



Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

Appendix B – Supporting Documents for the Applicant’s Responses to the Examining Authority’s First Written Questions

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Appendix B.1

*This appendix has been produced to support the Applicant's response to the Examining Authority's First Written Question - Q1.1.3.1. This document should be read alongside the **Applicant's Response to the Examining Authority's First Written Questions** [document reference 12.4].*

Energy Bill [HL]

[AS AMENDED IN COMMITTEE]

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[AS AMENDED IN COMMITTEE]

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TO

Make provision about energy production and security and the regulation of the energy market, including provision about the licensing of carbon dioxide transport and storage; about commercial arrangements for industrial carbon capture and storage and for hydrogen production; about new technology, including low-carbon heat schemes and hydrogen grid trials; about the Independent System Operator and Planner; about gas and electricity industry codes; about heat networks; about energy smart appliances and load control; about the energy performance of premises; about energy savings opportunity schemes; about the resilience of the core fuel sector; about offshore energy production, including environmental protection, licensing and decommissioning; about the civil nuclear sector, including the Civil Nuclear Constabulary and pensions; and for connected purposes.

BE IT ENACTED by the King’s most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

PART 1

LICENSING OF CARBON DIOXIDE TRANSPORT AND STORAGE

CHAPTER 1

LICENSING OF ACTIVITIES

General functions

5

1 Principal objectives and general duties of Secretary of State and economic regulator

- (1) The principal objectives of the Secretary of State and the Gas and Electricity Markets Authority in carrying out their respective functions under this Part are to—
 - (a) protect the interests of current and future transport and storage network users;

10

- (b) protect the interests of any consumers whose interests the Secretary of State or the economic regulator (as the case may be) considers may be impacted by the exercise of their respective functions under this Part;
 - (c) promote the efficient and economic development and operation of transport and storage networks, having regard to the need for licence holders to be able to finance their licensable activities. 5
- (2) In this Part the Gas and Electricity Markets Authority is referred to as the “economic regulator”.
- (3) The Secretary of State and the economic regulator must carry out their respective functions under this Part in the manner which the Secretary of State or the economic regulator (as the case may be) considers is best calculated to further the principal objectives, wherever appropriate by – 10
- (a) promoting effective competition between persons engaged in, or in commercial activities connected with, the activities mentioned in section 2(2); 15
 - (b) promoting the resilience of transport and storage networks;
 - (c) protecting the public from dangers arising from the construction, operation and decommissioning of infrastructure used for the purposes of activities mentioned in section 2(2). 20
- (4) In carrying out functions under this Part in accordance with the preceding provisions of this section, the Secretary of State or the economic regulator (as the case may be) must have regard to –
- (a) the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed, and any other principles appearing to the Secretary of State or the economic regulator to represent the best regulatory practice; 25
 - (b) the need to contribute to the achievement of sustainable development.
- (5) In carrying out functions under this Part in accordance with the preceding provisions of this section the Secretary of State must have regard to the Secretary of State’s duties under sections 1 and 4(1)(b) of the Climate Change Act 2008 (carbon targets and budgets). 30
- (6) In carrying out functions under this Part in accordance with the preceding provisions of this section, the economic regulator must have regard to – 35
- (a) the need to assist the Secretary of State’s compliance with the duties mentioned in subsection (5);
 - (b) the targets specified in subsection (8).
- (7) In exercising their respective functions in relation to licensable activities, the Secretary of State and the economic regulator may have regard to the desirability of the efficient and effective operation of the energy system (or any part of it) in the United Kingdom or any part of the United Kingdom. 40
- (8) The targets referred to in subsection (6)(b) are –

- (a) the net-zero emissions target, as defined in section A1(1) of the Climate Change (Scotland) Act 2009 (asp 12);
 - (b) a target in, or set under, section 1 or 2 of the Climate Change Act (Northern Ireland) 2022;
 - (c) a target in, or set under, section 29 or 30 of the Environment (Wales) Act 2016 (anaw 3). 5
- (9) In this section –
- “transport and storage network user” means a person who is, or seeks to be, a party to arrangements for carbon dioxide to be transported to a relevant site for the purpose of disposal by way of geological storage; 10
 - “transport and storage networks” means infrastructure and facilities for –
 - (a) the disposal of carbon dioxide by way of geological storage (or injection for the purposes of geological storage) at a relevant site, or 15
 - (b) the transportation of carbon dioxide to a relevant site for the purpose of such disposal;
 - “relevant site” means a site that is –
 - (a) in the United Kingdom, or
 - (b) in, under or over – 20
 - (i) the territorial sea adjacent to the United Kingdom, or
 - (ii) waters in a Gas Importation and Storage Zone (within the meaning given by section 1 of the Energy Act 2008).
- (10) For the purposes of this Part activities are “licensable activities” if undertaking them without the authority of a licence or exemption constitutes an offence under section 2(1). 25

Licensable activities

2 Prohibition on unlicensed activities

- (1) It is an offence for a person to carry on an activity within subsection (2) unless the person is authorised to do so by a licence. 30
- (2) The activities are –
- (a) operating a site for the disposal of carbon dioxide by way of geological storage;
 - (b) providing a service of transporting carbon dioxide by a licensable means of transportation. 35
- (3) In this Part “licensable means of transportation” means –
- (a) a pipe or system of pipes, or
 - (b) any other means of transportation that may be specified by regulations made by the Secretary of State,
- which falls within subsection (4). 40

- (4) A means of transportation falls within this subsection if it is used (with or without other means of transportation) for transporting carbon dioxide all or part of the way to a site for the geological storage of carbon dioxide.
- (5) A person who commits an offence under this section is liable—
- (a) on summary conviction in England and Wales, to a fine; 5
 - (b) on summary conviction in Scotland or Northern Ireland, to a fine not exceeding the statutory maximum;
 - (c) on conviction on indictment, to a fine.
- (6) No proceedings may be instituted in England and Wales in respect of an offence under this section except by or on behalf of the Secretary of State or the economic regulator. 10
- (7) Regulations under subsection (3)(b) may make consequential, transitional, incidental or supplementary provision including—
- (a) amendments (or repeals) in any provision of this Act or any other enactment, and 15
 - (b) provision modifying any standard conditions of licences or provision determining the conditions which are to be standard conditions for the purposes of licences authorising the undertaking of activities which are to become licensable activities.
- (8) Regulations under subsection (3)(b) are subject to the affirmative procedure. 20
- (9) For the purposes of this Part the person who “operates” a site for the geological storage of carbon dioxide is the person who carries on or (where different) controls activities at the site.
- 3 Consultation on proposals for additional activities to become licensable**
- (1) Before making regulations under section 2(3)(b), the Secretary of State must give notice— 25
- (a) stating that the Secretary of State proposes to make regulations providing for the means of transportation in question to become a licensable means of transportation, and
 - (b) specifying a reasonable period (of not less than 28 days from the date of publication of the notice) within which representations or objections may be made with respect to the proposal, 30
- and must consider any representations or objections duly made and not withdrawn.
- (2) The notice must be given— 35
- (a) by sending a copy of the notice to the economic regulator, the appropriate devolved authorities and any other body the Secretary of State considers appropriate, and
 - (b) by publishing it in such manner as the Secretary of State considers appropriate for bringing it to the attention of persons likely to be affected by such regulations. 40

- (3) For the purposes of this section the “appropriate devolved authorities” are—
- (a) the Welsh Ministers, if the regulations contain provision that would be within the legislative competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006); 5
 - (b) the Scottish Ministers, if the regulations contain provision that would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament;
 - (c) the Department for the Economy in Northern Ireland, if the regulations contain provision that— 10
 - (i) would be within the legislative competence of the Northern Ireland Assembly if it were contained in an Act of that Assembly, and
 - (ii) would not, if it were contained in a Bill in the Northern Ireland Assembly, result in the Bill requiring the consent of the Secretary of State under section 8 of the Northern Ireland Act 1998. 15

4 Territorial scope of prohibition

- Section 2(1) applies to activities in, above or below — 20
- (a) the territorial sea adjacent to the United Kingdom, or
 - (b) waters in a Gas Importation and Storage Zone (within the meaning given by section 1 of the Energy Act 2008),
- as it applies to activities in the United Kingdom.

5 Exemption from prohibition 25

- (1) The Secretary of State may by regulations grant exemption from the prohibition under section 2(1).
- (2) An exemption may be granted—
- (a) to a specified person, or persons of a specified class;
 - (b) generally or to such extent as may be specified; 30
 - (c) unconditionally or subject to such conditions as may be specified.
- (3) Before making regulations under subsection (1) the Secretary of State must give notice—
- (a) stating that the Secretary of State proposes to make such regulations and setting out the terms of the proposed regulations; 35
 - (b) stating the reasons why the Secretary of State proposes to make the regulations in the terms proposed, and
 - (c) specifying the time (which must be not less than 28 days from the date of publication of the notice) within which representations with respect to the proposals may be made, 40

and must consider any representations which are duly made in respect of the proposals and not withdrawn.

- (4) The notice required by subsection (3) must be given—
- (a) by serving a copy of it on the economic regulator and any appropriate devolved authority, and 5
 - (b) by publishing it in such manner as the Secretary of State considers appropriate for bringing it to the attention of those likely to be affected by the proposed regulations.
- (5) Notice of an exemption granted to a person is to be given—
- (a) by serving a copy of the exemption on the person, and 10
 - (b) by publishing the exemption in such manner as the Secretary of State considers appropriate for bringing it to the attention of other persons who may be affected by it.
- (6) Notice of an exemption granted to persons of a class must be given by publishing the exemption in such manner as the Secretary of State considers appropriate for bringing it to the attention of— 15
- (a) persons of that class, and
 - (b) other persons who may be affected by it.
- (7) An exemption may be granted—
- (a) indefinitely, or 20
 - (b) for a period specified in, or determined by or under, the exemption.
- (8) Conditions subject to which an exemption is granted may (in particular) require any person carrying on any activity in pursuance of the exemption—
- (a) to comply with any direction given by a relevant authority as to such matters as are specified in the exemption or are of a description so specified; 25
 - (b) to do (or not do) such things as are specified in the exemption or are of a description so specified, except so far as the Secretary of State or a relevant authority consents to the person’s not doing (or doing) them, and 30
 - (c) to refer for determination by the Secretary of State or a relevant authority such questions arising under the exemption as are specified in the exemption or are of a description so specified.
- (9) For the purposes of this section the “appropriate devolved authorities” are—
- (a) the Scottish Ministers, if the regulations under subsection (1) contain provision that would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament; 35
 - (b) the Welsh Ministers, if those regulations contain provision that would be within the legislative competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006); 40

- (c) the Department for the Economy in Northern Ireland, if those regulations contain provision that—
 - (i) would be within the legislative competence of the Northern Ireland Assembly if it were contained in an Act of that Assembly, and 5
 - (ii) would not, if it were contained in a Bill in the Northern Ireland Assembly, result in the Bill requiring the consent of the Secretary of State under section 8 of the Northern Ireland Act 1998.
- (10) In subsection (8) “relevant authority” means a person specified in the conditions. 10

6 Revocation or withdrawal of exemption

- (1) The Secretary of State may by regulations revoke regulations by which an exemption was granted to a person or vary regulations by which more than one exemption was so granted so as to terminate any of the exemptions— 15
 - (a) at the person’s request;
 - (b) in accordance with any provision of the regulations by which the exemption was granted, or
 - (c) if it appears to the Secretary of State inappropriate that the exemption should continue to have effect. 20
- (2) The Secretary of State may by regulations revoke regulations by which an exemption was granted to persons of a class or vary regulations by which more than one exemption was so granted so as to terminate any of the exemptions—
 - (a) in accordance with any provision of the regulations by which the exemption was granted, or 25
 - (b) if it appears to the Secretary of State inappropriate that the exemption should continue to have effect.
- (3) The Secretary of State may by regulations withdraw an exemption granted to persons of a class from any person of that class— 30
 - (a) at the person’s request;
 - (b) in accordance with any provision of the regulations by which the exemption was granted, or
 - (c) if it appears to the Secretary of State inappropriate that the exemption should continue to have effect in the case of the person. 35
- (4) Before making regulations under subsection (1)(b) or (c), (2) or (3)(b) or (c), the Secretary of State must give notice of the proposal to do so (with reasons) and of a period within which representations may be made to the Secretary of State.
- (5) The notice under subsection (4) must be given— 40
 - (a) to the economic regulator and any appropriate devolved authority;

- (b) where the Secretary of State is proposing to make regulations under subsection (1)(b) or (c), by serving a copy of it on the person to whom the exemption was granted;
 - (c) where the Secretary of State is proposing to make regulations under subsection (2), by publishing it in such manner as the Secretary of State considers appropriate for bringing it to the attention of persons of the class of persons to whom the exemption was granted, and 5
 - (d) where the Secretary of State is proposing to make regulations under subsection (3)(b) or (c), by serving a copy of it on the person from whom the Secretary of State proposes to withdraw the exemption. 10
- (6) For the purposes of subsection (5) the “appropriate devolved authorities” are—
- (a) the Scottish Ministers, if the regulations to which the notice relates contain provision that would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament; 15
 - (b) the Welsh Ministers, if those regulations contain provision that would be within the legislative competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006); 20
 - (c) the Department for the Economy in Northern Ireland, if those regulations contain provision that—
 - (i) would be within the legislative competence of the Northern Ireland Assembly if it were contained in an Act of that Assembly, and 25
 - (ii) would not, if it were contained in a Bill in the Northern Ireland Assembly, result in the Bill requiring the consent of the Secretary of State under section 8 of the Northern Ireland Act 1998. 30
- (7) Regulations under this section and section 5 are subject to the negative procedure.

Grant and conditions of licences

7 Power to grant licences

- (1) The economic regulator may grant a licence authorising a person to carry on— 35
 - (a) activities falling within section 2(2)(a);
 - (b) activities falling within section 2(2)(b).
- (2) A licence—
 - (a) must be in writing; 40

- (b) is to continue in force for such period as may be specified in or determined by or under the licence, unless previously revoked in accordance with any term of the licence.

8 Power to create licence types

- (1) The Secretary of State may by regulations provide that different types of licence may be granted under section 7(1) in respect of different descriptions of activity falling within section 2(2). 5
- (2) Regulations under this section may make consequential, transitional, incidental or supplementary provision including –
 - (a) amendments (or repeals) in any provision of this Act or any other enactment, and 10
 - (b) provision modifying any standard conditions of licences or provision determining the conditions which are to be standard conditions for the purposes of new types of licences.
- (3) Regulations under this section are subject to the affirmative procedure. 15

9 Procedure for licence applications

- (1) The Secretary of State, or the economic regulator with the approval of the Secretary of State, may by regulations –
 - (a) make provision about the form and manner in which an application for a licence must be made; 20
 - (b) authorise the grantor to require that an application is accompanied by a fee for processing the application of an amount determined in accordance with the regulations.
- (2) The Secretary of State may by regulations make provision about the procedure for applications for a licence (in addition to any provision that may be made under subsection (1)) including, for example, provision –
 - (a) requiring that a decision to refuse a licence must be accompanied by reasons for the decision; 25
 - (b) imposing requirements with regard to the publication of decisions to refuse a licence. 30
- (3) Before making regulations under subsection (2) the Secretary of State must consult the economic regulator and the appropriate devolved authorities.
- (4) Before granting a licence the economic regulator must give notice –
 - (a) stating that the economic regulator proposes to grant the licence,
 - (b) stating the reasons why the economic regulator proposes to grant the licence, and 35
 - (c) specifying the time (which must not be less than 28 days from the date of publication of the notice) within which representations or objections with respect to the proposed licence may be made,

and must consider any representations or objections which are duly made and not withdrawn.

- (5) A notice under subsection (4) must be given by publishing the notice in such manner as the economic regulator considers appropriate for bringing it to the attention of persons likely to be affected by the grant of the licence. 5
- (6) The Secretary of State may by regulations make provision, in relation to licences, about the matters to be taken into account in determining whether an applicant for a licence should be granted the licence.
- (7) Regulations under this section are subject to the negative procedure.
- (8) Consultation before the passing of this Act is as effective for the purposes of subsections (3) and (4) as consultation after that time. 10
- (9) In this Part “grantor”, in relation to a licence or an application for a licence, means the person who grants or, as the case may be, has power to grant, the licence.
- (10) For the purposes of subsection (3) the “appropriate devolved authorities” are— 15
- (a) the Welsh Ministers, if the Secretary of State proposes to include in the regulations provision within the legislative competence of Senedd Cymru;
 - (b) the Scottish Ministers, if the Secretary of State proposes to include in the regulations provision within the legislative competence of the Scottish Parliament; 20
 - (c) the Department for the Economy in Northern Ireland, if the Secretary of State proposes to include in the regulations provision within the legislative competence of the Northern Ireland Assembly. 25
- (11) The Statutory Instruments Act 1946 applies in relation to the power of the economic regulator to make regulations under subsection (1) as if the economic regulator were a Minister of the Crown.
- (12) Any sums received by the economic regulator or the Secretary of State by virtue of this section must be paid into the Consolidated Fund. 30

10 Competitive tenders for licences

- (1) The Secretary of State may by regulations make such provision as the Secretary of State considers appropriate for facilitating the making, in prescribed cases, of a determination on a competitive basis of the person to whom a licence is to be granted. 35
- (2) That provision may include—
- (a) provision, in prescribed cases, for the publication of a proposal to grant a licence;
 - (b) provision for the inclusion in such a proposal of an invitation to apply for a licence; 40

- (c) provision restricting the making of applications for a licence and imposing requirements as to the period within which they must be made;
 - (d) provision for regulating the manner in which applications are considered and determined; 5
 - (e) provision authorising the Secretary of State to direct, in relation to a particular competition, that specified functions which would, apart from the direction, be exercisable by the economic regulator are, so far as they relate to that competition, to be exercised instead by a specified person. 10
- (3) Before making regulations under subsection (1) the Secretary of State must consult the economic regulator and the appropriate devolved authorities.
- (4) Regulations under subsection (1) –
 - (a) may make provision by reference to a determination by the economic regulator or to the opinion of the economic regulator as to any matter; 15
 - (b) may dispense with or supplement provision made in relation to applications for licences under section 9.
- (5) Regulations under subsection (1) are subject to the affirmative procedure.
- (6) For the purposes of subsection (3) the “appropriate devolved authorities” are – 20
 - (a) the Scottish Ministers, if the regulations contain provision that would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament;
 - (b) the Welsh Ministers, if the regulations contain provision that would be within the legislative competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006); 25
 - (c) the Department for the Economy in Northern Ireland, if the regulations contain provision that – 30
 - (i) would be within the legislative competence of the Northern Ireland Assembly if it were contained in an Act of that Assembly, and
 - (ii) would not, if it were contained in a Bill in the Northern Ireland Assembly, result in the Bill requiring the consent of the Secretary of State under section 8 of the Northern Ireland Act 1998. 35
- (7) In this section –
 - “competition” means a determination such as is mentioned in subsection (1); 40
 - “prescribed” means prescribed in, or determined under, regulations under subsection (1);
 - “specified”, in relation to a direction under subsection (2)(e), means specified in the direction.

11 Conditions of licences: general

- (1) A licence may include –
- (a) such conditions (whether or not relating to the activities authorised by the licence) as appear to the grantor to be requisite or expedient having regard to the duties imposed by section 1 (principal objectives of Secretary of State and economic regulator), and 5
 - (b) conditions requiring the making to the economic regulator of a payment on the grant of the licence, or payments during the currency of the licence, or both, of such amount or amounts as may be determined by or under the licence. 10
- (2) Without prejudice to the generality of paragraph (a) of subsection (1), conditions included in a licence by virtue of that paragraph may require the licence holder –
- (a) to comply with any direction given by the economic regulator or the Secretary of State as to such matters as are specified in the licence or are of a description so specified; 15
 - (b) to consent to the disclosure of information provided in accordance with a direction given to the licence holder;
 - (c) except in so far as the economic regulator or Secretary of State consents to the person’s doing (or not doing) them, not to do (or to do) such things as are specified in the licence or are of a description so specified; 20
 - (d) to refer for determination by the economic regulator or Secretary of State such questions arising under the licence, or under any document referred to in the licence, as are specified in the licence or are of a description so specified, and 25
 - (e) to refer for approval by the economic regulator or the Secretary of State such things as are (or may be) required to be done under the licence, and such contracts or agreements made before the grant of the licence, as are specified in the licence or are of a description so specified. 30
- (3) Without prejudice to the generality of paragraph (a) of subsection (1), conditions in a licence may also include –
- (a) provision about the revenue that the licence holder may receive in respect of its activities (the licence holder’s “allowed revenue”);
 - (b) provision about how the licence holder’s allowed revenue is to be calculated. 35
- (4) In subsection (3) the reference to revenue that the licence holder may receive in respect of its activities includes revenue that is calculated by reference to estimates of the licence holder’s decommissioning costs, as defined in section 85 (financing of costs of decommissioning etc). 40
- (5) Without prejudice to the generality of paragraph (a) of subsection (1), conditions which are described in subsection (6) may be included in a licence by virtue of that paragraph, in respect of circumstances where a person (“the licence holder”) holds such a licence, and another person (“the candidate”) –

- (a) has applied or is considering whether to apply for a licence, or
 - (b) is considering whether to apply for financial support for carbon capture activities.
- (6) The conditions in this subsection are conditions which require the licence holder to comply with a direction given by the economic regulator or the Secretary of State requiring the licence holder to provide to the candidate – 5
 - (a) information in relation to the activities authorised by the licence, and
 - (b) any other assistance the candidate may reasonably require, for the purpose of determining whether to –
 - (i) apply for a licence, or 10
 - (ii) (as the case may be) apply for financial support for carbon capture activities.
- (7) Conditions included in a licence may contain provision for the conditions –
 - (a) to have effect or cease to have effect at such times and in such circumstances as may be determined by or under the conditions, or 15
 - (b) to be modified in such manner as may be specified in the conditions at such times and in such circumstances as may be so determined.
- (8) Any provision included by virtue of subsection (7) in a licence is to have effect in addition to the provision made by this Part with respect to the modification of the conditions of a licence. 20
- (9) Conditions included in a licence may provide for references in the conditions to any document to operate as references to that document as revised or re-issued from time to time.
- (10) Any sums received by the economic regulator in consequence of the provisions of any condition of a licence must be paid into the Consolidated Fund. 25

12 Standard conditions of licences

- (1) The Secretary of State may determine the conditions that are to be the standard conditions of licences.
- (2) The Secretary of State must publish any standard conditions determined under subsection (1) in whatever manner the Secretary of State considers appropriate. 30
- (3) Subject to subsections (4) and (5), each condition which is a standard condition is to be incorporated by reference in each licence.
- (4) Subsection (3) does not apply to a licence granted before the publication of the standard condition.
- (5) Subject to the following provisions of this section, the grantor of a licence in which standard conditions would, but for this subsection, be incorporated in accordance with subsection (3) may exclude or modify any of those standard conditions, to such extent as the grantor may consider requisite to meet the circumstances of a particular case. 35

- (6) Before excluding any standard conditions or making any modifications under subsection (5), the grantor must give notice—
- (a) stating that the grantor proposes to exclude the conditions or make the modifications and setting out the effect of so doing,
 - (b) stating the reasons why the grantor proposes to exclude the conditions or make the modifications, and 5
 - (c) specifying the time (which must not be less than 28 days from the date of publication of the notice) within which representations or objections with respect to the proposed exclusions or modifications may be made, 10
- and must consider any representations or objections which are duly made and not withdrawn.
- (7) A notice under subsection (6) must be given—
- (a) by publishing the notice in whatever manner the grantor considers appropriate for the purpose of bringing the notice to the attention of persons likely to be affected by the making of the exclusions or modifications, and 15
 - (b) by sending a copy of the notice to the appropriate devolved authorities (if any) and the Secretary of State.
- (8) The grantor must not exclude any conditions, or make any modifications, under subsection (5) unless the grantor is of the opinion that the exclusions or modifications are such that— 20
- (a) the licence holder would not be unduly disadvantaged in competing with other holders of licences, and
 - (b) no other holder of a licence would be unduly disadvantaged in competing with other holders of such licences (including the holder of the licence). 25
- (9) If, within the time specified in the notice under subsection (6), the Secretary of State (after consulting the appropriate devolved authorities (if any)) directs the grantor not to exclude or modify any standard condition, the grantor must comply with the direction. 30
- (10) The modification under subsection (5) of part of a standard condition does not prevent any other part of the condition from continuing to be treated as a standard condition for the purposes of this Part.
- (11) Where, in granting a licence, the grantor excludes or modifies any standard conditions under subsection (5), the grantor must publish a notice setting out— 35
- (a) each exclusion or modification,
 - (b) their effects, and the reason for adopting them, and
 - (c) how the grantor has taken account of any representations or objections made in accordance with subsection (6). 40
- (12) For the purposes of this section the “appropriate devolved authorities” are—

- (a) the Welsh Ministers, if provision making the exclusions and modifications proposed in the notice under subsection (6) would be within the legislative competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006); 5
 - (b) the Scottish Ministers, if provision making the exclusions and modifications proposed in that notice would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament; 10
 - (c) the Department for the Economy in Northern Ireland, if provision making the exclusions and modifications proposed in that notice –
 - (i) would be within the legislative competence of the Northern Ireland Assembly if it were contained in an Act of that Assembly, and 15
 - (ii) would not, if it were contained in a Bill in the Northern Ireland Assembly, result in the Bill requiring the consent of the Secretary of State under section 8 of the Northern Ireland Act 1998.
- 13 Modification of conditions of licences** 20
- (1) The economic regulator may make modifications of –
 - (a) the conditions of a particular licence;
 - (b) the standard conditions of licences.
 - (2) Before making any modifications under this section, the economic regulator must give notice – 25
 - (a) stating that it proposes to make modifications;
 - (b) setting out the proposed modifications and their effect;
 - (c) stating the reasons why it proposes to make the modifications, and
 - (d) specifying the time within which representations with respect to the proposed modifications may be made. 30
 - (3) The time specified by virtue of subsection (2)(d) may not be less than 28 days from the date of the publication of the notice.
 - (4) A notice under subsection (2) must be given –
 - (a) by publishing the notice in such manner as the economic regulator considers appropriate for the purpose of bringing the notice to the attention of persons likely to be affected by the making of the modifications, and 35
 - (b) by sending a copy of the notice to –
 - (i) each relevant licence holder, and
 - (ii) the Secretary of State. 40
 - (5) The economic regulator must consider any representations which are duly made.

- (6) If, within the time specified by virtue of subsection (2)(d), the Secretary of State directs the economic regulator not to make any modification, the economic regulator must comply with the direction.
- (7) Subsections (8) to (10) apply where, having complied with subsections (2) to (5), the economic regulator decides to proceed with the making of modifications of the conditions of any licence under this section. 5
- (8) The economic regulator must—
- (a) publish the decision and the modifications in such manner as it considers appropriate for the purpose of bringing them to the attention of persons likely to be affected by the making of the modifications, 10
 - (b) state the effect of the modifications,
 - (c) state how it has taken account of any representations duly made, and
 - (d) state the reason for any differences between the modifications and those set out in the notice by virtue of subsection (2)(b).
- (9) Each modification has effect from the date specified by the economic regulator in relation to that modification (subject to the giving of a direction under paragraph 2 of Schedule 2). 15
- (10) The date specified by virtue of subsection (9) may not be less than 56 days from the publication of the decision to proceed with the making of modifications under this section. 20
- (11) In this section “relevant licence holder”—
- (a) in relation to the modification of standard conditions, means the holder of a licence—
 - (i) which is to be modified by the inclusion of any new standard condition, or 25
 - (ii) which includes any standard conditions to which the modifications relate which are in effect at the time specified by virtue of subsection (2)(d), or
 - (b) in relation to the modification of a condition of a particular licence (other than a standard condition), means the holder of that particular licence. 30

14 Modification of conditions under section 13: supplementary

- (1) Subsections (2) and (3) apply where at any time the economic regulator modifies the conditions of licences under section 13.
- (2) If the conditions modified are standard conditions, the economic regulator must— 35
- (a) also make (as nearly as possible) the same modifications of those conditions for the purposes of their incorporation in licences granted after that time, and

- (b) publish the modifications in such manner as it considers appropriate for the purpose of bringing them to the attention of persons likely to be affected by the making of the modifications.
- (3) The economic regulator may make such incidental or consequential modifications of any conditions of licences as it considers necessary or expedient. 5
- (4) The modification of part of a standard condition of a particular licence under section 13 does not prevent any other part of the condition from continuing to be regarded as a standard condition for the purposes of this Part.
- (5) The modification of a condition of a licence under this section has effect subject to the giving of a direction under paragraph 2 of Schedule 2 in relation to the decision to which the modification relates. 10

15 Modification by order under other enactments

- (1) Where the CMA or (as the case may be) the Secretary of State (in this section “the relevant authority”) makes a relevant order, the order may also provide for the modification of— 15
 - (a) the conditions of a particular licence, or
 - (b) the standard conditions of licences,to such extent as may appear to the relevant authority to be necessary or expedient for the purpose of giving effect to, or taking account of, any provision made by the order. 20
- (2) In subsection (1) “relevant order” means—
 - (a) an order under section 75, 83 or 84 of, or paragraph 5, 10 or 11 of Schedule 7 to, the Enterprise Act 2002 where—
 - (i) one or more than one of the enterprises which have, or may have, ceased to be distinct enterprises was engaged in the carrying on of activities authorised or regulated by a licence, or 25
 - (ii) one or more than one of the enterprises which will or may cease to be distinct enterprises is engaged in the carrying on of activities authorised or regulated by a licence, or 30
 - (b) an order under section 160 or 161 of that Act where the feature, or combination of features, of the market or markets in the United Kingdom for goods or services which prevents, restricts or distorts competition relates to activities authorised or regulated by a licence. 35
- (3) The modification under subsection (1)(a) of part of a standard condition of a particular licence does not prevent any other part of the condition from continuing to be regarded as a standard condition for the purposes of this Part.
- (4) Where at any time the relevant authority modifies under subsection (1)(b) the standard conditions of licences, the relevant authority— 40

- (a) must also make (as nearly as possible) the same modifications of those conditions for the purposes of their incorporation in licences granted after that time, and
 - (b) may, after consultation with the economic regulator, make such incidental or consequential modifications as the relevant authority considers necessary or expedient of any conditions of licences under that provision granted before that time. 5
- (5) Where at any time the relevant authority modifies standard conditions under subsection (4)(a) for the purposes of their incorporation in licences granted after that time, the relevant authority must publish those modifications in such manner as the relevant authority considers appropriate. 10
- (6) Expressions used in subsection (2) and in Part 3 or (as the case may be) Part 4 of the Enterprise Act 2002 have the same meanings in that subsection as in that Part.

Interim power of Secretary of State to grant licences 15

16 Interim power of Secretary of State to grant licences

Schedule 1 makes provision about the power of the Secretary of State to grant licences during an interim period.

Termination of licence

17 Termination of licence 20

- (1) If the economic regulator considers that a termination event has arisen, or is likely to arise, the economic regulator must notify the persons mentioned in subsection (2) as soon as reasonably practicable.
- (2) Those persons are –
 - (a) the Secretary of State; 25
 - (b) the Scottish Ministers, if an activity authorised by the licence is within Scottish devolved competence;
 - (c) the Welsh Ministers, if an activity authorised by the licence is within Welsh devolved competence;
 - (d) the Department for the Economy in Northern Ireland, if an activity authorised by the licence is within Northern Ireland devolved competence; 30
 - (e) the Oil and Gas Authority;
 - (f) any affected persons not falling within paragraphs (a) to (e) that the economic regulator considers appropriate. 35
- (3) A notice under subsection (1) must specify –
 - (a) in a case where a termination event has arisen, the date on which the economic regulator proposes to revoke the licence, and

- (b) in any case, the date by which any representations must be made.
- (4) For the purposes of this section an activity authorised by a licence –
- (a) is within Scottish devolved competence if provision about that activity would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament; 5
 - (b) is within Welsh devolved competence if provision about that activity would be within the legislative competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006); 10
 - (c) is within Northern Ireland devolved competence if provision about that activity –
 - (i) would be within the legislative competence of the Northern Ireland Assembly if it were contained in an Act of that Assembly, and 15
 - (ii) would not, if it were contained in a Bill in the Northern Ireland Assembly, result in the Bill requiring the consent of the Secretary of State under section 8 of the Northern Ireland Act 1998.
- (5) In this section – 20
- “affected person” means a person that the economic regulator considers may be affected by the decision as to whether the licence should be terminated;
- “termination event” means a state of affairs in which the economic regulator is authorised to revoke the licence. 25

Transfer of licences

18 Transfer of licences

- (1) A licence –
- (a) is to be capable of being transferred by the licence holder, with the consent of the economic regulator, in accordance with this section and subject to any term of the licence relating to its transfer; 30
 - (b) may include conditions which must be complied with before the licence can be transferred.
- (2) A transfer may relate to the whole or any part of the licence.
- (3) The reference in subsection (2) to part of a licence is a reference to a part of the activities authorised by the licence (whether described by reference to activities being carried on by the licence holder or to activities which the licence holder is authorised to carry on). 35
- (4) Such consent may be given subject to compliance with such modification conditions or other conditions as the economic regulator considers necessary or expedient. 40

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- (5) In the case of a partial transfer, conditions imposed under subsection (4) may make, as respects so much of the licence as is proposed to be retained by the transferor, provision different from that made as respects so much of the licence as is proposed to be transferred.
- (6) Conditions imposed under subsection (4) may in particular require— 5
- (a) the transfer of rights, liabilities or property to the transferee;
 - (b) the creation of rights in relation to property, rights or liabilities in favour of the transferee;
 - (c) the creation of other rights and liabilities as between the transferor and transferee. 10
- (7) A purported transfer of a licence is to be void— 15
- (a) if the licence is not capable of transfer or the economic regulator has not given its consent under section 19,
 - (b) if the purported transfer is in breach of a condition of the licence, or
 - (c) if there has, before the purported transfer, been a contravention of a condition subject to compliance with which the economic regulator’s consent is given.
- (8) In this section— 20
- “modification condition” means a condition requiring, or otherwise providing for the making of, modifications to the conditions of a licence;
 - “transfer” includes any form of transfer or assignment or, in Scotland, assignation.

19 Consenting to transfer

- (1) Before giving consent to the transfer of a licence under section 18(1), the economic regulator must— 25
- (a) publish a notice stating that it proposes to grant consent to the transfer,
 - (b) send a copy of the notice to such persons as the economic regulator considers are likely to be affected by the decision, and
 - (c) consider any representations or objections that are duly made and not withdrawn. 30
- (2) A notice under subsection (1) must— 35
- (a) state the reasons why the economic regulator proposes to give consent;
 - (b) specify any conditions the economic regulator proposes to impose under section 18(4);
 - (c) specify the time from the date of publication of the notice (which must not be less than two months) within which representations or objections with respect to the proposed transfer may be made,
- and must be published in such manner as the economic regulator considers appropriate for bringing it to the attention of persons likely to be affected by the transfer. 40

- (3) Subject to subsection (5), the economic regulator must, following consideration of any representations or objections under subsection (2), give the Secretary of State not less than 28 days' notice of –
- (a) any proposal to give consent to the transfer, and
 - (b) any conditions the economic regulator proposes to impose under section 18(4). 5
- (4) If, before the expiry of the time specified in a notice under subsection (3), the Secretary of State gives the economic regulator –
- (a) a direction not to consent to the transfer, or
 - (b) a direction not to impose a condition of which notice was given under subsection (3)(b), 10
- the economic regulator must comply with that direction.
- (5) Where the Secretary of State gives no direction under subsection (4)(a), the economic regulator may give consent to the transfer of the licence after –
- (a) the expiry of the time specified in the notice under subsection (3), or 15
 - (b) if earlier than the time in paragraph (a), the time at which the Secretary of State informs the economic regulator that, in relation to the notice –
 - (i) no direction will be given under subsection (4)(a), and
 - (ii) no direction or, (as the case may be) no further direction will be given under subsection (4)(b). 20

Appeal from decisions of the economic regulator

20 Appeal to the CMA

- (1) An appeal may be made to the CMA against a decision by the economic regulator to proceed with the modification of a condition of a licence under section 13. 25
- (2) An appeal may be brought under this section only by –
- (a) a relevant licence holder (within the meaning of section 13);
 - (b) a transport and storage network user whose interests are materially affected by the decision;
 - (c) a qualifying body or association in the capacity of representing a person falling within paragraph (a) or (b); 30
- (3) The permission of the CMA is required for the bringing of an appeal under this section.
- (4) The CMA may refuse permission to bring an appeal only on one of the following grounds – 35
- (a) in relation to an appeal brought by a person falling within subsection (2)(b), that the interests of the person are not materially affected by the decision;

- (b) in relation to an appeal brought by a qualifying body or association, that the interests of the person represented are not materially affected by the decision;
 - (c) in relation to any appeal—
 - (i) that the appeal is brought for reasons that are trivial or vexatious; 5
 - (ii) that the appeal has no reasonable prospect of success.
- (5) References in this section to a “qualifying body or association” are to a body or association whose functions are or include representing persons in respect of interests of theirs which are materially affected by the decision in question. 10
- (6) In this section “transport and storage network user” has the same meaning as in section 1.
- 21 Procedure on appeal to CMA**
- (1) Schedule 2 has effect.
 - (2) Except where specified otherwise in Schedule 2, the functions of the CMA with respect to an appeal under section 20 are to be carried out on behalf of the CMA by a group constituted for the purpose by the chair of the CMA under Schedule 4 to the Enterprise and Regulatory Reform Act 2013. 15
- 22 Determination by CMA of appeal**
- (1) This section applies to every appeal brought under section 20. 20
 - (2) In determining an appeal the CMA must have regard, to the same extent as is required of the economic regulator, to the matters to which the economic regulator must have regard—
 - (a) in the carrying out of its principal objectives under section 1, and
 - (b) in the performance of its duties under that section. 25
 - (3) In determining the appeal the CMA—
 - (a) may have regard to any matter to which the economic regulator was not able to have regard in relation to the decision which is the subject of the appeal, but
 - (b) must not, in the exercise of that power, have regard to any matter to which the economic regulator would not have been entitled to have regard in reaching its decision had it had the opportunity of doing so. 30
 - (4) The CMA may allow the appeal only to the extent that it is satisfied that the decision appealed against was wrong on one or more of the following grounds— 35
 - (a) that the economic regulator failed properly to have regard to any matter mentioned in subsection (2);
 - (b) that the economic regulator failed to give the appropriate weight to any matter mentioned in subsection (2); 40

- (c) that the decision was based, wholly or partly, on an error of fact;
 - (d) that the modifications fail to achieve, in whole or in part, the effect stated by the economic regulator by virtue of section 13(8)(b);
 - (e) that the decision was wrong in law.
- (5) To the extent that the CMA does not allow the appeal, it must confirm the decision appealed against. 5

23 CMA’s powers on allowing appeal

- (1) This section applies where the CMA allows an appeal to any extent.
- (2) If the appeal is in relation to a price control decision, the CMA must do one or more of the following— 10
- (a) quash the decision (to the extent that the appeal is allowed);
 - (b) remit the matter back to the economic regulator for reconsideration and determination in accordance with any directions given by the CMA;
 - (c) substitute the CMA’s decision for that of the economic regulator (to the extent that the appeal is allowed) and give any directions to the economic regulator or any other party to the appeal. 15
- (3) If the appeal is in relation to any other decision, the CMA must do one or both of the following— 20
- (a) quash the decision (to the extent that the appeal is allowed);
 - (b) remit the matter back to the economic regulator for reconsideration and determination in accordance with any directions given by the CMA.
- (4) A direction under subsection (2) or (3) must not require a person to do anything that the person would not have power to do (apart from the direction). 25
- (5) A person to whom a direction is given under that subsection must comply with it.
- (6) A direction given under that subsection to a person other than the economic regulator is enforceable as if it were an order of the High Court or (in Scotland) an order of the Court of Session. 30
- (7) For the purposes of this section a decision is a “price control decision”, in relation to the modification of a condition of a licence, if the purpose of the condition is, in the CMA’s opinion, to limit or control the charges on, or the revenue of, the holder of the licence. 35
- (8) In determining for the purposes of subsection (7) what the purpose of a condition is the condition may be assessed on its own or in combination with any other conditions of the licence.
- (9) In this section and section 24 any reference to a party to an appeal is to be read in accordance with Schedule 2. 40

24 Time limits for CMA to determine an appeal

- (1) The CMA must—
 - (a) determine an appeal against a price control decision within the period of 6 months beginning with the permission date;
 - (b) determine an appeal against any other decision within the period of 4 months beginning with the permission date. 5
- (2) Subsection (1)(a) or (b) does not apply if subsection (3) applies.
- (3) This subsection applies where—
 - (a) the CMA has received representations on the timing of the determination from a party to the appeal, and 10
 - (b) it is satisfied that there are special reasons why the determination cannot be made within the period specified in subsection (1)(a) or (b).
- (4) Where subsection (3) applies, the CMA must—
 - (a) determine an appeal against a price control decision within the period specified by it, which must not be longer than the period of 7 months beginning with the permission date; 15
 - (b) determine an appeal against any other decision within the period specified by it, which must not be longer than the period of 5 months beginning with the permission date.
- (5) Where subsection (3) applies, the CMA must also— 20
 - (a) inform the parties to the appeal of the time limit for determining the appeal, and
 - (b) publish that time limit in such manner as it considers appropriate for the purpose of bringing it to the attention of any other persons likely to be affected by the determination. 25
- (6) In this section “price control decision” is to be read in accordance with section 23.
- (7) References in this section to the “permission date” are to the date on which the CMA gave permission to bring the appeal in accordance with section 20(3). 30

25 Determination of appeal by CMA: supplementary

- (1) A determination by the CMA on an appeal—
 - (a) must be contained in an order made by the CMA;
 - (b) must set out the reasons for the determination;
 - (c) takes effect at the time— 35
 - (i) specified in the order, or
 - (ii) determined in accordance with provision made in the order;
 - (d) must be notified by the CMA to the parties to the appeal;
 - (e) must be published by the CMA—

- (i) as soon as reasonably practicable after the determination is made;
 - (ii) in such manner as the CMA considers appropriate for the purpose of bringing the determination to the attention of any person likely to be affected by it (other than a party to the appeal). 5
- (2) The CMA may exclude from publication under section 25(1)(e) any information which it is satisfied is –
 - (a) commercial information, the disclosure of which would, or might in the CMA’s opinion, significantly harm the legitimate business interests of an undertaking to which it relates, or 10
 - (b) information relating to the private affairs of an individual, the disclosure of which would, or might in the CMA’s opinion, significantly harm the individual’s interests.
- (3) The economic regulator must take such steps as it considers necessary for it to comply with an order of the CMA made by virtue of subsection (1)(a). 15
- (4) The steps must be taken –
 - (a) if a time is specified in (or is to be determined in accordance with) the order, within that time;
 - (b) in any other case, within a reasonable time. 20
- (5) Subsections (2) to (4) of section 14 (consequences of modification of standard conditions) apply where a condition of a licence is modified in accordance with section 23 as they apply where a condition of a licence is modified under section 13.

Information 25

26 Provision of information to or by the economic regulator

- (1) The economic regulator may provide to a person within subsection (2) such information as the economic regulator considers necessary in connection with the exercise by the economic regulator of its functions relating to the regulation of licensable activities. 30
- (2) The persons within this subsection are –
 - (a) the Oil and Gas Authority;
 - (b) the Environment Agency;
 - (c) the Scottish Environment Protection Agency;
 - (d) Natural Resources Wales; 35
 - (e) the Health and Safety Executive;
 - (f) the Health and Safety Executive for Northern Ireland;
 - (g) the CMA;
 - (h) the Scottish Ministers;
 - (i) the Welsh Ministers; 40

- (j) the Department for the Economy in Northern Ireland;
 - (k) the Northern Ireland Environment Agency;
 - (l) the Secretary of State;
 - (m) any other person the economic regulator considers appropriate who has powers or duties conferred by or by virtue of primary legislation which the economic regulator considers relevant to the exercise of the economic regulator’s functions relating to the regulation of licensable activities. 5
- (3) The economic regulator may by notice request from a person within subsection (2) such information as the economic regulator considers necessary in connection with the exercise by the economic regulator of its functions relating to the regulation of licensable activities. 10
- (4) A person to whom a request is made under subsection (3) must, so far as reasonably practicable, provide the requested information within such period, and in such form and manner, as may be specified in the notice. 15
- (5) Except as provided by subsection (6), the disclosure of information under this section does not breach—
- (a) any obligation of confidence owed by the person making the disclosure, or
 - (b) any other restriction on the disclosure of information (however imposed). 20
- (6) This section does not authorise or require a disclosure of information if the disclosure would contravene the data protection legislation (but in determining whether a disclosure would do so, the power conferred by subsection (1) or, as the case may be, the duty under subsection (4) is to be taken into account). 25
- (7) In this section “primary legislation” means—
- (a) an Act of Parliament,
 - (b) an Act of the Scottish Parliament,
 - (c) an Act or Measure of Senedd Cymru, or
 - (d) Northern Ireland legislation. 30
- 27 Power of Secretary of State to require information**
- (1) The Secretary of State may by notice in writing require a licence holder to provide the Secretary of State with information which is reasonably required by the Secretary of State for the purposes of the Secretary of State’s functions under this Part. 35
- (2) A notice under subsection (1) must specify—
- (a) the form and manner in which information is to be provided, and
 - (b) the time within which it is to be provided.
- (3) A licence holder may not be required under this section to provide any information that would be protected from disclosure or production in legal 40

proceedings on grounds of legal professional privilege or, in Scotland, confidentiality of communications.

- (4) Except as provided by subsection (5), the disclosure of information under this section does not breach –
- (a) any obligation of confidence owed by the licence holder making the disclosure, or 5
 - (b) any other restriction on the disclosure of information (however imposed).
- (5) This section does not authorise or require a disclosure of information if the disclosure would contravene the data protection legislation (but in determining whether a disclosure would do so, a requirement imposed under subsection (1) is to be taken into account). 10

Other functions of the economic regulator

28 Monitoring, information gathering etc

- (1) The economic regulator must keep under review the carrying on in the United Kingdom and elsewhere of the following activities – 15
- (a) operating a site for the disposal of carbon dioxide by way of geological storage;
 - (b) providing a service of transporting carbon dioxide by a licensable means of transportation; 20
 - (c) activities ancillary to activities mentioned in paragraph (a) or (b).
- (2) The economic regulator may, for the purpose of facilitating the performance of its functions under this Part, collect information with respect to such activities.
- (3) The economic regulator must give the Secretary of State or the CMA any information they may request with respect to any matter relating to the economic regulator’s functions. 25

29 Power to require information for purposes of monitoring

- (1) The economic regulator may, for the purpose of exercising its functions under subsections (1) and (2) of section 28, serve a notice under subsection (2) on any licence holder. 30
- (2) A notice under this subsection is a notice which –
- (a) requires the person on whom it is served to produce, at a time and place specified in the notice, to the economic regulator any documents which are specified or described in the notice and are in that person’s custody or under their control, or 35
 - (b) requires that person, if they are carrying on a business, to provide to the economic regulator in the form and manner, and within the period,

specified in the notice, the information specified or described in the notice.

- (3) In paragraphs (a) and (b) of subsection (2) the reference to the economic regulator includes a person appointed by the economic regulator for the purpose of exercising the function in question. 5
- (4) A person who intentionally alters, suppresses or destroys any document or record of information which that person has been required to produce by a notice under subsection (2) is guilty of an offence liable – 10
- (a) on summary conviction in England and Wales, to a fine;
 - (b) on summary conviction in Scotland or Northern Ireland, to a fine not exceeding the statutory maximum;
 - (c) on conviction on indictment, to a fine.

30 Duty to carry out impact assessment

- (1) This section applies where – 15
- (a) the economic regulator is proposing to do anything for the purposes of, or in connection with, the carrying out of any function exercisable by it under or by virtue of this Part, and
 - (b) it appears to the economic regulator that the proposal is important; but this section does not apply if it appears to the economic regulator that the urgency of the matter makes it impracticable or inappropriate for the economic regulator to comply with the requirements of this section. 20
- (2) A proposal is important for the purposes of this section only if its implementation would be likely to do one or more of the following – 25
- (a) involve a major change in the activities carried on by the economic regulator;
 - (b) have a significant impact on persons engaged in the capture, transportation or storage of carbon dioxide;
 - (c) have a significant impact on persons engaged in commercial activities connected with the capture, transportation or storage of carbon dioxide;
 - (d) have a significant impact on the general public in the United Kingdom or in a part of the United Kingdom; 30
 - (e) have significant effects on the environment.
- (3) Before implementing its proposal, the economic regulator must either – 35
- (a) carry out and publish an assessment of the likely impact of implementing the proposal, or
 - (b) publish a statement setting out its reasons for thinking that it is unnecessary for it to carry out an assessment.
- (4) An assessment carried out under this section must – 40
- (a) include an assessment of the likely effects on the environment of implementing the proposal, and

- (b) relate to such other matters as the economic regulator considers appropriate.
- (5) In determining the matters to which an assessment under this section should relate, the economic regulator must have regard to such general guidance relating to the carrying out of impact assessments as it considers appropriate. 5
- (6) An assessment carried out under this section may take such form as the economic regulator considers appropriate.
- (7) Where the economic regulator publishes an assessment under this section –
 - (a) it must provide an opportunity of making representations to the economic regulator about its proposal to members of the public and other persons who, in the economic regulator’s opinion, are likely to be affected to a significant extent by the proposal’s implementation, 10
 - (b) the published assessment must be accompanied by a statement setting out how representations may be made, and
 - (c) the economic regulator must not implement its proposal unless the period for making representations about the proposal has expired and it has considered all the representations that were made in that period. 15
- (8) Where the economic regulator is required (apart from this section) –
 - (a) to consult about a proposal to which this section applies, or
 - (b) to give a person an opportunity of making representations about it, 20the requirements of this section are in addition to, but may be performed contemporaneously with, the other requirements.
- (9) Every report under section 41 (annual reports on transport and storage licensing functions) must set out –
 - (a) a list of the assessments under this section carried out during the financial year to which the report relates, and 25
 - (b) a summary of the decisions taken during that year in relation to proposals to which assessments carried out in that year or previous financial years relate.
- (10) The publication of anything under this section must be in such manner as the economic regulator considers appropriate for bringing it to the attention of the persons who, in the economic regulator’s opinion, are likely to be affected if its proposal is implemented. 30

31 Reasons for decisions

- (1) This section applies to the following decisions of the economic regulator or the Secretary of State – 35
 - (a) the revocation of a licence;
 - (b) the modification of the conditions of a licence;
 - (c) the giving of any directions or consent in pursuance of a condition included in a licence by virtue of section 11(2)(a) or (c); 40

- (d) the determination of a question referred in pursuance of a condition included in a licence by virtue of section 11(2)(d);
 - (e) the making of a final order, the making or confirmation of a provisional order or the revocation of a final order or of a provisional order which has been confirmed. 5
- (2) As soon as reasonably practicable after making such a decision the economic regulator or the Secretary of State (“the decision maker”) must –
- (a) publish a notice stating the reasons for the decision in such manner as the decision maker considers appropriate for the purpose of bringing the matters to which the notice relates to the attention of persons likely to be interested, and 10
 - (b) send a copy of the notice to the licence holder to whose licence, or to whom, the decision relates.
- (3) In preparing a notice under subsection (2) the decision maker must have regard to the need for excluding, so far as that is practicable, any matter which relates to the affairs of a particular individual or body of persons (corporate or unincorporate), where the decision maker considers that publication of that matter would or might seriously and prejudicially affect the interests of that individual or body. 15
- (4) In this Part “final order” and “provisional order” are to be interpreted in accordance with section 25(8) of the Electricity Act 1989, in the application of that provision by virtue of regulations within section 32(2). 20

Enforcement

32 Enforcement of obligations of licence holders

Schedule 3 makes provision for the enforcement of conditions of licences and of other requirements imposed on licence holders by or under this Part. 25

False statements

33 Making of false statements etc

- (1) A person who, in giving any information or making any application for the purposes of any provision of this Part, or of any regulation made under any provision of this Part, makes any statement which the person knows to be false in a material particular, or recklessly makes any statement which is false in a material particular, is guilty of an offence and liable – 30
- (a) on summary conviction in England and Wales, to a fine;
 - (b) on summary conviction in Scotland or Northern Ireland, to a fine not exceeding the statutory maximum; 35
 - (c) on conviction on indictment, to a fine.

- (2) Proceedings for an offence under subsection (1) must not in England and Wales be instituted except by or with the consent of the Secretary of State or the Director of Public Prosecutions.
- (3) Proceedings for an offence under subsection (1) must not in Northern Ireland be instituted except by or with the consent of the Director of Public Prosecutions for Northern Ireland. 5

Criminal liability and procedure

34 Liability of officers of entities

- (1) Where an offence under this Part committed by a body corporate is proved –
 - (a) to have been committed with the consent or connivance of an officer of the body corporate, or 10
 - (b) to be attributable to neglect on the part of an officer of the body corporate,
that officer (as well as the body corporate) commits the offence and is liable to be proceeded against and dealt with accordingly. 15
- (2) In subsection (1) “officer”, in relation to a body corporate, means –
 - (a) any director, manager, secretary or other similar officer of the body corporate, or
 - (b) any person purporting to act in any such capacity.
- (3) In subsection (2) “director”, in relation to a body corporate whose affairs are managed by its members, means a member of the body corporate. 20
- (4) Where an offence under this Part is committed by a Scottish partnership and is proved to have been committed with the consent or connivance of a partner, or to be attributable to any neglect on the part of a partner, that partner (as well as the partnership) commits the offence and is liable to be proceeded against and dealt with accordingly. 25

35 Criminal proceedings

- (1) Proceedings for an offence under this Part may be taken, and the offence may for all incidental purposes be treated as having been committed, in any place in the United Kingdom. 30
- (2) Section 3 of the Territorial Waters Jurisdiction Act 1878 (restriction on prosecutions) does not apply to any proceedings for an offence under this Part.
- (3) Proceedings for an offence under this Part alleged to have been committed in an offshore place may not be instituted in England and Wales except – 35
 - (a) by the Secretary of State or a person authorised by the Secretary of State, or
 - (b) by or with the consent of the Director of Public Prosecutions.

- (4) Proceedings for an offence under this Part alleged to have been committed in an offshore place may not be instituted in Northern Ireland except—
- (a) by the Secretary of State or a person authorised by the Secretary of State, or
 - (b) by or with the consent of the Director of Public Prosecutions for Northern Ireland. 5
- (5) In this section “offshore place” means a place in, under or over—
- (a) the territorial sea adjacent to the United Kingdom, or
 - (b) waters in a Gas Importation and Storage Zone (within the meaning given by section 1 of the Energy Act 2008). 10

CHAPTER 2

FUNCTIONS WITH RESPECT TO COMPETITION

36 Functions under the Enterprise Act 2002

- (1) The functions to which subsection (2) applies are to be concurrent functions of the economic regulator and the CMA. 15
- (2) This subsection applies to the functions of the CMA under Part 4 of the Enterprise Act 2002 (other than sections 166, 171 and 174E) so far as those functions are exercisable by the CMA Board (within the meaning of Schedule 4 to the Enterprise and Regulatory Reform Act 2013) and relate to commercial activities connected with relevant storage and transport activities. 20
- (3) So far as necessary for the purposes of, or in connection with, subsections (1) and (2)—
- (a) references in Part 4 of the Enterprise Act 2002 to the CMA (including references in provisions of that Act applied by that Part) are to be construed as including references to the economic regulator (except in sections 166, 171 and 174E of that Act and in any other provision of that Act where the context otherwise requires); 25
 - (b) references in that Part to section 5 of that Act are to be construed as including references to section 28(1) and (2) of this Act.
- (4) Section 130A of the Enterprise Act 2002 is to have effect in its application in relation to the economic regulator by virtue of subsections (1) and (2)—
- (a) as if for subsection (1) of that section there were substituted—
 - “(1) Where the Gas and Electricity Markets Authority—
 - (a) is proposing to carry out its functions under section 28(1) or (2) of the Energy Act 2023 in relation to a matter for the purposes mentioned in subsection (2), and 35
 - (b) considers that the matter is one in respect of which it would be appropriate for the Gas and Electricity Markets Authority to exercise its powers under section 40

- 174 (investigation) in connection with deciding whether to make a reference under section 131, the Gas and Electricity Markets Authority must publish a notice under this section (referred to in this Part as a “market study notice”).”, and” 5
- (b) as if in subsection (2)(a) of that section, for “the acquisition or supply of goods or services of one or more than one description in the United Kingdom” there were substituted “commercial activities connected with activities to which section 36(2) of the Energy Act 2023 applies”.
- (5) It is to be the duty of the economic regulator, for the purpose of assisting a CMA group in carrying out an investigation on a market investigation reference made by the economic regulator (under section 131 of the Enterprise Act 2002) by virtue of subsection (1), to give to the group— 10
- (a) any information which is in the economic regulator’s possession and which relates to matters falling within the scope of the investigation and— 15
- (i) is requested by the group for that purpose, or
- (ii) is information which, in the economic regulator’s opinion, it would be appropriate for that purpose to give to the group without any such request, and 20
- (b) any other assistance which the group may require and which it is within the economic regulator’s power to give, in relation to any such matters,
- and the group must, for the purposes of carrying out any such investigation, take into account any information given to them for that purpose under this subsection. 25
- (6) Insubsection (5) “CMA group” has the same meaning as in Schedule 4 to the Enterprise and Regulatory Reform Act 2013.

37 Functions under the Competition Act 1998

- (1) The economic regulator is to be entitled to exercise, concurrently with the CMA, the functions of the CMA under the provisions of Part 1 of the Competition Act 1998 (other than sections 31D(1) to (6), 38(1) to (6), 40B(1) to (4) and 51), so far as relating to— 30
- (a) agreements, decisions or concerted practices of the kind mentioned in section 2(1) of that Act, or 35
- (b) conduct of the kind mentioned in section 18(1) of that Act, or which relate to the carrying on of relevant transport and storage activities.
- (2) So far as necessary for the purposes of, or in connection with, the provisions of subsection (1), references in Part 1 of the Competition Act 1998 to the CMA are to be read as including a reference to the economic regulator (except in sections 31D(1) to (6), 38(1) to (6), 40B(1) to (4), 51, 52(6) and (8) and 54 of that Act and in any other provision of that Act where the context otherwise requires). 40

38 Sections 36 and 37: supplementary

- (1) Before the CMA or the economic regulator first exercises in relation to any matter functions which are exercisable concurrently by virtue of section 36(1) or 37(1), it must consult the other.
- (2) Neither the CMA nor the economic regulator is to exercise in relation to any matter functions which are exercisable concurrently virtue of section 36(1) or 37(1) if functions which are so exercisable have been exercised in relation to that matter by the other. 5
- (3) If any question arises as to whether section 36(1) or 37(1) applies to any particular case, that question is to be referred to and determined by the Secretary of State, and no objection may be taken to anything done under— 10
 - (a) Part 4 of the Enterprise Act 2002, or
 - (b) Part of the Competition Act 1998 (other than sections 31D(1) to (6), 38(1) to (6), 40B(1) to (4) and 51).

by or in relation to the economic regulator on the ground that it should have been done by or in relation to the CMA. 15
- (4) In sections 36 and 37 “relevant storage and transport activities” means—
 - (a) activities such as are mentioned in section 2(2), and
 - (b) activities ancillary to such activities. 20

CHAPTER 3

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REPORTING REQUIREMENTS

39 Forward work programmes

- (1) The economic regulator must, before each financial year, publish a document (the “transport and storage forward work programme”) containing a general description of the relevant projects, other than those comprising routine activities in the exercise of its functions, which it plans to undertake during the year. 25
- (2) That description must include the objectives of each relevant project.
- (3) The forward work programme for any year must also include an estimate of the overall expenditure which the economic regulator expects to incur during the year in the exercise of its relevant functions. 30
- (4) Before publishing the forward work programme for any year, the economic regulator must give notice—
 - (a) containing a draft of the transport and storage forward work programme, and 35
 - (b) specifying the time within which representations or objections to the proposals contained in it may be made,

and must consider any representations or objections which are duly made and not withdrawn.

- (5) The notice under subsection (4) must be published by the economic regulator in such manner as it considers appropriate for the purpose of bringing the matters contained in it to the attention of persons likely to be affected by them.
- (6) In this section—
 - “relevant functions” means functions of the economic regulator under this Part;
 - “relevant project” means a project relating to the economic regulator’s functions under this Part.

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40 Information in relation to CCUS strategy and policy statement

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- (1) As soon as reasonably practicable after the designation of a statement as the CCUS strategy and policy statement for the purposes of this Part, the economic regulator must publish a document setting out the required information in relation to the statement.
- (2) The economic regulator must include the required information in relation to a CCUS strategy and policy statement in the transport and storage forward work programme for each financial year, subject to making such modifications to the information as the economic regulator considers appropriate from the version as last published under this subsection.
- (3) The required information in relation to a CCUS strategy and policy statement to be set out in a document or forward work programme is—
 - (a) the strategy the economic regulator intends to adopt for the purpose of furthering the delivery of the policy outcomes contained in the statement (both in respect of the year in or for which the document or programme is issued and beyond);
 - (b) the things the economic regulator proposes to do in implementing that strategy (including when the economic regulator proposes to do them);
 - (c) the ways in which the economic regulator has had regard to the strategic priorities contained in the statement in setting out the information required under paragraphs (a) and (b).
- (4) The duty under subsection (1) does not apply if—
 - (a) the economic regulator does not think it reasonably practicable to publish the document mentioned in that subsection before the time when the economic regulator is next required to publish a transport and storage forward work programme, and
 - (b) the economic regulator includes the required information in that forward work programme.
- (5) The duty under subsection (2) does not apply in relation to the first financial year beginning after the designation of the statement if—

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- (a) the economic regulator does not think it reasonably practicable to include the required information in the transport and storage forward work programme for that year, and
 - (b) the economic regulator includes the required information in a document published under subsection (1). 5
- (6) The duty under subsection (2) does not apply in relation to a financial year if the Secretary of State gives notice to the economic regulator under this subsection that the statement’s designation—
- (a) will be withdrawn before the beginning of the year, or
 - (b) is expected to have been withdrawn before the beginning of the year. 10
- (7) Subsections (4) and (5) of section 39 (notice requirements) apply to a document published under subsection (1) as they apply to a transport and storage forward work programme.
- (8) In this section—
- “CCUS strategy and policy statement”, “policy outcomes” and “strategic priorities” have the same meaning as in Chapter 3 of Part 2 (see section 91); 15
 - “designation”, in relation to a CCUS strategy and policy statement, means designation of the statement by the Secretary of State under section 91; 20
 - “transport and storage forward work programme” has the meaning given by section 39.

41 Annual report on transport and storage licensing functions

- (1) The economic regulator must, as soon as practicable after the end of each financial year, make to the Secretary of State a report (the “annual T&S report” for that year) on—
- (a) the exercise of its functions under this Part during that year including a general survey of developments in respect of matters falling within the scope of those functions, and
 - (b) the activities of the CMA during that year in respect of any references made by the economic regulator by virtue of section 36(1). 30
- (2) The annual T&S report for each year must include—
- (a) a report on the progress of the projects described in the transport and storage forward work programme for that year;
 - (b) a summary of final and provisional orders made and penalties imposed by the economic regulator during the year; 35
 - (c) a report on such other matters as the Secretary of State may from time to time require.
- (3) The annual T&S report for each year must also include a report on—
- (a) the ways in which the economic regulator has carried out its duties under section 92(1) in relation to the CCUS strategy and policy 40

- statement (so far as the statement's designation was in effect during the whole or any part of the year), and
- (b) the extent to which the economic regulator has done the things set out under section 40 in a transport and storage forward work programme or other document as the things the economic regulator proposed to do during that year in implementing its strategy for furthering the delivery of the policy outcomes contained in the statement (see subsection (3)(b) of that section). 5
- (4) The report mentioned in subsection (3) must, in particular, include—
- (a) the economic regulator's assessment of how the carrying out of its functions under this Part during the year has contributed to the delivery of the policy outcomes contained in the CCUS strategy and policy statement, and 10
- (b) if the economic regulator has failed to do any of the things mentioned in subsection (3)(b), an explanation for the failure and the actions the economic regulator proposes to take to remedy it. 15
- (5) In subsections (3) and (4)—
- “CCUS strategy and policy statement” and “policy outcomes” have the same meaning as in Chapter 3 of Part 2 (see section 91);
- “transport and storage forward work programme” has the meaning given by section 39(1). 20
- (6) The Secretary of State must consult the economic regulator before exercising the power under subsection (2)(c) in relation to any matter.
- (7) The Secretary of State must—
- (a) lay a copy of each annual T&S report before each House of Parliament, 25
- (b) send a copy of the report to the Scottish Ministers, the Welsh Ministers and the Department for the Economy in Northern Ireland, and
- (c) arrange for the report to be published in such manner as the Secretary of State considers appropriate.
- (8) The Scottish Ministers must lay a copy of each annual T&S report before the Scottish Parliament. 30
- (9) The Welsh Ministers must lay a copy of each annual T&S report before Senedd Cymru.
- (10) The Department for the Economy in Northern Ireland must lay a copy of each annual T&S report before the Northern Ireland Assembly. 35
- (11) In making or preparing any report under this section the economic regulator must have regard to the need for excluding, so far as practicable, any matter which relates to the affairs of a particular individual or body of persons (corporate or unincorporate), where publication of that matter would or might, in the opinion of the economic regulator, seriously and prejudicially affect the interests of that individual or body. 40

CHAPTER 4

SPECIAL ADMINISTRATION REGIME

Transport and storage administration orders

42 Transport and storage administration orders

- (1) A transport and storage administration order means an order which— 5
- (a) is made by the court in relation to a company which holds a licence under section 7, and
- (b) directs that, while the order is in force, the affairs, business and property of the company are to be managed by a person appointed by the court. 10
- (2) In this Chapter—
- (a) a transport and storage administration order is referred to as a T&S administration order,
- (b) a company which holds a licence under section 7 is referred to as a T&S company, and 15
- (c) the person appointed in relation to a T&S company for the purposes of a T&S administration order is referred to as the T&S administrator of the company.
- (3) The T&S administrator of a company must manage the company’s affairs, business and property, and exercise and perform all the powers and duties of a T&S administrator, so as to achieve the objective set out in section 43. 20
- (4) In relation to a T&S administration order applying to a non-GB company, references in this section to the affairs, business and property of the company are references only—
- (a) to its affairs and business so far as carried on in Great Britain or a relevant controlled place, and 25
- (b) to its property in Great Britain or a relevant controlled place.
- (5) In this section, “relevant controlled place” means a controlled place within the meaning of section 17(3) to (4) of the Energy Act 2008 other than a place— 30
- (a) in Great Britain,
- (b) in Northern Ireland, or
- (c) in, under or over so much of the internal waters and territorial sea of the United Kingdom as are adjacent to Northern Ireland.

43 Objective of a transport and storage administration

- (1) The objective of a transport and storage administration is to secure— 35
- (a) that the activities authorised by the licence of the T&S company to which the administration relates commence, or continue, in a manner which—

- (i) is efficient and economical, and
 - (ii) ensures the safety and security of the transport and storage network, or the part of that network, to which the licence relates, and
 - (b) that it becomes unnecessary, by one or both of the following means, for the T&S administration order to remain in force for that purpose. 5
- (2) Those means are –
 - (a) the rescue as a going concern of the company subject to the T&S administration order, and
 - (b) transfers falling within subsection (3). 10
- (3) A transfer falls within this subsection if it is a transfer as a going concern –
 - (a) to another company, or
 - (b) as respects different parts of the undertaking of the company subject to the T&S administration order, to two or more different companies, of so much of that undertaking as it is appropriate to transfer for the purpose of achieving the objective of the transport and storage administration. 15
- (4) The means by which transfers falling within subsection (3) may be effected include, in particular –
 - (a) a transfer of the undertaking of the company subject to the T&S administration order, or of a part of its undertaking, to a wholly-owned subsidiary of that company, and 20
 - (b) a transfer to a company of securities of a wholly-owned subsidiary to which there has been a transfer falling within paragraph (a).
- (5) The objective of a transport and storage administration may be achieved by a transfer falling within subsection (3) to the extent only that –
 - (a) the rescue as a going concern of the company subject to the T&S administration order is not reasonably practicable or is not reasonably practicable without such a transfer,
 - (b) the rescue of that company as a going concern will not achieve that objective or will not do so without such a transfer, 30
 - (c) such a transfer would produce a result for the company's creditors as a whole that is better than the result that would be produced without it, or
 - (d) such a transfer would, without prejudicing the interests of those creditors as a whole, produce a result for the company's members as a whole that is better than the result that would be produced without it. 35
- (6) In subsection (1)(a) –
 - (a) the reference to the activities authorised by the licence of the T&S company to which the administration relates includes a reference to any construction work or other activities needing to be carried out to commence those activities, and 40

- (b) the reference to the safety and security of the transport and storage network, or the part of that network, to which the licence relates includes a reference to the safety and security of any infrastructure and facilities being constructed for that network, or that part of that network.

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Application and amendment of the Energy Act 2004

44 Application of certain provisions of the Energy Act 2004

- (1) Sections 156 to 167 of, and Schedules 20 and 21 to, the Energy Act 2004 (special administration regime for energy licensees) apply in relation to a T&S administration order as they apply in relation to an energy administration order within the meaning given by section 154(1) of that Act, but with the modifications set out in subsections (2) to (4). 10
- (2) In the application of those provisions generally –
- (a) for “energy administration”, in each place where it occurs, substitute “transport and storage administration”; 15
- (b) for “energy administrator”, in each place where it occurs, substitute “T&S administrator”;
- (c) for “Great Britain”, in each place it occurs (other than paragraphs 4(2)(e) and 11(4) and (7) of Schedule 21), substitute “Great Britain or a relevant controlled place”; 20
- (d) for “a protected energy company”, in each place where it occurs, substitute “a T&S company”.
- (3) In the application of Schedule 20 –
- (a) in paragraph 32(1)(d), for the words from ““energy administration application”” to “Energy Act 2004” substitute ““transport and storage administration application” means an application to the court for a transport and storage administration order under Chapter 3 of Part 3 of the Energy Act 2004, as applied by section 44 of the Energy Act 2023”; 25
- (b) in paragraph 32(1)(e), for “section 155 of the Energy Act 2004” substitute “section 43 of the Energy Act 2023”; 30
- (c) in paragraph 36, for “section 154(4) of this Act” substitute “section 42(4) of the Energy Act 2023”;
- (d) in paragraph 43, after “the Energy Act 2004” insert “and section 44 of the Energy Act 2023”; 35
- (e) in paragraph 44(5), after “the Energy Act 2004” insert “and section 44 of the Energy Act 2023”;
- (f) in paragraph 45, after “section 157(1)(e) of this Act” insert “as applied by section 44 of the Energy Act 2023”;
- (g) omit paragraph 46 (but see section 48 of this Act); 40
- (h) in paragraph 47, after “Part 1 of this Schedule” insert “and section 44 of the Energy Act 2023”.

- (4) In the application of Schedule 21 –
- (a) for “an energy transfer scheme”, in each place where it occurs, substitute “a T&S transfer scheme”;
 - (b) for “old energy company”, in each place where it occurs, substitute “old T&S company”; 5
 - (c) for “new energy company”, in each place where it occurs, substitute “new T&S company”;
 - (d) in paragraph 1(b), for “section 155(3)” substitute “section 43(3) of the Energy Act 2023”;
 - (e) in paragraph 3(1), for “an “energy transfer scheme”” substitute “a “T&S transfer scheme””; 10
 - (f) in paragraphs 3(8) and 9(6), for “GEMA” substitute “–
 - (a) GEMA,
 - (b) the Health and Safety Executive,
 - (c) the Oil and Gas Authority, 15
 - (d) the appropriate devolved authorities (if any), and
 - (e) such other persons as the Secretary of State considers appropriate.”;
 - (g) in paragraph 5, after sub-paragraph (4) insert –
 - “(5) This paragraph also applies in relation to any licence or permit that the relevant licence mentioned in sub-paragraph (1) requires its holder to hold as it applies in relation to the relevant licence.”; 20
 - (h) in paragraphs 6(3) and 11(2), for “the energy transfer scheme” substitute “the T&S transfer scheme”; 25
 - (i) in paragraph 12, for “section 155” substitute “section 43 of the Energy Act 2023”;
 - (j) after paragraph 13 insert –
 - “14 For the purposes of paragraphs 3(8)(e) and 9(6)(e) the “appropriate devolved authorities” are – 30
 - (a) the Welsh Ministers, if provision making the scheme or (as the case may be) modification would be within the legislative competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006); 35
 - (b) the Scottish Ministers, if provision making the scheme or (as the case may be) modification would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament.” 40
- (5) Sections 171 and 196 of the Energy Act 2004 (interpretation) apply for the purposes of the application by subsection (1) of the provisions mentioned in that subsection, but with the modifications set out in subsection (6).

- (6) In the application of section 171(1)–
- (a) insert, at the appropriate places, the following definitions–
- ““objective of the transport and storage administration” is to be construed in accordance with section 43 of the Energy Act 2023;”;
- ““relevant controlled place” has the meaning give by section 42(5) of the Energy Act 2023;”;
- ““T&S company” has the meaning given by section 42(2) of the Energy Act 2023;”;
- ““transport and storage administration order” has the meaning given by section 42(1) of the Energy Act 2023;”;
- ““transport and storage administration rules” means the rules made under section 411 of the 1986 Act by virtue of section 159(3) of this Act, for the purpose of giving effect to this Chapter as applied by section 44 of the Energy Act 2023;”;
- (b) for the definition of “energy administrator” substitute–
- ““T&S administrator” has the meaning given by section 49 of the Energy Act 2023;”;
- (c) for the definition of “relevant licence” substitute–
- ““relevant licence” means a licence under section 7 of the Energy Act 2023.”

45 Conduct of administration, transfer schemes etc

In section 159(3) of the Energy Act 2004 (conduct of administration, transfer schemes, etc under Chapter 3 of Part 3 of that Act), for “or section 33 of the Nuclear Energy (Financing) Act 2022” substitute “, section 33 of the Nuclear Energy (Financing) Act 2022 or section 44 of the Energy Act 2023”.

Licence modifications

46 Modification of conditions of licences

- (1) The Secretary of State may modify the conditions of a T&S company’s licence so that they include–
- (a) conditions relating to the recovery of amounts owed to the Secretary of State by the T&S company by virtue of, or otherwise relating to, financial assistance given by the Secretary of State while a T&S administration order is in force in relation to the T&S company;
- (b) conditions relating to raising of funds for the purpose of meeting of expenses arising by virtue of the order.
- (2) The Secretary of State may exercise the power under subsection (1) only if a T&S administration order is in force in relation to the T&S company.

- (3) Before making a modification under subsection (1), the Secretary of State must consult—
 - (a) the economic regulator,
 - (b) the Oil and Gas Authority,
 - (c) the appropriate devolved authorities (if any), and 5
 - (d) such other persons as the Secretary of State considers appropriate.
- (4) The power to make modifications under subsection (1) includes power to make such incidental, consequential or transitional modifications as the Secretary of State considers necessary or expedient.
- (5) In subsection (1)(a), “financial assistance” means grants, loans, guarantees or indemnities, or any other kind of financial assistance. 10
- (6) For the purposes of subsection (3)(c), the “appropriate devolved authorities” are—
 - (a) the Welsh Ministers, if provision making the modification would be within the legislative competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006); 15
 - (b) the Scottish Ministers, if provision making the modification would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament. 20

Powers to modify enactments

47 Modification under the Enterprise Act 2002

- (1) The power to modify or apply enactments conferred on the Secretary of State by each of the sections of the Enterprise Act 2002 mentioned in subsection (2) includes power to make such consequential modifications of this Chapter as the Secretary of State considers appropriate in connection with any other provision made under that section. 25
- (2) Those sections are—
 - (a) sections 248 and 277 (amendments consequential on that Act); and 30
 - (b) section 254 (power to apply insolvency law to foreign companies).
- (3) In section 170(1) of the Energy Act 2004 (modification of Chapter 3 of Part 3 of that Act under the Enterprise Act 2002), for “or section 33 of the Nuclear Energy (Finance) Act 2022” substitute “, section 33 of the Nuclear Energy (Finance) Act 2022 or section 44 of the Energy Act 2023”. 35

48 Power to make further modifications of insolvency legislation

- (1) The Secretary of State may by regulations—
 - (a) provide for insolvency legislation to apply in relation to any provision made by or under this Chapter;

- (b) make such modifications of insolvency legislation as the Secretary of State considers appropriate in relation to any provision made by or under this Chapter (including any insolvency legislation that is applied under paragraph (a)).
- (2) In relation to regulations under subsection (1), "insolvency legislation" means – 5
- (a) the Insolvency Act 1986,
- (b) Chapter 3 of Part 3 of the Energy Act 2004, and
- (c) any other provision that relates to insolvency, or makes provision by reference to anything that is or may be done under the Insolvency Act 1986, and is – 10
- (i) contained in an Act passed before this Act or in the same Session, or
- (ii) made under an Act before the regulations come into force.
- (3) Provision made under subsection (1) may amend this Chapter.
- (4) Regulations under this section are subject to the affirmative procedure. 15

Interpretation

49 Interpretation of Chapter 4

- (1) In this Chapter –
- “business”, “member” and “property” have the same meanings as in the Insolvency Act 1986; 20
- “company” means –
- (a) a company registered under the Companies Act 2006, or
- (b) an unregistered company;
- “court”, in relation to a company, means the court –
- (a) having jurisdiction to wind up the company, or 25
- (b) that would have such jurisdiction apart from section 221(2) or 441(2) of the Insolvency Act 1986 (exclusion of winding up jurisdiction in case of companies having principal place of business in, or incorporated in, Northern Ireland);
- “modification” includes omission, addition or alteration, and cognate expressions are to be construed accordingly; 30
- “non-GB company” means a company incorporated outside Great Britain;
- “objective of a transport and storage administration” is to be construed in accordance with section 43;
- “subsidiary” and “wholly-owned subsidiary” have the meaning given by section 1159 of the Companies Act 2006; 35
- “T&S administration order” (or “transport and storage administration order”) has the meaning given by section 42(1);
- “T&S administrator” has the meaning given by section 42(2)(c) and is to be construed in accordance with subsection (2) of this section; 40
- “T&S company” has the meaning given by section 42(2)(b);

“unregistered company” means a company that is not registered under the Companies Act 2006.

- (2) In this Chapter references to the T&S administrator of a company –
- (a) include references to a person appointed under paragraph 91 or 103 of Schedule B1 to the Insolvency Act 1986, as applied by Part 1 of Schedule 20 to the Energy Act 2004 and section 44 of this Act to be the T&S administrator of that company, and 5
 - (b) where two or more persons are appointed to be the T&S administrator of that company, are to be construed in accordance with the provision made under section 158(5) of the Energy Act 2004, as applied by section 44 of this Act. 10

CHAPTER 5

TRANSFER SCHEMES

50 Transfer schemes

- (1) This section applies where – 15
- (a) a termination event has arisen in relation to a licence, and
 - (b) the economic regulator has complied with its duties under section 17 in relation to the termination event.
- (2) The Secretary of State may make a scheme for the transfer of designated property, rights or liabilities of the licence holder to a person falling within subsection (3), or two or more of those persons, with the objective of – 20
- (a) securing that the activities authorised by the licence continue in a manner which –
 - (i) is efficient and economical, and
 - (ii) ensures the safety and security of the transport and storage network, or the part of that network, to which the licence relates, or 25
 - (b) facilitating the cessation of the transportation and injection of carbon dioxide authorised by the licence and ensuring the safety and security of the transport and storage network, or the part of that network, to which the licence relates. 30
- (3) The persons to whom a scheme may transfer designated property, rights or liabilities are –
- (a) the Secretary of State;
 - (b) any person the Secretary of State considers to be an appropriate person to achieve the objective in subsection (2)(a) or (as the case may be) (b). 35
- (4) In determining whether a person is an appropriate person for the purposes of subsection (3)(b), the Secretary of State must take into account whether the person would be able to meet the conditions and requirements of any licence or permit that would be transferred to the person under the proposed scheme. 40

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- (5) The Secretary of State may not make a scheme without the consent of—
- (a) the licence holder, and
 - (b) where the scheme would transfer designated property, rights and liabilities to a person or persons falling within subsection (3)(b), each such person. 5
- (6) In this section—
- “designated”, in relation to a scheme, means specified in or determined in accordance with the scheme;
- “termination event” has the meaning given by section 17.
- 51 Consultation in relation to transfers** 10
- (1) If the Secretary of State proposes to make a scheme under section 50, the Secretary of State must consult the licence holder mentioned in section 50(2) (“the proposed transferor”) before making the scheme.
- (2) If the Secretary of State proposes to make a scheme under section 50 which transfers designated property, rights or liabilities to a person or persons falling within section 50(3)(b) (“the proposed transferee or transferees”), the Secretary of State must consult before making the scheme—
- (a) the proposed transferee or transferees, and
 - (b) where a proposed transferee is not a public authority—
 - (i) the economic regulator, 20
 - (ii) the Health and Safety Executive,
 - (iii) the Oil and Gas Authority,
 - (iv) the appropriate devolved authorities (if any), and
 - (v) such other persons as the Secretary of State considers appropriate. 25
- (3) The matters on which the Secretary of State is to consult the proposed transferor, and the proposed transferee or transferees, must include the provision the proposed scheme should make.
- (4) The matters on which the Secretary of State is to consult a body or person falling within subsection (2)(b)(i) to (v) must include whether the proposed transferee is an appropriate person, or whether the proposed transferees are appropriate persons, for the purposes of section 50(3)(b). 30
- (5) For the purposes of subsection (2)(b)(iv) the “appropriate devolved authorities” are—
- (a) the Welsh Ministers, if provision making the proposed scheme would be within the legislative competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006); 35
 - (b) the Scottish Ministers, if provision making the proposed scheme would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament; 40

- (c) the Department for the Economy in Northern Ireland, if provision making the proposed scheme –
 - (i) would be within the legislative competence of the Northern Ireland Assembly if it were contained in an Act of that Assembly, and
 - (ii) would not, if it were contained in a Bill in the Northern Ireland Assembly, result in the Bill requiring the consent of the Secretary of State under section 8 of the Northern Ireland Act 1998.

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- (6) In this section, “designated” has the same meaning as in section 50.

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52 Conduct of transfer schemes

Schedule 4 contains further provision about transfer schemes under section 50.

CHAPTER 6

MISCELLANEOUS AND GENERAL

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53 Cooperation of storage licensing authority with economic regulator

- (1) In Chapter 3 of Part 1 of the Energy Act 2008 (storage of carbon dioxide), after section 34 insert –

“34A Cooperation with economic regulator

- (1) This section applies where a licence holder also holds a relevant licence.
- (2) The licensing authority who granted the licence to the licence holder must provide such assistance as the economic regulator may reasonably require in carrying out its functions in relation to the relevant licence.
- (3) The licensing authority must, in particular, inform the economic regulator if it becomes aware of –
 - (a) circumstances that have arisen, or are likely to arise, in relation to the activities authorised by the licence which, in the opinion of the licensing authority, could affect the carrying on of activities authorised by the relevant licence;
 - (b) circumstances that have arisen, or are likely to arise, in which the licence or a storage permit granted under the licence may be terminated.
- (4) In this section –
 - “economic regulator” has the same meaning as in Part 1 of the Energy Act 2023 (see section 55 of that Act);
 - “relevant licence” means a licence under section 7 of the Energy Act 2023;
 - “storage permit” means a storage permit within the meaning of –

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- (a) regulation 1(3) of the Storage of Carbon Dioxide (Licensing etc) Regulations 2010 (S.I. 2010/2221), or
- (b) regulation 1(3) of the Storage of Carbon Dioxide (Licensing etc) (Scotland) Regulations 2011 (S.S.I. 2011/24).

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34B Information sharing with economic regulator

- (1) A licensing authority may provide information relating to a licence or a storage permit granted under a licence to the economic regulator for the purpose of enabling or facilitating the exercise of the economic regulator’s functions in relation to a relevant licence. 10
- (2) Except as provided by subsection (3), the disclosure of information under this section does not breach—
 - (a) any obligation of confidence owed by the person making the disclosure, or
 - (b) any other restriction on the disclosure of information (however imposed). 15
- (3) This section does not authorise or require a disclosure of information if the disclosure would contravene the data protection legislation (but in determining whether a disclosure would do so, the power conferred by subsection (1) is to be taken into account). 20
- (4) In this section—
 - “the data protection legislation” has the same meaning as in the Data Protection Act 2018 (see section 3 of that Act);
 - “economic regulator”, “relevant licence” and “storage permit” have the same meaning as in section 34A; 25
 - “information” includes advice.”
- (2) In section 8 of the Energy Act 2016 (matters to which the Oil and Gas Authority must have regard), in subsection (1), in the paragraph headed “Collaboration”, after “government of the United Kingdom” insert “, with the Gas and Electricity Markets Authority,”. 30

54 Amendments related to Part 1

Schedule 5 contains amendments related to this Part.

55 Interpretation of Part 1

In this Part—

- “carbon dioxide stream” means a flow of substances that results from carbon dioxide capture processes; 35
- “CMA” means the Competition and Markets Authority;

- “contravention”, in relation to any direction, condition, requirement, regulation or order, includes any failure to comply with it and cognate expressions are to be construed accordingly;
- “the data protection legislation” has the same meaning as in the Data Protection Act 2018 (see section 3 of that Act); 5
- “economic regulator” has the meaning given by section 1(2);
- “enactment” includes –
- (a) an enactment contained in subordinate legislation (as defined in section 21 of the Interpretation Act 1978);
 - (b) an enactment contained in, or in an instrument made under, a Measure or Act of Senedd Cymru; 10
 - (c) an enactment contained in, or in an instrument made under, an Act of the Scottish Parliament;
 - (d) an enactment contained in, or in an instrument made under, Northern Ireland legislation; 15
 - (e) any retained direct EU legislation;
- “final order” has the meaning given by section 31(4);
- “financial year” means a financial year of the economic regulator;
- “functions” includes powers and duties;
- “geological formation” means a lithostratigraphical subdivision within which distinct rock layers can be found and mapped; 20
- “geological storage”, in relation to carbon dioxide, means storage of carbon dioxide streams in underground geological formations with a view to the permanent containment of carbon dioxide (and references to geological storage are to be read as including injection); 25
- “grantor” has the meaning given by section 9(9);
- “licence” means a licence under section 7, and “licence holder” is to be interpreted accordingly;
- “licensable activities” has the meaning given by section 1(10);
- “licensable means of transportation” has the meaning given by section 2(3); 30
- “modifications” includes additions, alterations and omissions and cognate expressions are to be construed accordingly;
- “operates”, in relation to a site for the geological storage of carbon dioxide, is to be interpreted in accordance with section 2(9); 35
- “provisional order” has the meaning given by section 31(4);
- “transport and storage network” has the meaning given by section 1.

PART 2

CARBON DIOXIDE CAPTURE, STORAGE ETC AND HYDROGEN PRODUCTION

CHAPTER 1

REVENUE SUPPORT CONTRACTS

Key definitions 5

56 Chapter 1: interpretation

(1) In this Chapter –

- “allocation body” has the meaning given by section 68(5)(d);
- “allocation notification” has the meaning given by section 70(3);
- “carbon capture allocation body” has the meaning given by section 68(5)(b); 10
- “carbon capture counterparty” has the meaning given by section 63(4);
- “carbon capture entity” has the meaning given by section 63(8);
- “carbon capture revenue support contract” has the meaning given by section 63(2); 15
- “electricity supplier” means a person who holds a licence under –
 - (a) section 6(1)(d) of the Electricity Act 1989, or
 - (b) Article 10(1)(c) of the Electricity (Northern Ireland) Order 1992 (S.I. 1992/231 (N.I. 1));
- “eligible carbon capture entity” is to be interpreted in accordance with regulations by virtue of section 63(3); 20
- “eligible low carbon hydrogen producer” is to be interpreted in accordance with regulations by virtue of section 61(3);
- “gas shipper” means a person who holds a licence under section 7A(2) of the Gas Act 1986; 25
- “gas supplier” means a person who holds a licence under –
 - (a) section 7A(1) of the Gas Act 1986, or
 - (b) Article 8(1)(c) of the Gas (Northern Ireland) Order 1996 (S.I. 1996/275 (N.I. 2));
- “hydrogen levy administrator” has the meaning given by section 65(6); 30
- “hydrogen production allocation body” has the meaning given by section 68(5)(a);
- “hydrogen production counterparty” has the meaning given by section 61(4);
- “hydrogen production revenue support contract” has the meaning given by section 61(2); 35
- “low carbon hydrogen producer” has the meaning given by section 61(8);
- “relevant market participant” has the meaning given by section 66(8);
- “revenue support contract” has the meaning given by section 57(2);

“revenue support counterparty” has the meaning given by section 58(6);
“revenue support regulations” has the meaning given by section 57(4);
“transport and storage counterparty” has the meaning given by section 59(3);
“transport and storage revenue support contract” has the meaning given by section 59(2).

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- (2) In this Chapter references to “allocating” a hydrogen production revenue support contract or carbon capture revenue support contract to a person are to be interpreted in accordance with section 68(5).

Provision of revenue support under certain contracts

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57 Revenue support contracts

- (1) The Secretary of State may by regulations make provision about revenue support contracts (including the funding of liabilities and costs in relation to such contracts).

- (2) In this Chapter “revenue support contract” means –
- (a) a transport and storage revenue support contract (see section 59(2)),
 - (b) a hydrogen production revenue support contract (see section 61(2)),
or
 - (c) a carbon capture revenue support contract (see section 63(2)).

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- (3) The provision made by this Chapter is without prejudice to the generality of subsection (1).

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- (4) In this Part “revenue support regulations” means regulations under this section.

- (5) Revenue support regulations may –
- (a) make different provision for different cases or circumstances or for different purposes;
 - (b) provide for exemptions or other exceptions to any requirement imposed by the regulations.

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- (6) Revenue support regulations may –
- (a) include incidental, supplementary or consequential provision;
 - (b) make transitory or transitional provision or savings.

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- (7) Revenue support regulations may confer any function on any person.

- (8) Revenue support regulations may provide for a function conferred on a person to be exercisable on that person’s behalf by another person.

- (9) Regulations of any of the following kinds are subject to the affirmative procedure –

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- (a) the first revenue support regulations that make (with or without other provision) provision falling within any of sections 66, 67, 72, 73, 76 or 77;
 - (b) revenue support regulations that make (with or without other provision) provision falling within any of sections 58(2), 60(3), 61(3), 62(2), 63(3), 64(2), 70, 71, 75(4) or 78. 5
- (10) Any other revenue support regulations are subject to the negative procedure.
- (11) If, apart from this subsection, a draft of an instrument containing revenue support regulations would be treated for the purposes of the standing orders of either House of Parliament as a hybrid instrument, it is to proceed in that House as if it were not such an instrument. 10

Duties of revenue support counterparty

58 Duties of revenue support counterparty

- (1) A revenue support counterparty must act in accordance with—
 - (a) any direction given by the Secretary of State by virtue of this Chapter; 15
 - (b) any provision included in revenue support regulations.
- (2) Revenue support regulations may make provision—
 - (a) to require a revenue support counterparty to enter into arrangements or to offer to contract for purposes connected to a revenue support contract; 20
 - (b) specifying things that a revenue support counterparty may or must do, or things that a revenue support counterparty may not do;
 - (c) conferring on the Secretary of State further powers to direct a revenue support counterparty to do, or not to do, things specified in the regulations or the direction. 25
- (3) The provision that may be made by virtue of subsection (2)(b) or (c) includes provision requiring consultation with, or the consent of, the Secretary of State in relation to—
 - (a) the determination of an application for a modification agreement under section 73; 30
 - (b) the enforcement of obligations under a revenue support contract;
 - (c) a variation or termination of a revenue support contract;
 - (d) the settlement or compromise of a claim under a revenue support contract;
 - (e) the conduct of legal proceedings relating to a revenue support contract; 35
 - (f) the exercise of rights under a revenue support contract.
- (4) A revenue support counterparty must exercise the functions conferred by or by virtue of this Chapter so as to ensure that it can meet its liabilities under any revenue support contract to which it is a party.

- (5) Revenue support regulations must include such provision as the Secretary of State considers necessary so as to ensure that a transport and storage counterparty, hydrogen production counterparty or carbon capture counterparty can meet its liabilities under any transport and storage revenue support contract, hydrogen production revenue support contract or (as the case may be) carbon capture revenue support contract to which it is a party. 5
- (6) In this Chapter “revenue support counterparty” means—
- (a) a transport and storage counterparty (see section 59(3)),
 - (b) a hydrogen production counterparty (see section 61(4)), or
 - (c) a carbon capture counterparty (see section 63(4)). 10

Carbon dioxide transport and storage

59 Designation of transport and storage counterparty

- (1) The Secretary of State may by notice given to a person designate the person to be a counterparty for transport and storage revenue support contracts.
- (2) A “transport and storage revenue support contract” is a contract in relation to which both the following paragraphs apply— 15
- (a) the contract is between a transport and storage counterparty and the holder of a licence under section 7;
 - (b) the contract was entered into by a transport and storage counterparty in pursuance of a direction given to it under section 60(1). 20
- (3) A person designated under subsection (1) is referred to in this Chapter as a “transport and storage counterparty”.
- (4) A designation may be made only with the consent of the person designated (except where that person is the Secretary of State).
- (5) The Secretary of State may exercise the power to designate so that more than one designation has effect under subsection (1), but only if the Secretary of State considers it necessary for the purposes of ensuring that— 25
- (a) liabilities under a transport and storage revenue support contract are met,
 - (b) arrangements entered into for purposes connected to a transport and storage revenue support contract continue to operate, or 30
 - (c) directions given to a transport and storage counterparty continue to have effect.
- (6) As soon as reasonably practicable after a designation ceases to have effect, the Secretary of State must make one or more transfer schemes under section 80 to ensure the transfer of all rights and liabilities under any transport and storage revenue support contract to which the person who has ceased to be a transport and storage counterparty was a party. 35

60 Direction to offer to contract

- (1) The Secretary of State may, in accordance with any provision made by revenue support regulations, direct a transport and storage counterparty to offer to contract with an eligible person specified in the direction, on terms specified in the direction. 5
- (2) The following are “eligible” persons for the purposes of this section—
- (a) the holder of a licence under section 7, or
 - (b) a person who is to be granted a licence under section 7 (and has been notified of that by the Secretary of State or the GEMA).
- (3) Revenue support regulations may make further provision about a direction under this section and in particular about— 10
- (a) the circumstances in which a direction may or must be given;
 - (b) the terms that may or must be specified in a direction.

Hydrogen production

61 Designation of hydrogen production counterparty

- (1) The Secretary of State may by notice given to a person designate the person to be a counterparty for hydrogen production revenue support contracts. 15
- (2) A “hydrogen production revenue support contract” is a contract in relation to which both the following paragraphs apply—
- (a) the contract is between a hydrogen production counterparty and an eligible low carbon hydrogen producer; 20
 - (b) the contract was entered into by a hydrogen production counterparty in pursuance of a direction given to it under section 62(1) or a notification given to it under section 70(1).
- (3) Revenue support regulations must make provision for determining the meaning of “eligible” in relation to a low carbon hydrogen producer. 25
- (4) A person designated under subsection (1) is referred to in this Chapter as a “hydrogen production counterparty”.
- (5) A designation may be made only with the consent of the person designated (except where that person is the Secretary of State). 30
- (6) The Secretary of State may exercise the power of designation so that more than one designation has effect under subsection (1), but only if the Secretary of State considers it necessary for the purposes of ensuring that—
- (a) liabilities under a hydrogen production revenue support contract are met, 35
 - (b) arrangements entered into for purposes connected to a hydrogen production revenue support contract continue to operate, or
 - (c) directions given to a hydrogen production counterparty continue to have effect.

(7) As soon as reasonably practicable after a designation ceases to have effect, the Secretary of State must make one or more transfer schemes under section 80 to ensure the transfer of all rights and liabilities under any hydrogen production revenue support contract to which the person who has ceased to be a hydrogen production counterparty was a party. 5

(8) In this Chapter –
“low carbon hydrogen producer” means a person who carries on (or is to carry on) activities of producing hydrogen which in the opinion of the Secretary of State will contribute to a reduction in emissions of greenhouse gases; 10
“greenhouse gas” has the meaning given by section 92(1) of the Climate Change Act 2008.

62 Direction to offer to contract

(1) The Secretary of State may, in accordance with any provision made by revenue support regulations, direct a hydrogen production counterparty to offer to contract with an eligible low carbon hydrogen producer specified in the direction, on terms specified in the direction. 15

(2) Revenue support regulations may make further provision about a direction under this section and in particular about –
(a) the circumstances in which a direction may or must be given; 20
(b) the terms that may or must be specified in a direction.

(3) Provision falling within subsection (2) may include provision for –
(a) the determination of a matter on a competitive basis,
(b) calculations or determinations to be made under the regulations, including by such persons, in accordance with such procedure and by reference to such matters and to the opinion of such persons, as may be specified in the regulations. 25

(4) For the meaning of “eligible” in relation to a low carbon hydrogen producer see section 61(3).

Carbon capture 30

63 Designation of carbon capture counterparty

(1) The Secretary of State may by notice given to a person designate the person to be a counterparty for carbon capture revenue support contracts.

(2) A “carbon capture revenue support contract” is a contract in relation to which both the following paragraphs apply – 35
(a) the contract is between a carbon capture counterparty and an eligible carbon capture entity;

-
- (b) the contract was entered into by a carbon capture counterparty in pursuance of a direction given to it under section 64(1) or a notification given to it under section 70(2).
- (3) Revenue support regulations must make provision for determining the meaning of “eligible” in relation to a carbon capture entity. 5
- (4) A person designated under subsection (1) is referred to in this Chapter as a “carbon capture counterparty”.
- (5) A designation may be made only with the consent of the person designated (except where that person is the Secretary of State).
- (6) The Secretary of State may exercise the power of designation so that more than one designation has effect under subsection (1), but only if the Secretary of State considers it necessary for the purposes of ensuring that— 10
- (a) liabilities under a carbon capture revenue support contract are met,
- (b) arrangements entered into for purposes connected to a carbon capture revenue support contract continue to operate, or 15
- (c) directions given to a carbon capture counterparty continue to have effect.
- (7) As soon as reasonably practicable after a designation ceases to have effect, the Secretary of State must make one or more transfer schemes under section 80 to ensure the transfer of all rights and liabilities under any carbon capture revenue support contract to which the person who has ceased to be a carbon capture counterparty was a party. 20
- (8) In this section—
- “carbon capture entity” means a person who carries on (or is to carry on) activities of capturing carbon dioxide (or any substance consisting primarily of carbon dioxide) that has been produced by commercial or industrial activities, with a view to the storage of carbon dioxide; 25
- “storage”, in relation to carbon dioxide, means any storage with a view to the permanent containment of carbon dioxide.
- 64 Direction to offer to contract** 30
- (1) The Secretary of State may, in accordance with any provision made by revenue support regulations, direct a carbon capture counterparty to offer to contract with an eligible carbon capture entity specified in the direction, on terms specified in the direction.
- (2) Revenue support regulations may make further provision about a direction under this section and in particular about— 35
- (a) the circumstances in which a direction may or must be given;
- (b) the terms that may or must be specified in a direction.
- (3) Provision falling within subsection (2) may include provision for— 40
- (a) the determination of a matter on a competitive basis,

- (b) calculations or determinations to be made under the regulations, including by such persons, in accordance with such procedure and by reference to such matters and to the opinion of such persons, as may be specified in the regulations.
- (4) For the meaning of “eligible” in relation to a carbon capture entity see section 63(3). 5

Hydrogen levy

65 Appointment of hydrogen levy administrator

- (1) The Secretary of State may by regulations appoint a person to carry out functions with respect to obligations of relevant market participants under section 66. 10
- (2) The Secretary of State may exercise the power under subsection (1) so that more than one appointment has effect under that subsection at the same time.
- (3) An appointment may be made only with the consent of the person appointed (except where that person is the Secretary of State). 15
- (4) An appointment ceases to have effect if the Secretary of State by regulations revokes the appointment.
- (5) As soon as reasonably practicable after a person’s appointment under subsection (1) ceases to have effect, the Secretary of State must make one or more transfer schemes under section 80 to ensure the transfer of any rights and liabilities of that person that the Secretary of State considers appropriate. 20
- (6) A person appointed under subsection (1) is called a “hydrogen levy administrator”.

66 Obligations of relevant market participants

- (1) Revenue support regulations may make provision for relevant market participants (see subsection (8)) to make payments to a hydrogen levy administrator for the purpose of enabling – 25
 - (a) a hydrogen production counterparty to make payments under a hydrogen production revenue support contract or in respect of liabilities incurred in connection with the contract; 30
 - (b) a counterparty to a transport and storage revenue support contract to make payments under that contract, or in respect of liabilities incurred in connection with that contract, for a purpose connected with hydrogen production revenue support contracts.
- (2) Revenue support regulations may make provision for relevant market participants to make payments to a hydrogen levy administrator for the purpose of enabling the hydrogen levy administrator – 35

- (a) to meet or reimburse such descriptions of relevant costs (whether of the hydrogen levy administrator or another person) as the Secretary of State considers appropriate;
- (b) to hold sums in reserve;
- (c) to cover losses in the case of insolvency or default of a relevant market participant. 5
- (3) Revenue support regulations may make provision about the method of calculating or determining amounts that are to be paid by a hydrogen levy administrator for a purpose mentioned in subsection (1) or (2), including provision for adjustments or apportionments in cases where an amount required to be paid by a hydrogen levy administrator for such a purpose has not been paid in full. 10
- (4) Revenue support regulations may make provision to require relevant market participants to provide financial collateral to a hydrogen levy administrator (whether in cash, securities or any other form). 15
- (5) Revenue support regulations that make provision by virtue of subsection (1) for the payment of sums by relevant market participants must impose on a hydrogen levy administrator a duty in relation to the collection of such sums.
- (6) In subsection (1) a reference to liabilities incurred in connection with a revenue support contract includes liabilities incurred in connection with a contract entered into by the counterparty concerned for a purpose related to that contract. 20
- (7) In subsection (2) “relevant costs” means any costs in connection with the performance of any function conferred by or by virtue of this Chapter.
- (8) In this Chapter “relevant market participants” means one or more descriptions of persons specified in revenue support regulations, but no description of relevant market participants may include persons other than— 25
- (a) gas suppliers;
- (b) electricity suppliers;
- (c) gas shippers. 30
- (9) Revenue support regulations may make provision about eligibility for exemptions from obligations imposed on relevant market participants by regulations within subsections (1) to (4).
- 67 Functions of hydrogen levy administrator**
- (1) Revenue support regulations may make provision— 35
- (a) specifying things that a hydrogen levy administrator may or must do, or things that a hydrogen levy administrator may not do;
- (b) conferring on the Secretary of State powers to direct a hydrogen levy administrator to do, or not to do, things specified in the regulations or the direction. 40

- (2) The following provisions of this section are without prejudice to the generality of subsection (1)(a).
- (3) Revenue support regulations may make provision—
- (a) for a hydrogen levy administrator to calculate or determine, in accordance with such criteria as may be provided for by or under the regulations, amounts that are owed by a relevant market participant or are to be provided as financial collateral by a relevant market participant; 5
 - (b) for the issuing of notices by a hydrogen levy administrator to require the payment or provision of such amounts; 10
 - (c) for the provision of copies of such notices to persons specified in the regulations or the publication of such notices;
 - (d) for the enforcement of obligations imposed by or under the regulations (including provision about interest on late payments and imposing financial penalties); 15
 - (e) about the resolution of disputes, including provision about arbitration or appeals (which may in particular include provision for the person conducting an arbitration or determining an appeal to order the payment of costs or expenses or compensation);
 - (f) for a hydrogen levy administrator to determine the form and terms of any financial collateral; 20
 - (g) for a hydrogen levy administrator to hold sums in reserve.
- (4) Provision made by virtue of subsection (3)(a) or section 66(3) or (9) may provide for anything that is to be calculated or determined under the regulations to be calculated or determined— 25
- (a) by such persons,
 - (b) in accordance with such procedure, and
 - (c) by reference to such matters and to the opinion of such persons,
- as may be specified in the regulations.
- (5) Any sum that— 30
- (a) a relevant market participant is required by virtue of revenue support regulations to pay to a hydrogen levy administrator, and
 - (b) has not been paid by the date on which it is required by virtue of revenue support regulations to be paid,
- may be recovered from the relevant market participant by the hydrogen levy administrator as a civil debt due to it. 35
- (6) Revenue support regulations may make provision about the application of sums held by a hydrogen levy administrator.
- (7) The provision that may be made by virtue of subsection (6) includes provision that sums are to be paid, or not to be paid, into the Consolidated Fund. 40

Allocation of contracts

68 Power to appoint allocation bodies

- (1) The Secretary of State may by regulations appoint—
 - (a) a person to carry out functions in connection with the allocation of hydrogen production revenue support contracts; 5
 - (b) a person to carry out functions in connection with the allocation of carbon capture revenue support contracts.
- (2) An appointment may be made only with the consent of the person appointed (except where that person is the Secretary of State).
- (3) An appointment ceases to have effect if— 10
 - (a) the Secretary of State by regulations revokes the appointment, or
 - (b) the person withdraws consent.
- (4) Regulations under subsection (1) may make provision with regard to the cessation of an appointment, including—
 - (a) provision requiring a person appointed under subsection (1) to give 15
 a period of notice no shorter than a period specified in the regulations when withdrawing their consent to designation, or otherwise restricting or subjecting to conditions a person’s power under subsection (3) to withdraw consent;
 - (b) provision enabling a person who has ceased to be appointed under 20
 subsection (1) to continue to be treated as if they were so appointed, including provision about the circumstances in which, and the period for which, such a person may be so treated.
- (5) In this Chapter—
 - (a) a person appointed under subsection (1)(a) is called a “hydrogen 25
 production allocation body”;
 - (b) a person appointed under subsection (1)(b) is called a “carbon capture allocation body”;
 - (c) references to “allocating” a hydrogen production revenue support 30
 contract or carbon capture revenue support contract to a person are to specifying the person in a notification under section 70(1) or (2) (and references to the “allocation” of such a contract are to be interpreted accordingly);
 - (d) “allocation body” means a hydrogen production allocation body or a 35
 carbon capture allocation body.
- (6) Regulations under this section, other than regulations under subsection (3)(a), are subject to the negative procedure.

69 Standard terms of revenue support contracts

- (1) The Secretary of State may issue standard terms and conditions (“standard terms”) of— 40

- (a) hydrogen production revenue support contracts;
 - (b) carbon capture revenue support contracts.
- (2) The Secretary of State may from time to time revise standard terms.
- (3) Standard terms issued or revised under this section must be in accordance with provision made in revenue support regulations. 5
- (4) The Secretary of State must publish standard terms as issued or revised under this section.
- (5) In publishing standard terms the Secretary of State may designate particular standard terms as terms that may not be modified under section 73.
- (6) Different standard terms may be issued for different categories of hydrogen production revenue support contract or carbon capture revenue support contract. 10

70 Allocation notifications

- (1) A hydrogen production allocation body may, in accordance with provision made by revenue support regulations, give a notification to a hydrogen production counterparty specifying – 15
 - (a) an eligible low carbon hydrogen producer, and
 - (b) such other information as may be required for the purpose of making an offer under section 72 to contract with that low carbon hydrogen producer. 20
- (2) A carbon capture allocation body may, in accordance with provision made by revenue support regulations, give a notification to a carbon capture counterparty specifying –
 - (a) an eligible carbon capture entity, and
 - (b) such other information as may be required for the purpose of making an offer under section 72 to contract with that carbon capture entity. 25
- (3) A notification given under subsection (1) or (2) is called an “allocation notification”.
- (4) Revenue support regulations may make further provision about allocation notifications and in particular provision about – 30
 - (a) the circumstances in which an allocation notification may or must be given;
 - (b) the kinds of information that must be specified in an allocation notification in accordance with subsection (1)(b) or (2)(b);
 - (c) appeals against decisions not to give allocation notifications. 35

71 Allocation of contracts

- (1) Provision that may be made in revenue support regulations for the purposes of section 70(1) and (2) includes provision about how determinations are to be made as regards –

- (a) which eligible low carbon hydrogen producer a hydrogen production revenue support contract is to be allocated to;
 - (b) which eligible carbon capture entity a carbon capture revenue support contract is to be allocated to.
- (2) Provision made by revenue support regulations falling within subsection (1) may include – 5
- (a) provision conferring power on the Secretary of State to make rules (an “allocation framework”) about the allocation of hydrogen production revenue support contracts or carbon capture revenue support contracts; 10
 - (b) provision for different periods within which hydrogen production revenue support contracts or carbon capture revenue support contracts are to be allocated (“allocation rounds”);
 - (c) provision for different allocation frameworks to apply in respect of different allocation rounds; 15
 - (d) provision for the publication of allocation frameworks;
 - (e) provision about matters in relation to which provision may or must be made in an allocation framework.
- (3) Provision made by revenue support regulations falling within subsection (2) may impose requirements on the Secretary of State, including in particular – 20
- (a) requirements as to the giving of notice before an allocation round is commenced;
 - (b) restrictions on the circumstances in which amendments may be made during an allocation round to an allocation framework or to any other matter relevant to an allocation round (including any amount by reference to which a limit on the contracts allocated during the round is to be determined). 25
- (4) An allocation framework may –
- (a) confer functions on an allocation body with respect to the allocation of hydrogen production revenue support contracts or carbon capture revenue support contracts; 30
 - (b) specify targets to be met or taken into account by an allocation body in giving allocation notifications by virtue of section 70, including targets relating to –
 - (i) the process used for producing hydrogen or for capturing carbon dioxide; 35
 - (ii) outputs or capacity (whether in respect of hydrogen production or capture of carbon dioxide);
 - (iii) the geographical location of an applicant’s activities;
 - (c) make any provision that may be made by regulations by virtue of subsection (3). 40
- (5) An allocation framework may include provision for –
- (a) the determination of a matter on a competitive basis;

- (b) calculations or determinations to be made under the framework, including by such persons, in accordance with such procedure and by reference to such matters and to the opinion of such persons, as may be specified in the framework.
- (6) An allocation framework may – 5
 - (a) include incidental, supplementary and consequential provision;
 - (b) make transitory or transitional provision and savings;
 - (c) make different provision for different cases or circumstances or for different purposes;
 - (d) make provision subject to exceptions. 10
- (7) Any power conferred by virtue of subsection (2) to make an allocation framework includes a power to amend, add to or remove an allocation framework.
- (8) Subsections (4) to (7) are subject to any provision contained in revenue support regulations. 15

72 Duty to offer to contract following allocation

- (1) Where an allocation notification is given to a hydrogen production counterparty under section 70(1), the counterparty must, in accordance with provision made by revenue support regulations, offer to contract with the eligible low carbon hydrogen producer specified in the notification on – 20
 - (a) standard terms, or
 - (b) standard terms as modified in accordance with any modification agreement entered into between the counterparty and the eligible low carbon hydrogen producer for the purposes of the allocation notification (see section 73). 25
- (2) Where an allocation notification is given to a carbon capture counterparty under section 70(2), the counterparty must, in accordance with provision made by revenue support regulations, offer to contract with the eligible carbon capture entity specified in the notification on – 30
 - (a) standard terms, or
 - (b) standard terms as modified in accordance with any modification agreement entered into between the counterparty and the eligible carbon capture entity for the purposes of the allocation notification (see section 73).
- (3) Revenue support regulations may make further provision about an offer to contract made under this section, including provision about – 35
 - (a) how a hydrogen production counterparty or carbon capture counterparty is to apply or complete standard terms in relation to the offer in accordance with information specified in an allocation notification; 40
 - (b) the time within which the offer must be made;

- (c) how the eligible low carbon hydrogen producer or eligible carbon capture entity to whom the offer is made may enter into a hydrogen production revenue support contract or (as the case may be) carbon capture revenue support contract as a result of the offer;
 - (d) what is to happen if the eligible low carbon hydrogen producer or eligible carbon capture entity does not enter into such a contract as a result of the offer. 5
- (4) In this section, “standard terms”, in relation to an allocation notification, means standard terms published under section 69, determined in accordance with revenue support regulations as the standard terms that are to apply in relation to the allocation notification. 10

73 Modification of standard terms

- (1) This section applies where a person wishes to be specified as an eligible low carbon hydrogen producer, or an eligible carbon capture entity, in an allocation notification (“the potential allocation notification”). 15
- (2) A hydrogen production counterparty or (as the case requires) carbon capture counterparty and the person may, in accordance with provision made by revenue support regulations, agree to modify standard terms for the purposes of any offer that would be required under section 72 if the potential allocation notification is given (a “modification agreement”). 20
- (3) A hydrogen production counterparty or carbon capture counterparty may enter into a modification agreement providing for the modification of any particular standard term only if—
 - (a) the counterparty is satisfied that—
 - (i) the effect of the modification is minor, and 25
 - (ii) the modification is necessary; and
 - (b) the standard term has not been designated under section 69(5) as a term that may not be modified under this section.
- (4) Revenue support regulations may make further provision about modification agreements, including— 30
 - (a) the circumstances in which a person may make an application for a modification agreement;
 - (b) the time by which an application must be made;
 - (c) the procedure to be followed, and the information to be given, by the person in making an application; 35
 - (d) how a hydrogen production counterparty or carbon capture counterparty is to determine an application (including how it is to determine whether the effect of a modification is minor and whether it is necessary);
 - (e) the time by which determinations must be made; 40
 - (f) the form of modification agreements.

- (5) Provision made by virtue of subsection (4)(d) may include provision under which the counterparty may make alternative proposals for modifications in response to an application.
- (6) In this section “modify” includes add to, alter or omit, and “modification” is to be read accordingly. 5

74 Sections 70 to 73: supplementary

Provision made by regulations by virtue of any of sections 70 to 73 may include provision for –

- (a) the determination of a matter on a competitive basis;
- (b) calculations or determinations to be made under the regulations, including by such persons, in accordance with such procedure and by reference to such matters and to the opinion of such persons, as may be specified in the regulations. 10

General provision about counterparties

75 Further provision about designations

15

- (1) A designation under section 59, 61, or 63 ceases to have effect if –
 - (a) the Secretary of State revokes the designation by notice given to the person designated (in which case the designation ends on the date specified in the notice), or
 - (b) the person withdraws consent to the designation by giving not less than 3 months’ notice in writing to the Secretary of State. 20
- (2) At any time after the first designation under section 59, 61 or 63 has effect, the Secretary of State must, except where the Secretary of State considers it unnecessary or not reasonably practicable to do so, exercise the power to designate so as to ensure that at least one designation has effect under that section. 25
- (3) The Secretary of State must publish a notice given to a person under –
 - (a) section 59(1), 61(1), or 63(1), or
 - (b) subsection (1)(a).
- (4) Revenue support regulations may make provision enabling a person who has ceased to be a transport and storage counterparty, hydrogen production counterparty or carbon capture counterparty to continue to be treated as such a counterparty, including provision about the circumstances in which, and the period for which, such a person may be so treated. 30

76 Application of sums held by a revenue support counterparty

35

- (1) Revenue support regulations may make provision for apportioning sums –
 - (a) received by a revenue support counterparty from a hydrogen levy administrator under provision made by virtue of section 66, or

- (b) received by a revenue support counterparty under a revenue support contract,
in circumstances where the revenue support counterparty is unable to fully meet its liabilities under a revenue support contract.
- (2) The provision that may be made by virtue of subsection (1) includes provision about the meaning of “unable to fully meet its liabilities under a revenue support contract”. 5
- (3) In making provision by virtue of subsection (1), the Secretary of State must have regard to the principle that sums should be apportioned in proportion to the amounts that are owed. 10
- (4) Revenue support regulations may make provision about the application of sums held by a revenue support counterparty.
- (5) The provision that may be made by virtue of subsection (4) includes provision that sums are to be paid, or not to be paid, into the Consolidated Fund.

Information and advice 15

77 Information and advice

- (1) Revenue support regulations may make provision about the provision and publication of information and advice.
- (2) The provision that may be made by virtue of subsection (1) includes provision— 20
- (a) for the Secretary of State to require a revenue support counterparty, to provide advice to the Secretary of State or any other person, or persons of any description, specified in the regulations;
- (b) for the Secretary of State to require any party to a revenue support contract to provide information to the Secretary of State or any other person, or persons of any description, specified in the regulations; 25
- (c) for the Secretary of State to require any of the following to provide information or advice to the Secretary of State or any other person, or persons of any description, specified in the regulations— 30
- (i) a hydrogen levy administrator;
- (ii) an allocation body;
- (iii) the GEMA;
- (iv) any other person or description of persons specified in the regulations;
- (d) for a hydrogen levy administrator to require— 35
- (i) a revenue support counterparty,
- (ii) an allocation body,
- (iii) an electricity supplier,
- (iv) a gas supplier,
- (v) a gas shipper, or 40

- (vi) any other person or description of persons specified in the regulations,
to provide information to it;
 - (e) for an allocation body to require any party to a hydrogen production revenue support contract or carbon capture revenue support contract to provide information to it; 5
 - (f) for the classification and protection of confidential or sensitive information; 10
 - (g) for the enforcement of any requirement imposed by virtue of paragraphs (a) to (f). 10
- (3) The prohibition on disclosure of information by –
- (a) section 105(1) of the Utilities Act 2000;
 - (b) Article 63(1) of the Energy (Northern Ireland) Order 2003 (S.I. 2003/419 (N.I. 6));
- does not apply to a disclosure required by virtue of this section. 15

Enforcement

78 Enforcement

- (1) Revenue support regulations may make provision –
- (a) for requirements imposed under the regulations on –
 - (i) a gas supplier who holds a licence under section 7A(1) of the Gas Act 1986, or 20
 - (ii) a person who holds a licence under section 7A(2) of that Act (gas shipper),
to be enforceable by the GEMA as if they were relevant requirements within the meaning of sections 28 to 30O of that Act; 25
 - (b) for requirements imposed under the regulations on an electricity supplier who holds a licence under section 6(1)(d) of the Electricity Act 1989 to be enforceable by the GEMA as if they were relevant requirements within the meaning of Part 1 of that Act; 30
 - (c) for requirements imposed under the regulations on –
 - (i) an electricity supplier who holds a licence under Article 10(1)(c) of the Electricity (Northern Ireland) Order 1992 (S.I. 1992/231 (N.I. 1)), or
 - (ii) a gas supplier who holds a licence under Article 8(1)(c) of the Gas (Northern Ireland) Order 1996 (S.I. 1996/275 (N.I. 2)), 35
to be enforceable by the Northern Ireland Authority for Utility Regulation as if they were relevant requirements within the meaning of Part 6 of the Energy (Northern Ireland) Order 2003 (S.I. 2003/419 (N.I. 6)).
- (2) References in subsection (1) to enforcement include enforcement under the terms of a licence mentioned in any of paragraphs (a) to (c) of that subsection. 40

Consultation

79 Consultation

- (1) Before making revenue support regulations the Secretary of State must consult—
- (a) the Scottish Ministers, if the regulations contain provision that would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament; 5
 - (b) the Welsh Ministers, if the regulations contain provision that would be within the legislative competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006); 10
 - (c) the Department for the Economy in Northern Ireland, if the regulations contain provision that—
 - (i) would be within the legislative competence of the Northern Ireland Assembly if it were contained in an Act of that Assembly, and 15
 - (ii) would not, if it were contained in a Bill in the Northern Ireland Assembly, result in the Bill requiring the consent of the Secretary of State under section 8 of the Northern Ireland Act 1998; 20
 - (d) such other persons as the Secretary of State considers appropriate.
- (2) Before publishing standard terms under section 69 the Secretary of State must consult such persons as the Secretary of State considers it appropriate to consult. 25
- (3) A requirement under this section to consult may be satisfied by consultation before, as well as consultation after, the passing of this Act.

Transfer schemes

80 Transfer schemes

- (1) The Secretary of State may make— 30
- (a) one or more schemes for the transfer of designated property, rights or liabilities of a person who has ceased to be a revenue support counterparty to a person who is a revenue support counterparty;
 - (b) one or more schemes for the transfer of designated property, rights or liabilities of a person who has ceased to be a hydrogen levy administrator to a person who is a hydrogen levy administrator; 35
 - (c) one or more schemes for the transfer of designated property, rights or liabilities of a person who has ceased to be a hydrogen levy administrator to the Secretary of State;

- (d) one or more schemes for the transfer of designated property, rights or liabilities of a person who has ceased to be an allocation body to a person who is an allocation body.
- (2) In this section—
- “transferee” means— 5
- (a) in a case within subsection (1)(a), the person who is a revenue support counterparty;
 - (b) in a case within subsection (1)(b), the person who is a hydrogen levy administrator;
 - (c) in a case within subsection (1)(c), the Secretary of State; 10
 - (d) in a case within subsection (1)(d), the person who is an allocation body;
- “transferor” means the person who has ceased to be a revenue support counterparty, a hydrogen levy administrator or an allocation body (as the case may be). 15
- (3) On the transfer date, the designated property, rights and liabilities are transferred and vest in accordance with the scheme.
- (4) The rights and liabilities that may be transferred by a scheme include those arising under or in connection with a contract of employment.
- (5) A certificate by the Secretary of State that anything specified in the certificate has vested in any person by virtue of a scheme is conclusive evidence for all purposes of that fact. 20
- (6) A scheme may make provision—
- (a) for anything done by or in relation to the transferor in connection with any property, rights or liabilities transferred by the scheme to be treated as done, or to be continued, by or in relation to the transferee; 25
 - (b) for references to the transferor in any agreement (whether written or not), instrument or other document relating to any property, rights or liabilities transferred by the scheme to be treated as references to the transferee; 30
 - (c) about the continuation of legal proceedings;
 - (d) for transferring property, rights or liabilities that could not otherwise be transferred or assigned;
 - (e) for transferring property, rights and liabilities irrespective of any requirement for consent that would otherwise apply; 35
 - (f) for preventing a right of pre-emption, right of reverter, right of forfeiture, right to compensation or other similar right from arising or becoming exercisable as a result of the transfer of property, rights or liabilities;
 - (g) for dispensing with any formality in relation to the transfer of property, rights or liabilities by the scheme; 40
 - (h) for transferring property acquired, or rights or liabilities arising, after the scheme is made but before it takes effect;

- (i) for apportioning property, rights or liabilities;
 - (j) for creating rights, or imposing liabilities, in connection with property, rights or liabilities transferred by the scheme;
 - (k) for requiring the transferee to enter into any agreement of any kind, or for a purpose, specified in or determined in accordance with the scheme. 5
- (7) Subsection (6)(b) does not apply to references in –
- (a) primary legislation, or
 - (b) an instrument made under primary legislation.
- (8) A scheme may contain provision for the payment of compensation by the Secretary of State to any person whose interests are adversely affected by it. 10
- (9) A transfer scheme may –
- (a) include incidental, supplementary or consequential provision;
 - (b) make transitory or transitional provision or savings;
 - (c) make different provision for different cases or circumstances or for different purposes; 15
 - (d) make provision subject to exceptions.
- (10) In this section –
- “designated”, in relation to a scheme, means specified in or determined in accordance with the scheme; 20
 - “primary legislation” means –
 - (a) an Act of Parliament,
 - (b) an Act of the Scottish Parliament,
 - (c) an Act or Measure of Senedd Cymru, or
 - (d) Northern Ireland legislation; 25
 - “property” includes interests of any description;
 - “the transfer date” means a date specified by a scheme as the date on which the scheme is to have effect.
- 81 Modification of transfer schemes**
- (1) The Secretary of State may modify a transfer scheme made under section 80, subject to subsection (2). 30
- (2) If a transfer under the scheme has taken effect, any modification under subsection (1) that relates to the transfer may be made only with the agreement of the transferor or transferee affected by the modification (or, where both the transferor and transferee are affected, with the agreement of both of them). 35
- (3) A modification takes effect from such date as the Secretary of State may specify (which may be the date when the original scheme came into effect).
- (4) In this section “transferor” and “transferee” have the same meaning as in section 80.

General

82 Shadow directors, etc

- (1) The Secretary of State is not, by virtue of the exercise of a power conferred by or by virtue of this Chapter, to be regarded as –
- (a) a person occupying the position of director in relation to a Chapter 1 entity; 5
 - (b) a person in accordance with whose directions or instructions the directors of a Chapter 1 entity are accustomed to act;
 - (c) exercising any function of management in a Chapter 1 entity;
 - (d) a principal of a Chapter 1 entity. 10
- (2) An allocation body is not, by virtue of the exercise of a power conferred by or by virtue of this Chapter, to be regarded as –
- (a) a person occupying the position of director in relation to a revenue support counterparty;
 - (b) a person in accordance with whose directions or instructions the directors of a revenue support counterparty are accustomed to act; 15
 - (c) exercising any function of management in a revenue support counterparty;
 - (d) a principal of a revenue support counterparty.
- (3) In this section “Chapter 1 entity” means the following – 20
- (a) a revenue support counterparty;
 - (b) a hydrogen levy administrator;
 - (c) an allocation body.

83 Modifications of licences etc

- (1) The Secretary of State may modify – 25
- (a) a condition of a particular licence under section 6(1)(b) of the Electricity Act 1989 (transmission licences);
 - (b) the standard conditions incorporated in licences under section 6(1)(b) of the Electricity Act 1989 by virtue of section 8A of that Act;
 - (c) a document maintained in accordance with the conditions of licences under section 6(1)(b) of the Electricity Act 1989, or an agreement that gives effect to a document so maintained. 30
- (2) The Secretary of State may modify –
- (a) a condition of a particular licence under section 7 of the Gas Act 1986 (licensing of gas transporters); 35
 - (b) the standard conditions incorporated in licences under section 7 of the Gas Act 1986 by virtue of section 8 of that Act;
 - (c) a document maintained in accordance with the conditions of licences under section 7 of the Gas Act 1986, or an agreement that gives effect to a document so maintained. 40

- (3) The Secretary of State may modify –
- (a) a condition of a particular licence under Article 10(1)(b), (bb) or (d) of the Electricity (Northern Ireland) Order 1992 (S.I. 1992/231 (N.I. 1)) (transmission, distribution or SEM operator licences);
 - (b) the standard conditions of licences under Article 10(1)(b), (bb) or (d) of that Order; 5
 - (c) a document maintained in accordance with the conditions of licences under Article 10(1)(b), (bb) or (d) of that Order, or an agreement that gives effect to a document so maintained.
- (4) The Secretary of State may modify – 10
- (a) a condition of a particular licence under Article 8(1)(a) of the Gas (Northern Ireland) Order 1996 (S.I. 1996/275 (N.I. 2)) (licences to convey gas);
 - (b) the standard conditions of licences under Article 8(1)(a) of that Order;
 - (c) a document maintained in accordance with the conditions of licences under Article 8(1)(a) of that Order, or an agreement that gives effect to a document so maintained. 15
- (5) The powers conferred by subsections (1) to (4) may be exercised only for the purpose of facilitating or supporting enforcement of, and administration in connection with, obligations under regulations within section 66 (including facilitation and support by way of allowing or requiring the provision of services). 20
- (6) Provision included in a licence, or in a document or agreement relating to licences, by virtue of any power under subsections (1) to (4) may in particular include provision of a kind that may be included in revenue support regulations. 25
- (7) If under subsection (1) or (2) the Secretary of State makes modifications of the standard conditions of a licence, the GEMA must –
- (a) make the same modification of those standard conditions for the purposes of their incorporation in licences of that type granted after that time, and 30
 - (b) publish the modification.
- (8) If under subsection (3) or (4) the Secretary of State makes modifications of the standard conditions of a licence, the Northern Ireland Authority for Utility Regulation must – 35
- (a) make the same modification of those standard conditions for the purposes of their incorporation in licences of that type granted after that time, and
 - (b) publish the modification.
- (9) Before making a modification under this section, the Secretary of State must consult – 40
- (a) the holder of any licence being modified, and

- (b) such other persons as the Secretary of State considers it appropriate to consult.
- (10) Subsection (9) may be satisfied by consultation before, as well as by consultation after, the passing of this Act.

84 Section 83: supplementary 5

- (1) In this section “relevant power” means a power conferred by any of subsections (1) to (4) of section 83.
- (2) Before making modifications under a relevant power, the Secretary of State must lay a draft of the modifications before Parliament.
- (3) If, within the 40-day period, either House of Parliament resolves not to approve the draft, the Secretary of State may not take any further steps in relation to the proposed modifications. 10
- (4) If no such resolution is made within that period, the Secretary of State may make the modifications in the form of the draft.
- (5) Subsection (3) does not prevent a new draft of proposed modifications being laid before Parliament. 15
- (6) In this section “40-day period”, in relation to a draft of proposed modifications, means the period of 40 days beginning with the day on which the draft is laid before Parliament (or, if it is not laid before each House of Parliament on the same day, the later of the 2 days on which it is laid). 20
- (7) For the purposes of calculating the 40-day period, no account is to be taken of any period during which Parliament is dissolved or prorogued or during which both Houses are adjourned for more than 4 days.
- (8) A relevant power –
 - (a) may be exercised generally, only in relation to specified cases or subject to exceptions (including provision for a case to be excepted only so long as specified conditions are satisfied); 25
 - (b) may be exercised differently in different cases or circumstances;
 - (c) includes a power to make incidental, supplementary, consequential or transitional modifications. 30
- (9) Provision included in a licence, or in a document or agreement relating to licences, by virtue of a relevant power –
 - (a) may make different provision for different cases;
 - (b) need not relate to the activities authorised by the licence.
- (10) The Secretary of State must publish details of any modifications made under a relevant power as soon as reasonably practicable after they are made. 35
- (11) A modification made under a relevant power of part of a standard condition of a licence does not prevent any other part of the condition from continuing to be regarded as a standard condition for the purposes of Part 1 of the Gas

Act 1986, Part 1 of the Electricity Act 1989, the Electricity (Northern Ireland) Order 1992 or the Gas (Northern Ireland) Order 1996.

- (12) The power conferred by a relevant power to “modify” (in relation to licence conditions or a document) includes a power to amend, add to or remove, and references to modifications are to be construed accordingly. 5
- (13) In section 81 of the Utilities Act 2000 (standard conditions of gas licences), in subsection (2), after “Smart Meters Act 2018” insert “or under section 83 or sections 195 to 197 of the Energy Act 2023”.
- (14) In section 137 of the Energy Act 2004 (new standard conditions for transmission licences), in subsection (3)– 10
- (a) omit the “or” after paragraph (f);
- (b) after paragraph (g) insert –
- “(h) under section 83 of the Energy Act 2023,”.

CHAPTER 2

DECOMMISSIONING OF CARBON STORAGE INSTALLATIONS 15

Financing of costs of decommissioning etc

85 Financing of costs of decommissioning etc

- (1) The Secretary of State may by regulations make provision for requiring relevant persons to provide security for the performance of obligations relating to the future abandonment or decommissioning of carbon dioxide-related sites, pipelines or installations. 20
- (2) For the purposes of subsection (1) an installation, site or pipeline is “carbon dioxide-related” if it is, or is to be, used for a purpose related to the geological storage, or transportation, of carbon dioxide.
- (3) In this section references to an installation, site or pipeline include one that is located in, under or over – 25
- (a) the territorial sea adjacent to the United Kingdom, or
- (b) waters in a Gas Importation and Storage Zone (within the meaning given by section 1 of the Energy Act 2008).
- (4) The following provisions of this section are without prejudice to the generality of subsection (1). 30
- (5) In this section “relevant person” means a person who –
- (a) holds a licence under section 7, or
- (b) is a person to whom a notice has been, or may be, given under section 29 of the Petroleum Act 1998 (preparation of abandonment programmes) in respect of a carbon storage installation. 35
- (6) Regulations under subsection (1) may –

- (a) require relevant persons to provide the Secretary of State with estimates of costs that are likely to be incurred in connection with obligations such as are mentioned in subsection (1) (“decommissioning costs”);
 - (b) make provision about the estimation of decommissioning costs and about the manner in which such estimates are to be verified (which may include provision requiring verification by an independent third party); 5
 - (c) require relevant persons to review estimates of decommissioning costs at times, or at intervals, specified in the regulations;
 - (d) make provision about the approval by the Secretary of State of estimates of such costs; 10
 - (e) provide for information specified, or of a description specified, in the regulations to be supplied to the Secretary of State by relevant persons at such intervals, or on such occasions, as may be prescribed by the regulations; 15
 - (f) require the Secretary of State to consult the Oil and Gas Authority or any other person specified in the regulations before exercising functions by virtue of paragraph (d).
- (7) Regulations under subsection (1) may make provision—
- (a) requiring that security for the discharge of liabilities in respect of decommissioning costs must be provided by way of a fund (a “decommissioning fund”); 20
 - (b) about the management of decommissioning funds;
 - (c) about payments to a relevant person, or another person, from such funds; 25
 - (d) providing for payments from such funds to be subject to the approval of the Secretary of State;
 - (e) imposing on a relevant authority functions with regard to—
 - (i) the monitoring and oversight of decommissioning funds;
 - (ii) the approval of any matter relating to such a fund. 30
- (8) This section is without prejudice to the breadth of subsection (4) of section 30 of the Energy Act 2008.
- (9) Regulations under subsection (1) may require the Secretary of State to publish guidance about—
- (a) estimates of decommissioning costs (including factors which it may be appropriate to consider in deciding whether or not to approve estimates of such costs); 35
 - (b) the structure, accrual and management of decommissioning funds.
- (10) Guidance by virtue of this section may make different provision for different cases or circumstances. 40
- (11) In this section—
“decommissioning costs” is to be interpreted in accordance with subsection (6)(a);

“decommissioning fund” is to be interpreted in accordance with subsection (7)(a);

“economic regulator” has the same meaning as in Part 1 (see section 55);

“geological storage” has the same meaning as in Part 1 (see section 55);

“relevant authority” means the Secretary of State, the economic regulator or the Oil and Gas Authority. 5

86 Section 85: supplementary

- (1) Regulations under section 85(1) may make provision—
 - (a) enabling a relevant authority to charge fees to relevant persons in order to cover the costs of the exercise of the authority’s functions under the regulations; 10
 - (b) about how fees payable by virtue of the regulations are to be determined;
 - (c) about when fees payable by virtue of the regulations are to be paid.
- (2) Regulations under section 85(1) may make provision about the supplying of information, including— 15
 - (a) provision for the Secretary of State to require any other person to supply information to the Secretary of State for the purposes of the Secretary of State’s functions under regulations under that section;
 - (b) about the sharing by the Secretary of State with the Oil and Gas Authority or the economic regulator of information about funds established as mentioned in section 85(7)(a). 20
- (3) Regulations under section 85(1) may make provision about compliance with requirements imposed by or under the regulations, including— 25
 - (a) provision imposing civil penalties;
 - (b) provision making it an offence to contravene specified provisions of the regulations.
- (4) Where regulations under section 85(1) create an offence, they must also make provision as to the mode of trial and punishment of offences, but—
 - (a) any provision as to punishment on summary conviction must not authorise imprisonment or, in the case of summary conviction in Scotland or Northern Ireland, a fine exceeding the statutory maximum; 30
 - (b) any provision as to punishment on conviction on indictment must not authorise imprisonment for a term exceeding 2 years.
- (5) Regulations under section 85(1) may — 35
 - (a) make different provision for different purposes;
 - (b) create exceptions to any requirement imposed by the regulations.
- (6) Regulations under section 85(1) may confer any function on any person.
- (7) Regulations under section 85(1) may provide for a function conferred on a person to be exercisable on that person’s behalf by another person. 40

- (8) In this section—
“economic regulator” has the same meaning as in Part 1 (see section 55);
“relevant authority” means the Secretary of State, the economic regulator
or the Oil and Gas Authority;
“relevant person” has the same meaning as in section 85. 5
- (9) Regulations under section 85(1) may make any amendments of—
(a) the Storage of Carbon Dioxide (Licensing etc.) Regulations 2010 (S.I. 2010/2221),
(b) the Storage of Carbon Dioxide (Licensing etc.) (Scotland) Regulations 2011 (S.S.I. 2011/24), 10
(c) the Storage of Carbon Dioxide (Termination of Licences) Regulations 2011 (S.I. 2011/1483), or
(d) the Storage of Carbon Dioxide (Licensing etc.) Regulations (Northern Ireland) 2015 (S.R. (N.I.) 2015 No. 387),
that the Secretary of State considers appropriate in consequence of, or of 15
provision made under, section 85 or this section.
- (10) Regulations under section 85(1) containing any of the following (with or without other provision) are subject to the affirmative procedure—
(a) provision creating a criminal offence;
(b) provision creating a civil penalty. 20
- (11) Any other regulations under section 85(1) are subject to the negative procedure.

Abandonment of carbon storage installations

87 Application of Part 4 of Petroleum Act 1998 in relation to carbon storage installations

- (1) In section 30 of the Energy Act 2008 (abandonment of installations), in subsection (5), for “established or maintained” substitute “or has been maintained, or is intended to be or has been established,”. 25
- (2) The power of the Scottish Ministers under section 30(2)(b) of the Energy Act 2008 to modify Part 4 of the Petroleum Act 1998 in its application to certain carbon storage installations includes power to make any modifications of that Part of that Act (in its application to the installations in question) that the Scottish Ministers consider appropriate in consequence of provision made by or under section 85 or 86. 30
- (3) The power of the Secretary of State under section 30(4) of the Energy Act 2008 to modify Part 4 of the Petroleum Act 1998 in its application to certain carbon storage installations includes power to make any modifications of that Part of that Act (in its application to the installations in question) that the Secretary considers appropriate in consequence of provision made by or under section 85 or 86. 35

- (4) Section 38A of the Petroleum Act 1998 (protection of funds set aside for the purposes of abandonment programme) has effect as if the reference in subsection (1) of that section to the performance of obligations under an approved abandonment programme included a reference to the meeting of liabilities in respect of decommissioning costs in relation to carbon storage installations. 5
- (5) In this section –
 “carbon storage installation” has the same meaning as in section 30 of the Energy Act 2008;
 “decommissioning costs” has the meaning given by section 85(6). 10

Change of use relief

88 Change of use relief: installations

- (1) Section 30A of the Energy Act 2008 (installations converted for CCS demonstration projects) is amended as follows.
- (2) For the heading substitute “Change of use relief for certain installations”. 15
- (3) In subsection (1), for “by order” insert “, on an application made by a relevant person, by notice”.
- (4) Omit subsections (2) and (3).
- (5) Before subsection (4) insert –
 “(3A) The Secretary of State must consult the Oil and Gas Authority before deciding –
 (a) whether to designate an installation under subsection (1);
 (b) whether to make a certification under subsection (5)(b).” 20
- (6) For subsection (4) substitute –
 “(4) An eligible CCS installation qualifies for change of use relief if –
 (a) the Secretary of State has given a CCS-related abandonment programme notice to a person in relation to the abandonment of the installation, and
 (b) the trigger event has occurred in relation to the installation. 25
- (4A) In subsection (4) “CCS-related abandonment programme notice” means an abandonment programme notice given under section 29 of the 1998 Act in that section’s application in relation to carbon storage installations (by virtue of section 30 of this Act).” 30
- (7) For subsection (5) substitute –
 “(5) The trigger event occurs in relation to an eligible CCS installation when –
 (a) a decommissioning fund (as defined in section 85(7)) has been established for providing security for the discharge of liabilities 35

- in respect of decommissioning costs in relation to the installation, and
- (b) the Secretary of State certifies by notice in writing (an “approval notice”) that one or more relevant persons have paid into the fund an amount or amounts the total of which is not less than the required amount. 5
- (5A) In subsection (5)–
- (a) “relevant person” means a person of a description specified in regulations made by the Secretary of State;
- (b) “the required amount” means an amount determined by the Secretary of State in accordance with regulations made by the Secretary of State. 10
- (5B) Where the Secretary of State gives an approval notice in relation to an eligible CCS installation the Secretary of State must–
- (a) give a copy of the approval notice to every person to whom a notice has been given under section 29(1) of the 1998 Act in relation to the installation, and 15
- (b) publish a notice that–
- (i) specifies the installation, and
- (ii) states that the Secretary of State has given an approval notice under subsection (5)(b) in relation to it.” 20
- (8) In subsection (11), for “an order made” substitute “a notice given”.
- (9) After subsection (11) insert–
- “(11A) The Secretary of State must publish a notice given under subsection (1).” 25
- (10) In subsection (12)–
- (a) for ““CCS demonstration project” and “commercial electricity generation” have the same meanings” substitute “has the same meaning”;
- (b) omit the definition of “carbon storage facility”; 30
- (c) at the appropriate places insert–
- ““decommissioning costs” has the meaning given by section 85 of the Energy Act 2023;”;
- ““relevant person” means a person to whom a notice may be given under section 29(1) of the 1998 Act in relation to an offshore installation (within the meaning given by section 44 of the 1998 Act);”.
- 35

89 Change of use relief: carbon storage network pipelines

- (1) Section 30B of the Energy Act 2008 (submarine pipelines converted for CCS demonstration projects) is amended as follows. 40

- (2) For the heading substitute “Change of use relief: carbon storage network pipelines”.
- (3) For “CCS pipeline”, in each place it occurs, substitute “carbon storage network pipeline”.
- (4) In subsection (1), for “by order” insert “, on an application made by a relevant person, by notice”. 5
- (5) After subsection (1) insert –
 “(1A) The Secretary of State must consult the Oil and Gas Authority before deciding –
 (a) whether to designate a pipeline under subsection (1); 10
 (b) whether to make a certification under subsection (3)(b).”
- (6) For subsection (2) substitute –
 “(2) An eligible carbon storage network pipeline qualifies for change of use relief if –
 (a) the Secretary of State has given a CCS-related abandonment programme notice to a person in relation to the abandonment of the pipeline, and 15
 (b) the trigger event has occurred in relation to the pipeline.
- (2A) In subsection (2) “CCS-related abandonment programme notice” means an abandonment programme notice under section 29 of the 1998 Act given at a time when the pipeline is used, or is to be used wholly or mainly – 20
 (a) for the purpose of disposing of carbon dioxide by way of geological storage, or
 (b) as a licensable means of transportation.” 25
- (7) For subsection (3) substitute –
 “(3) The trigger event occurs in relation to an eligible carbon storage network pipeline when –
 (a) a decommissioning fund (as defined in section 85(7)) has been established for providing security for the discharge of liabilities in respect of decommissioning costs in relation to the pipeline, and 30
 (b) the Secretary of State certifies by notice in writing (an “approval notice”) that one or more relevant persons have paid into the fund an amount or amounts the total of which is not less than the required amount. 35
- (3A) In subsection (3) –
 (a) “relevant person” means a person of a description specified in regulations made by the Secretary of State;

- (b) “the required amount” means an amount determined by the Secretary of State in accordance with regulations made by the Secretary of State.
- (3B) Where the Secretary of State gives an approval notice in relation to an eligible carbon storage network pipeline, the Secretary of State must –
 - (a) give a copy of the approval notice to every person to whom a notice has been given under section 29(1) of the 1998 Act in relation to the pipeline, and
 - (b) publish a notice that –
 - (i) specifies the pipeline, and
 - (ii) states that the Secretary of State has given an approval notice under subsection (3)(b) in relation to it.”
- (8) In subsection (6), for “an order made” substitute “a notice given”.
- (9) After subsection (6) insert –

“(6A) The Secretary of State must publish a notice given under subsection (1).”
- (10) In subsection (7) –
 - (a) for “and “CCS demonstration project” have the same meanings” substitute “has the same meaning”;
 - (b) omit the definition of “carbon storage facility”;
 - (c) at the appropriate places insert –
 - ““decommissioning costs” has the meaning given by section 85 of the Energy Act 2023;”;
 - ““geological storage”, in relation to carbon dioxide, has the same meaning as in Part 1 of the Energy Act 2023 (see section 55 of that Act);”;
 - ““licensable means of transportation” has the meaning given by section 2(3) of the Energy Act 2023;”;
 - ““relevant person” means a person to whom a notice may be given under section 29(1) of the 1998 Act in relation to a submarine pipeline;”.

90 Change of use relief: provision of information and advice

- (1) In the Energy Act 2008, after section 30B insert –

“30C Relief under sections 30A and 30B: supplementary

 - (1) The Secretary of State may by regulations make provision about the obtaining of information required, and sharing of information held, for the purposes of functions of the Secretary of State under sections 30A and 30B, including provision –

- (a) for the Secretary of State to require the holder of a licence under section 7, or a person who qualifies for change of use relief under section 30A or 30B, to provide information to the Secretary of State;
- (b) authorising His Majesty’s Revenue and Customs (or anyone acting on their behalf) to disclose to the Secretary of State information held as mentioned in section 18(1) of the Commissioners for Revenue and Customs Act 2005; 5
- (c) for the enforcement of any requirement imposed by virtue of the regulations. 10
- (2) For the purposes of subsection (1), a person “qualifies for change of use relief” if—
- (a) but for section 30A(6) they would be a person to whom a notice may be given under section 29(1) of the Petroleum Act 1998 in relation to a carbon storage installation, or 15
- (b) but for section 30B(4) they would be a person to whom a proposal may be made under section 29(1) of the Petroleum Act 1998 in relation to a submarine pipeline.
- (3) In this section—
- “carbon storage installation” has the same meaning as in section 30 of the Energy Act 2008; 20
- “submarine pipeline” has the same meaning as in Part 4 of 1998 Act (see section 45 of that Act).”
- (2) In section 105 of the Energy Act 2008 (Parliamentary control of subordinate legislation), in subsection (2) omit paragraph (aa). 25

CHAPTER 3

STRATEGY AND POLICY STATEMENT

91 Designation of strategy and policy statement

- (1) The Secretary of State may designate a statement as the strategy and policy statement for the purposes of this Part (“the CCUS strategy and policy statement”) if the requirements set out in section 94 are satisfied (consultation and laying requirements). 30
- (2) The CCUS strategy and policy statement is a statement prepared by the Secretary of State that sets out—
- (a) the strategic priorities, and other main considerations, of His Majesty’s government in formulating its carbon dioxide capture, usage and storage policy for the United Kingdom (“strategic priorities”), 35
- (b) the particular outcomes to be achieved as a result of the implementation of that policy (“policy outcomes”), and
- (c) the roles and responsibilities of persons (whether the Secretary of State, the economic regulator or other persons) who are involved in 40

implementing that policy or who have other functions that are affected by it.

- (3) In preparing a statement for designation under subsection (1) (or undertaking a review under section 93), the Secretary of State must take account of any statement for the time being designated under section 131 of the Energy Act 2013 (strategy and policy statement in respect of energy policy). 5
- (4) The Secretary of State must publish the CCUS strategy and policy statement (including any amended statement following a review under section 93) in such manner as the Secretary of State considers appropriate.
- (5) For the purposes of this section, carbon dioxide capture, usage and storage policy “for the United Kingdom” includes such policy for— 10
- (a) the territorial sea adjacent to the United Kingdom, or
 - (b) waters in a Gas Importation and Storage Zone (within the meaning given by section 1 of the Energy Act 2008).
- (6) In this Chapter— 15
- “the CCUS strategy and policy statement” means the statement for the time being designated under subsection (1) as the strategy and policy statement for the purposes of this Part;
 - “economic regulator” has the same meaning as in Part 1 (see section 55);
 - “policy outcomes” has the meaning given in subsection (2)(b); 20
 - “strategic priorities” has the meaning given in subsection (2)(a).

92 Duties with regard to considerations in the statement

- (1) The economic regulator must have regard to the strategic priorities set out in the CCUS strategy and policy statement when carrying out functions under this Part or Part 1. 25
- (2) The Secretary of State and the economic regulator must carry out their respective functions under Part 1 and this Part in the manner which the Secretary of State or the economic regulator (as the case may be) considers is best calculated to further the delivery of the policy outcomes.
- (3) Subsection (2) is subject to the application of the principal objectives in the carrying out of any such function. 30
- (4) Subsections (1) and (2) do not apply to anything done by the economic regulator—
- (a) in the exercise of functions relating to the determination of disputes;
 - (b) in the exercise of functions under section 36(1) or 37(1). 35
- (5) The duties imposed by subsections (1) and (2) do not affect the obligation of the economic regulator or the Secretary of State to perform or comply with any other duty or requirement (whether arising under this Act or another enactment or otherwise).

- (6) The economic regulator must give notice to the Secretary of State if at any time the economic regulator concludes that a policy outcome contained in the strategy and policy statement is not realistically achievable.
- (7) A notice under subsection (6) must include –
- (a) the grounds on which the conclusion was reached; 5
 - (b) what (if anything) the economic regulator is doing, or proposes to do, for the purpose of furthering the delivery of the outcome so far as reasonably practicable.
- (8) In subsection (3) “principal objectives” means the principal objectives of the Secretary of State and the economic regulator set out in section 1(1). 10

93 Review

- (1) The Secretary of State must review the CCUS strategy and policy statement if a period of 5 years has elapsed since the relevant time.
- (2) In this section “relevant time”, in relation to the CCUS strategy and policy statement, means – 15
- (a) the time when the statement was first designated under section 91, or
 - (b) if later, the time when a review of the statement under this section last took place.
- (3) A review under subsection (1) must take place as soon as reasonably practicable after the end of the 5 year period. 20
- (4) The Secretary of State may review the CCUS strategy and policy statement at any other time if –
- (a) a Parliamentary general election has taken place since the relevant time,
 - (b) the economic regulator has given notice to the Secretary of State under section 92(6) since the relevant time, 25
 - (c) a significant change in the policy of His Majesty’s government with regard to carbon dioxide capture, usage and storage has occurred since the relevant time,
 - (d) the Secretary of State has commenced a review under section 134 of the Energy Act 2013 since the relevant time, 30
 - (e) the Parliamentary approval requirement in relation to an amended statement was not met on the last review (see subsection (12)).
- (5) The Secretary of State may determine that a significant change in the government's policy with regard to carbon dioxide capture, usage and storage has occurred for the purposes of subsection (4)(c) only if – 35
- (a) the change was not anticipated at the relevant time, and
 - (b) if the change had been so anticipated, it appears to the Secretary of State likely that the statement would have been different in a material way. 40
- (6) On a review under this section the Secretary of State may –

- (a) amend the statement (including by replacing the whole or part of the statement with new content),
 - (b) leave the statement as it is, or
 - (c) withdraw the statement’s designation as the strategy and policy statement. 5
- (7) The amendment of a statement under subsection (6)(a) has effect only if the Secretary of State designates under section 91 the amended statement as the strategy and policy statement (and the procedural requirements under section 94 apply in relation to any such designation).
- (8) For the purposes of this section, corrections of clerical or typographical errors are not to be treated as amendments made to the statement. 10
- (9) The designation of a statement as the strategy and policy statement ceases to have effect upon a subsequent designation of an amended statement as the strategy and policy statement in accordance with subsection (7).
- (10) The Secretary of State must consult the following persons before proceeding under subsection (6)(b) or (c) – 15
 - (a) the economic regulator;
 - (b) so far as the decision as to whether or not to proceed relates to Scottish devolved matters, the Scottish Ministers;
 - (c) so far as that decision relates to Welsh devolved matters, the Welsh Ministers; 20
 - (d) so far as that decision relates to Northern Ireland devolved matters, the Department for the Economy in Northern Ireland.
- (11) For the purposes of subsection (2)(b), a review of a statement takes place – 25
 - (a) where the decision on the review is to amend the statement under subsection (6)(a) –
 - (i) at the time when the amended statement is designated as the CCUS strategy and policy statement under section 91, or
 - (ii) if the amended statement is not so designated, at the time when the amended statement was laid before Parliament for approval under section 94(9); 30
 - (b) where the decision on the review is to leave the statement as it is under subsection (6)(b), at the time when that decision is taken.
- (12) For the purposes of subsection (4)(e), the Parliamentary approval requirement in relation to an amended statement was not met on the last review if – 35
 - (a) on the last review of the strategy and policy statement to be held under this section, an amended statement was laid before Parliament for approval under section 94(9), but
 - (b) the amended statement was not designated because such approval was not given. 40
- (13) For the purposes of this section –

- (a) something relates to Welsh devolved matters so far as it relates to any matter provision about which would be within the legislative competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006); 5
- (b) something relates to Scottish devolved matters so far as it relates to any matter provision about which would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament; 10
- (c) something relates to Northern Ireland devolved matters so far as it relates to any matter provision about which—
- (i) would be within the legislative competence of the Northern Ireland Assembly if it were contained in an Act of that Assembly, and 15
- (ii) would not, if it were contained in a Bill in the Northern Ireland Assembly, result in the Bill requiring the consent of the Secretary of State under section 8 of the Northern Ireland Act 1998.
- 94 Procedural requirements** 20
- (1) This section sets out the requirements that must be satisfied in relation to a statement before the Secretary of State may designate it as the CCUS strategy and policy statement.
- (2) In this section references to a statement include references to a statement as amended following a review under section 93(6)(a). 25
- (3) The Secretary of State must first—
- (a) prepare a draft of the statement, and
- (b) issue the draft to the required consultees for the purpose of consulting them about it.
- (4) The “required consultees” are— 30
- (a) the economic regulator,
- (b) the Scottish Ministers,
- (c) the Department for the Economy in Northern Ireland, and
- (d) the Welsh Ministers.
- (5) The Secretary of State must then— 35
- (a) make such revisions to the draft as the Secretary of State considers appropriate as a result of responses to the consultation under subsection (3)(b), and
- (b) issue the revised draft for the purposes of further consultation about it to the required consultees and to such other persons as the Secretary of State considers appropriate. 40
- (6) The Secretary of State must then—

- (a) make any further revisions to the draft that the Secretary of State considers appropriate as a result of responses to the consultation under subsection (5)(b), and
 - (b) prepare a report summarising those responses and the changes (if any) that the Secretary of State has made to the draft as a result. 5
- (7) In relation to required consultees within subsection (4)(b) to (d), references in subsections (3)(b) and (5)(b) to consultation about a draft are to consultation about the draft so far as it relates –
 - (a) in the case of the Scottish Ministers, to Scottish devolved matters;
 - (b) in the case of the Department for the Economy in Northern Ireland, to Northern Ireland devolved matters; 10
 - (c) in the case of the Welsh Ministers, to Welsh devolved matters.
- (8) References in this section to relating to Scottish devolved matters, Northern Ireland devolved matters or Welsh devolved matters are to be interpreted in accordance with section 93(13). 15
- (9) The Secretary of State must lay before Parliament –
 - (a) the statement as revised under subsection (6)(a), and
 - (b) the report prepared under subsection (6)(b).
- (10) The statement as laid under subsection (9)(a) must have been approved by a resolution of each House of Parliament before the Secretary of State may designate it as the strategy and policy statement under section 91. 20
- (11) The requirement under subsection (3)(a) to prepare a draft of a statement may be satisfied by preparation carried out before, as well as preparation carried out after, the passing of this Act.

CHAPTER 4

25

CARBON DIOXIDE STORAGE LICENCES

95 Specified provisions in carbon dioxide storage licences

- (1) Schedule 6 amends Schedule 1 to the Storage of Carbon Dioxide (Licensing etc.) Regulations 2010 (S.I. 2010/2221) (“the 2010 Regulations”).
- (2) Subsections (3) to (5) apply in relation to a licence granted (or having effect as if granted) by the Oil and Gas Authority under section 18(1) of the Energy Act 2008 which is in force immediately before the commencement of Schedule 6. 30
- (3) The licence has effect with the addition of provision having the same legal effect as paragraph 6 of Schedule 1 to the 2010 Regulations (as inserted by Schedule 6 to this Act). 35
- (4) If the licence confers power on the Oil and Gas Authority to revoke a licence in connection with a change in control of a licence holder which is a company, the licence has effect –

- (a) with the omission of such provision, and
 - (b) with the replacement of such provision by provision having the same legal effect as paragraph 7 of Schedule 1 to the 2010 Regulations (as inserted by Schedule 6 to this Act).
- (5) If the licence confers power on the Oil and Gas Authority to partially revoke a licence in connection with a change in control of a licence holder which is a company, the licence has effect –
- (a) with the omission of such provision, and
 - (b) with the replacement of such provision by provision having the same legal effect as paragraph 8 of Schedule 1 to the 2010 Regulations (as inserted by Schedule 6 to this Act).
- (6) A reference in any document to provisions of a licence which are to have effect with amendments as provided for by Schedule 6 is to be construed, unless the nature of the document or the context otherwise requires, as a reference to those provisions as amended.
- (7) A provision inserted in a licence by virtue of Schedule 6 may be altered or deleted by deed executed by the Secretary of State and the licence holder or, as respects Scotland, by an instrument subscribed or authenticated by the Secretary of State and the licence holder in accordance with the Requirements of Writing (Scotland) Act 1995.

96 Content of storage permits under carbon dioxide storage licences

- (1) In the Storage of Carbon Dioxide (Licensing etc.) Regulations 2010 (S.I. 2010/2221) (“the 2010 Regulations”), regulation 8 (content of storage permits) is amended as follows –
- (a) after paragraph (1) insert –
 - “(1A) If the operator is a company, a storage permit must also include the provisions contained in paragraph 6(2) to (11) of Schedule 1, read as if –
 - (a) any reference to a company were to the operator,
 - (b) the reference in paragraph 6(8)(b) to the licence were to the storage permit, and
 - (c) paragraph 6(10)(c) were omitted.”;
 - (b) in paragraph (2), for “In this” substitute “In paragraph (1) of this”.
- (2) Subsection (4) applies in relation to a storage permit granted under an existing licence.
- (3) “Existing licence” means a licence granted (or having effect as if granted) by the Oil and Gas Authority under section 18(1) of the Energy Act 2008 which is in force immediately before the commencement of subsection (1).
- (4) The storage permit has effect with the addition of provision having the same legal effect as provision required to be included in the permit by reason of

paragraph (1A) of regulation 8 of the 2010 Regulations (as inserted by subsection (1)(a)).

97 Offences relating to carbon dioxide storage licences

In section 23 of the Energy Act 2008 (offences relating to carbon dioxide storage licences), after subsection (1) insert— 5

- “(1A) But a licence holder does not commit an offence under subsection (1)(a) or (b) if—
- (a) the licence holder is a company, or, where there are joint licence holders, any of them is a company, and
 - (b) the thing mentioned in subsection (1)(a) or (b) is a change in the control of the company.” 10

98 Power of OGA to require information about change in control of licence holder

After section 29 of the Energy Act 2008 insert—

“Information about change in control of licence holder” 15

29A OGA’s power to require information about change in control of licence holder

- (1) This section applies in relation to a licence granted (or having effect as if granted) by the OGA which includes provisions prohibiting a change in control of a licence holder which is a company without the OGA’s consent. 20
- (2) The OGA may by notice in writing require a person within subsection (3) to provide the OGA with any information that it requires for the purpose of exercising its functions in relation to a change or potential change in control of a licence holder which is a company. 25
- (3) The persons within this subsection are—
 - (a) the company;
 - (b) the person who (if consent were granted) would take control of the company;
 - (c) if the company is a joint licence holder with another person or other persons, that other person or those other persons; 30
 - (d) any person not within any of paragraphs (a) to (c) who appears to the OGA to have information that it requires as mentioned in subsection (2).
- (4) The power conferred by this section does not include power to require the provision of any information that would be protected from disclosure or production in legal proceedings on grounds of legal professional privilege or, in Scotland, confidentiality of communications. 35

- (5) Nothing in this section limits any power of the OGA to require information under –
- (a) regulations under this Chapter,
 - (b) the terms of a licence, or
 - (c) the terms of a permit granted under a licence.”

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CHAPTER 5

GENERAL

99 Access to infrastructure

- (1) The Secretary of State may by regulations make provision about the acquisition of rights to use any of the following (whether existing or proposed) – 10
- (a) relevant infrastructure within the meaning of the Storage of Carbon Dioxide (Access to Infrastructure) Regulations 2011 (S.I. 2011/2305);
 - (b) relevant infrastructure within the meaning of the Storage of Carbon Dioxide (Access to Infrastructure) Regulations (Northern Ireland) (S.R. (N.I.) 2015 No. 388). 15
- (2) In exercising the power under subsection (1) the Secretary of State must have regard to the need to ensure that the process for acquiring such rights operates in a transparent and non-discriminatory manner.
- (3) Regulations under subsection (1) may specify circumstances in which access to relevant infrastructure may be refused. 20
- (4) Regulations under subsection (1) may amend –
- (a) the Storage of Carbon Dioxide (Access to Infrastructure) Regulations 2011 (S.I. 2011/2305);
 - (b) the Storage of Carbon Dioxide (Access to Infrastructure) Regulations (Northern Ireland) (S.R. (N.I.) 2015 No. 388). 25
- (5) Before making regulations under subsection (1) the Secretary of State must consult –
- (a) the economic regulator;
 - (b) the Scottish Ministers, if the regulations contain provision that would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament; 30
 - (c) the Welsh Ministers, if the regulations contain provision that would be within the legislative competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006); 35
 - (d) the Department for the Economy in Northern Ireland, if the regulations contain provision that –
- (i) would be within the legislative competence of the Northern Ireland Assembly if it were contained in an Act of that Assembly, and 40

- (ii) would not, if it were contained in a Bill in the Northern Ireland Assembly, result in the Bill requiring the consent of the Secretary of State under section 8 of the Northern Ireland Act 1998;
- (e) the Oil and Gas Authority. 5
- (6) Regulations under subsection (1) are subject to the affirmative procedure.

100 Financial assistance

- (1) The Secretary of State may, out of money provided by Parliament, provide financial assistance to any person for the purpose of encouraging, supporting or facilitating – 10
 - (a) transportation and storage of carbon dioxide;
 - (b) carbon dioxide capture facilities which operate (or are to operate) in association with facilities for the transportation and storage of carbon dioxide;
 - (c) low carbon hydrogen production; 15
 - (d) transportation and storage of hydrogen.
- (2) The financial assistance referred to in subsection (1) includes expenditure incurred by the Secretary of State for the purposes of, or in connection with –
 - (a) the establishment of a revenue support counterparty, a hydrogen levy administrator or an allocation body; 20
 - (b) making payments to a revenue support counterparty.
- (3) Financial assistance under this section –
 - (a) may be provided in any form and in particular by way of grants, loans, guarantees or indemnities or by the provision of insurance;
 - (b) may be provided subject to conditions (which may include conditions about repayment with or without interest or other return); 25
 - (c) may be provided pursuant to a contract;
 - (d) may be provided to an investment fund for onward investment or for administrative costs relating to onward investment;
 - (e) may be provided by incurring expenditure for the benefit of the person assisted; 30
 - (f) may take the form of investment by the acquisition (directly or through another body corporate) of shares in or securities of a body corporate;
 - (g) may take the form of investment by the acquisition of any undertaking or of any assets. 35
- (4) The Secretary of State is not authorised by this section to give financial assistance in the way described in subsection (3)(f) without the consent of the body corporate concerned.
- (5) The power to provide financial assistance under this section is in addition to (and does not limit or replace) any other power of a Minister of the Crown to provide financial assistance. 40

- (6) In this section—
- “allocation body” has the same meaning as in Chapter 1 (see section 68(5));
 - “greenhouse gas” has the meaning given by section 92(1) of the Climate Change Act 2008; 5
 - “hydrogen levy administrator” has the same meaning as in Chapter 1 (see section 65(6));
 - “low carbon hydrogen production” means production of hydrogen by a method which in the opinion of the Secretary of State will contribute to a reduction in emissions of greenhouse gases; 10
 - “revenue support counterparty” has the same meaning as in Chapter 1 (see section 58(6));
 - “storage”, in relation to carbon dioxide, means any storage with a view to the permanent containment of carbon dioxide;
 - “undertaking” means any trade or business or any other activity providing employment. 15

PART 3

NEW TECHNOLOGY

CHAPTER 1

LOW-CARBON HEAT SCHEMES 20

101 Low-carbon heat schemes

- (1) The Secretary of State may by regulations make provision for the establishment and operation of one or more low-carbon heat schemes.
- (2) A “low-carbon heat scheme” is a scheme for encouraging the supply or installation in the United Kingdom of relevant heating appliances through the imposition of low-carbon heat targets on persons to whom the scheme applies. 25
- (3) In this Chapter—
 - “low-carbon heat target” means a target imposed by or under scheme regulations; 30
 - “relevant heating appliance” means—
 - (a) a heating appliance that generates heat but is incapable of burning fossil fuels or peat to do so, or
 - (b) a heating appliance that generates heat by burning fossil fuels or peat, but does so only as part of a wider system to supplement heat from air, water or the ground. 35
- (4) In the definition of “relevant heating appliance” in subsection (3), “fossil fuel” means—
 - (a) coal,

- (b) lignite,
 - (c) natural gas (within the meaning of the Energy Act 1976),
 - (d) crude liquid petroleum,
 - (e) petroleum products (within the meaning of that Act), or
 - (f) any substance produced directly or indirectly from a substance mentioned in paragraphs (a) to (e). 5
- (5) The provision made by sections 102 to 108 is without prejudice to the generality of subsection (1).
- (6) In this Chapter, “scheme regulations” means regulations under subsection (1). 10

102 Application of scheme

- (1) Scheme regulations that provide for the establishment of a low-carbon heat scheme must identify –
- (a) the descriptions of person to whom the scheme applies;
 - (b) the kinds of relevant heating appliance to which the scheme applies. 15
- (2) A person within a description identified by virtue of subsection (1)(a) is referred to in this Chapter as a “scheme participant”.
- (3) Scheme regulations may –
- (a) set low-carbon heat targets, or
 - (b) provide for low-carbon heat targets to be set in accordance with provision made by the regulations. 20
- Section 103 contains further provision about the setting of targets.
- (4) Scheme regulations must make provision about the period or periods in relation to which low-carbon heat targets have effect.
- (5) The provision that may be made by virtue of subsection (4) includes – 25
- (a) provision authorising things done by a scheme participant before the first period in relation to which a low-carbon heat target has effect to be treated as done by the scheme participant during that period;
 - (b) provision authorising things done by a scheme participant during one period in relation to which a low-carbon-heat target has effect to be treated instead as done by the scheme participant during a different period in relation to which such a target has effect. 30

103 Setting of targets etc

- (1) A low-carbon heat target may be set in whatever way, and by reference to whatever criteria, the Secretary of State considers appropriate, and may for example be set – 35
- (a) by reference to the carrying on of specified activities;
 - (b) as a proportion of the activities of a scheme participant that must relate to relevant heating appliances;

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- (c) by reference to the average level of energy efficiency (determined in accordance with scheme regulations) to be achieved in relation to heating appliances, or specified descriptions of heating appliances, supplied or installed by a scheme participant;
 - (d) by reference to the average carbon intensity of heat generation (determined in accordance with scheme regulations) of heating appliances, or specified descriptions of heating appliances, supplied or installed by a scheme participant; 5
 - (e) where a scheme participant manufactures heating appliances, by specifying what proportion of those heating appliances, or of specified heating appliances, that are supplied or installed (whether or not by the scheme participant) must be relevant heating appliances. 10
- (2) The power to specify an activity by virtue of subsection (1)(a) includes power to specify circumstances or conditions relating to the carrying out of the activity. 15
 - (3) In the case of a low-carbon heat target that is imposed by virtue of subsection (1)(c) or (d) on a scheme participant who manufactures heating appliances, the target may be set by reference to heating appliances that are supplied or installed (whether or not by the scheme participant).
 - (4) Scheme regulations may confer a discretion on the Secretary of State or any other person in connection with the setting of low-carbon heat targets. 20
 - (5) The reference in subsection (1)(d) to the carbon intensity of heat generation, in relation to an appliance, is a reference to the level of greenhouse gas emissions per unit of heat generated by the appliance.
 “Greenhouse gas emissions” means emissions of any greenhouse gas within the meaning of section 92(1) of the Climate Change Act 2008. 25
 - (6) Scheme regulations may provide—
 - (a) for different weight to be given to different kinds of appliance or different activities;
 - (b) for low-carbon heat targets to be set at different levels for different kinds of appliance or different activities. 30
 - (7) Scheme regulations may provide for specified activities to count towards the meeting of a low-carbon heat target.
 - (8) In this section, “specified” means specified in scheme regulations.
- 104 Further provision about scheme regulations** 35
- (1) Scheme regulations must provide for the making of determinations as to whether a scheme participant has met a low-carbon heat target imposed on the scheme participant.
 - (2) Scheme regulations may make provision for monitoring the operation of a low-carbon heat scheme, and may in particular make provision about— 40
 - (a) the keeping of records by scheme participants and others;

- (b) the provision of information by scheme participants and others;
 - (c) the audit and verification of information provided by scheme participants and others.
- (3) Scheme regulations may make provision—
- (a) enabling scheme participants to pool or transfer low-carbon heat targets imposed on them; 5
 - (b) for the issuing of certificates representing activities or appliances to which a low-carbon heat target relates;
 - (c) enabling scheme participants to acquire certificates mentioned in paragraph (b) for the purpose of meeting a low-carbon heat target; 10
 - (d) about the keeping of records in relation to—
 - (i) the pooling or transfer of low-carbon heat targets;
 - (ii) the acquisition of certificates.
- (4) Scheme regulations may make provision—
- (a) requiring a scheme participant who fails to meet a low-carbon heat target to make a payment, before a specified deadline, of an amount specified by or determined in accordance with the regulations; 15
 - (b) for a payment mentioned in paragraph (a) to be made to the administrator (see section 105) or to such other person as the regulations may specify; 20
 - (c) for a person who fails to meet a low-carbon heat target to be subject to such consequences (instead of or in addition to a requirement mentioned in paragraph (a)) as may be specified;
 - (d) about how liability to make a payment, or to other consequences, is to be determined where low-carbon heat targets have been pooled or transferred by virtue of provision made under subsection (3)(a). 25
- (5) In subsection (4), “specified” means specified in scheme regulations.

105 Administration of scheme

- (1) Scheme regulations may provide for the appointment of a person as the administrator of a low-carbon heat scheme. 30
- (2) Scheme regulations—
- (a) may confer functions on the administrator for the purposes of the scheme;
 - (b) may authorise the administrator to arrange for another person to carry out any functions of the administrator. 35
- (3) The functions that may be conferred on the administrator by virtue of subsection (2) include, for example, functions in connection with—
- (a) setting low-carbon heat targets;
 - (b) determining whether low-carbon heat targets have been met;
 - (c) obtaining information; 40
 - (d) keeping records;

-
- (e) requiring scheme participants to make payments to the administrator in connection with the costs of operating the scheme.
 - (4) Only the following may be appointed as the administrator of a low-carbon heat scheme –
 - (a) the Secretary of State; 5
 - (b) the Scottish Ministers;
 - (c) the Welsh Ministers;
 - (d) the Department for the Economy in Northern Ireland;
 - (e) a public authority (other than a person within any of paragraphs (a) to (d)); 10
 - (f) any combination of the above.
 - (5) More than one person may be appointed as the administrator of a low-carbon heat scheme.
 - (6) Scheme regulations that appoint a public authority as the administrator of a low-carbon heat scheme may make such amendments to primary legislation as the Secretary of State considers appropriate for the purpose of enabling the authority to carry out the functions conferred on it by the regulations. 15
 - (7) In this section, “public authority” means a person with functions of a public nature.
- 106 Enforcement, penalties and offences** 20
- (1) Scheme regulations may authorise the administrator of a low-carbon heat scheme –
 - (a) to require the production of documents or the provision of information;
 - (b) to question the officers of a company or other individuals;
 - (c) to enter premises with a warrant; 25
 - (d) to seize documents or records.
 - (2) Scheme regulations may authorise the administrator of a low-carbon heat scheme, in circumstances specified in the regulations –
 - (a) to treat activities of a person (A) as activities of a different person (B) for the purposes of the scheme, and 30
 - (b) to treat a low-carbon heat target imposed on A as if it had been imposed on B.
 - (3) Scheme regulations may provide that a person is liable to one or more penalties in respect of a failure to comply with a requirement imposed on the person by or under a low-carbon heat scheme. 35
 - (4) Where by virtue of subsection (3) scheme regulations provide that a person is liable to a financial penalty, the regulations –
 - (a) may specify the amount of the penalty or provide for the amount of the penalty to be determined in accordance with the regulations;

- (b) must provide for the penalty to be paid to the administrator or to such other person as the regulations may specify.
- (5) Scheme regulations may create offences for failure to comply with a requirement imposed by or under a low-carbon heat scheme.
- (6) Scheme regulations made by virtue of subsection (5) may provide for an offence created by the regulations to be triable – 5
 - (a) only summarily, or
 - (b) either summarily or on indictment.
- (7) Scheme regulations made by virtue of subsection (5) may provide for an offence created by the regulations to be punishable with a fine. 10

107 Application of sums paid by virtue of section 104(4) or 106(3)

- (1) Scheme regulations may make provision about the application of amounts paid by virtue of section 104(4)(a) or 106(3).
- (2) Provision made by virtue of subsection (1) may require the payment of amounts into the Consolidated Fund. 15

108 Appeals

- (1) Scheme regulations may make provision about appeals against –
 - (a) decisions made by the administrator of a low-carbon heat scheme, and
 - (b) civil penalties imposed or enforcement action taken for failure to comply with a requirement imposed by or under a low-carbon heat scheme. 20
- (2) The regulations must specify the court, tribunal or person who is to hear and determine an appeal made by virtue of subsection (1).

109 Scheme regulations: procedure etc

- (1) Scheme regulations are subject to the negative procedure unless subsection (2) applies, in which case they are subject to the affirmative procedure. 25
- (2) This subsection applies if scheme regulations –
 - (a) establish a low-carbon heat scheme;
 - (b) extend the descriptions of person, or the kinds of relevant heating appliance, to which a low-carbon heat scheme applies; 30
 - (c) provide for new penalties;
 - (d) increase the amount of existing financial penalties by more than is necessary to reflect changes in the value of money;
 - (e) create an offence or increase the fine for an existing offence;
 - (f) confer new powers to enforce requirements imposed by or under a low-carbon heat scheme; 35
 - (g) amend primary legislation.

- (3) Before making scheme regulations, the Secretary of State must consult—
- (a) the Scottish Ministers, so far as the regulations apply in relation to Scotland;
 - (b) the Welsh Ministers, so far as the regulations apply in relation to Wales; 5
 - (c) the Department for the Economy in Northern Ireland, so far as the regulations apply in relation to Northern Ireland.
- (4) Scheme regulations may create exceptions to any requirement imposed by the regulations.

110 Interpretation of Chapter 1 10

In this Chapter—

“low-carbon heat scheme” has the meaning given by section 101(2);

“low-carbon heat target” has the meaning given by section 101(3);

“primary legislation” means—

- (a) an Act, 15
- (b) an Act of the Scottish Parliament,
- (c) a Measure or Act of Senedd Cymru, or
- (d) Northern Ireland legislation;

“relevant heating appliance” has the meaning given by section 101(3);

“scheme participant” has the meaning given by section 102(2); 20

“scheme regulations” has the meaning given by section 101(6).

CHAPTER 2

HYDROGEN GRID CONVERSION TRIALS

111 Modifications of the gas code

- (1) For the purposes of this section, “hydrogen grid conversion trial” means a scheme designated by the Secretary of State that— 25
- (a) relates to a particular place or area (the “trial location”),
 - (b) is designed to gather evidence for the purpose of enabling assessments to be made about the feasibility, costs and benefits of using hydrogen for heating or cooking, 30
 - (c) requires the network for supplying gas to the trial location to be modified so as to enable the supply of hydrogen, and
 - (d) is intended to have effect for a definite period.
- (2) Schedule 2B to the Gas Act 1986 (the gas code) applies in relation to a hydrogen grid conversion trial— 35
- (a) as if references to a gas transporter included a person (other than a gas transporter) who is conducting the trial, and
 - (b) as if it were modified in accordance with subsections (3) to (5).

- (3) Paragraph 16 (alterations etc of burners on change of calorific value) applies as if –
- (a) in sub-paragraph (1), the words “at a rate not exceeding 75,000 therms a year” were omitted, and
 - (b) in sub-paragraph (2), the steps required to be taken in respect of premises in the trial location also included any works required in respect of the premises (other than works already mentioned in sub-paragraph (2)) for the purposes or in consequence of the trial. 5
- (4) Paragraph 23 (entry of premises during supply) applies as if the power conferred by sub-paragraph (1)(a) included power to enter premises in the trial location for the purpose of inspecting anything on the premises, or carrying out any tests on the premises, in preparation for or otherwise in connection with the trial. 10
- (5) Paragraph 24 (entry of premises to discontinue supply) applies as if the power conferred by sub-paragraph (2) were exercisable for the purposes of the trial – 15
- (a) in relation to any premises in the trial location, and
 - (b) notwithstanding sub-paragraph (1).
- (6) For the purposes of the application of the Rights of Entry (Gas and Electricity Boards) Act 1954 in relation to a relevant power of entry (see paragraph 28(5) of Schedule 2B to the Gas Act 1986), the reference in section 1(2) of the 1954 Act to a gas operator includes a reference to a person (other than a gas transporter) who is conducting a hydrogen grid conversion trial. 20
- (7) In subsection (6), “relevant power of entry” means a power of entry conferred by Schedule 2B to the Gas Act 1986, as it applies by virtue of this section in relation to a hydrogen grid conversion trial. 25

112 Regulations for protection of consumers

- (1) The Secretary of State may by regulations make provision –
- (a) requiring a gas transporter to take specified steps to secure that consumers in a trial location are properly informed about a hydrogen grid conversion trial being conducted in the trial location; 30
 - (b) requiring a gas transporter to take specified steps to secure that consumers are given adequate warning of the need for their premises to be disconnected for the purposes of a hydrogen grid conversion trial;
 - (c) about the enforcement of requirements imposed by virtue of paragraph (a) or (b). 35
- (2) Regulations under subsection (1) may confer functions on gas transporters in connection with the discharge of requirements imposed by the regulations.
- (3) The provision that may be made by virtue of subsection (1)(c) includes provision for the imposition of civil penalties in respect of a failure to comply with a requirement imposed by the regulations (but does not include provision for the creation of a criminal offence). 40

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- (4) The Secretary of State may by regulations make provision designed to secure protection for consumers and other people who are affected, or likely to be affected, by a hydrogen grid conversion trial.
- (5) The provision that may be made by regulations under subsection (4) includes, for example, provision— 5
- (a) about the making of complaints about the exercise by a gas transporter of a power conferred by a relevant statutory provision;
 - (b) about the award of redress in specified circumstances;
 - (c) imposing requirements on gas transporters or other persons to provide information to consumers and others; 10
 - (d) for securing that consumers and others are not required to incur expenditure, or are not otherwise financially disadvantaged, as a result of a hydrogen grid conversion trial;
 - (e) for securing fair treatment of consumers and others before, during and after a hydrogen grid conversion trial; 15
 - (f) about the quality of products provided to consumers and others and the quality of works carried out on premises owned by consumers and others;
 - (g) about the enforcement of requirements imposed by the regulations on gas transporters or other persons. 20
- (6) The provision that may be made by virtue of subsection (5)(g) includes provision for the imposition of civil penalties in respect of a failure to comply with a requirement imposed by the regulations (but does not include provision for the creation of a criminal offence).
- (7) Where regulations under this section make provision for a civil penalty, they may also include provision for a right of appeal to a court or tribunal against the imposition of the penalty. 25
- (8) Regulations under this section are subject to the negative procedure.
- (9) In this section—
- “consumer” and “disconnected” have the same meaning as in Schedule 2B to the Gas Act 1986 (see paragraph 1(1) of that Schedule);
 - “gas transporter” means— 30
 - (a) a gas transporter within the meaning of Part 1 of the Gas Act 1986 (see section 7 of that Act), or
 - (b) any other person who— 35
 - (i) is conducting a hydrogen grid conversion trial, and
 - (ii) does not require a licence under section 7 of the Gas Act 1986 as a result of an exemption under section 6A of that Act;
 - “hydrogen grid conversion trial” and “trial location” have the same meaning as in section 111; 40
 - “specified” means specified by regulations.

CHAPTER 3

MISCELLANEOUS

Fusion energy

113 Fusion energy facilities: nuclear site licence not required

- (1) Section 1 of the Nuclear Installations Act 1965 (restriction of certain nuclear installations to licensed sites) is amended as follows. 5
- (2) After subsection (2) insert –
 - “(2A) Subsection (1) does not apply to a fusion energy facility.
 - (2B) In subsection (2A), “fusion energy facility” means a site that is –
 - (a) used for the purpose of installing or operating any plant designed or adapted for the production of electrical energy or heat by fusion, and 10
 - (b) not also used for the purpose of installing or operating a nuclear reactor.”

Removals of greenhouse gases 15

114 Climate Change Act 2008: meaning of “UK removals”

In section 29(1)(b) of the Climate Change Act 2008 (UK emissions and removals of greenhouse gases), for “land use, land-use change or forestry” substitute “processes, mechanisms or”.

PART 4 20

INDEPENDENT SYSTEM OPERATOR AND PLANNER

Independent System Operator and Planner: functions and designation

115 The Independent System Operator and Planner (“the ISOP”)

- (1) This Part contains provision about the Independent System Operator and Planner (referred to in this Part as “the ISOP”). 25
- (2) The functions of the ISOP include –
 - (a) functions conferred by or by virtue of this Act, which include functions relating to the matters mentioned in subsection (3), and
 - (b) whatever other functions are conferred on the ISOP by or by virtue of any enactment other than one contained in this Act. 30
- (3) The matters referred to in subsection (2)(a) are –
 - (a) co-ordinating and directing the flow of electricity onto and over transmission systems;

- (b) making and administering arrangements for the provision of services for the purpose of facilitating the co-ordination of the flow of electricity onto and over transmission systems;
- (c) carrying out strategic planning and forecasting in connection with—
 - (i) the development of transmission systems, 5
 - (ii) the provision of services referred to in paragraph (b), and
 - (iii) other arrangements relating to the conveyance or supply of electricity;
- (d) carrying out strategic planning and forecasting in connection with—
 - (i) the development of pipe-line systems for the conveyance of gas, and 10
 - (ii) other arrangements relating to the conveyance or supply of gas;
- (e) providing advice, analysis or information in relation to the matters mentioned in section 125(1). 15

116 Designation etc

- (1) The Secretary of State may by notice designate a person as the ISOP.
- (2) A notice under subsection (1)—
 - (a) must specify the time from which the designation has effect;
 - (b) must be published by the Secretary of State as soon as reasonably practicable after the notice is given. 20
- (3) The Secretary of State must ensure that a person is designated under subsection (1) at all times after a person is first designated (but at any time not more than one person may be designated).
- (4) The Secretary of State may by notice revoke a person’s designation under subsection (1). 25
- (5) A notice under subsection (4)—
 - (a) must specify the time from which the revocation has effect;
 - (b) must be published by the Secretary of State as soon as reasonably practicable after the notice is given. 30

General duties

117 Duty to promote particular objectives

- (1) The ISOP must carry out its functions in the way that it considers is best calculated to promote—
 - (a) the net zero objective; 35
 - (b) the security of supply objective;
 - (c) the efficiency and economy objective.

-
- (2) The net zero objective is the objective of enabling the Secretary of State to meet the duties imposed by –
- (a) section 1 of the Climate Change Act 2008 (net UK carbon account target for 2050), and
 - (b) section 4(1)(b) of that Act (UK carbon account not to exceed carbon budget). 5
- (3) The security of supply objective is the objective of ensuring the security of supply, to existing and future consumers, of –
- (a) electricity conveyed by distribution systems or transmission systems, and 10
 - (b) gas conveyed through pipes.
- (4) The efficiency and economy objective is the objective of promoting –
- (a) efficient, co-ordinated and economical systems for the distribution and transmission of electricity and the conveyance of gas;
 - (b) efficiency (including the efficient use of energy) and economy on the part of persons who carry out relevant activities. 15
- (5) In this Part, “relevant activity” means any of the following, so far as carried out in the course of a business –
- (a) an activity mentioned in section 5(1) of the Gas Act 1986 (gas transportation, interconnection, supply, shipping, system planning, smart meter communication, code management); 20
 - (b) an activity mentioned in section 4(1) of the Electricity Act 1989 (electricity generation, transmission, distribution, supply, interconnection, multi-purpose interconnection, system operation, smart meter communication, code management); 25
 - (c) an activity, other than an activity within paragraph (a) or (b), that is connected with –
 - (i) the production, conveyance, storage or supply of energy,
 - (ii) the reduction of UK emissions of targeted greenhouse gases arising from the production, conveyance, storage, supply or consumption of energy, or 30
 - (iii) data relating to any matter within sub-paragraph (i) or (ii), or to demand for or consumption of energy;
 - (d) any other activity in respect of which the ISOP has functions.
- (6) For the purposes of subsection (5)(c) – 35
- (a) “energy” means energy in any form and includes fuel or other substances used to produce energy;
 - (b) references to the production of energy include references to the conversion of energy from one form to another;
 - (c) references to the supply of energy include references to adjusting consumption of energy (whether generally, at particular times, or by particular persons); 40

- (d) an activity referred to in paragraph (c)(i) is not a relevant activity when carried out in relation to products for human or animal consumption;
 - (e) “UK emissions of targeted greenhouse gases” are emissions of such gases as are, or are treated for the purposes of Part 1 of the Climate Change Act 2008 as, emissions from sources in the United Kingdom. 5
- (7) In this section, “targeted greenhouse gas” has the same meaning as in Part 1 of the Climate Change Act 2008 (see section 24 of that Act).

118 Duty to have regard to particular matters

- (1) The ISOP must, when carrying out its functions, have regard to— 10
 - (a) the need to facilitate competition between persons who carry out a relevant activity (except to the extent that such persons are, in accordance with or by virtue of an enactment, not subject to competition in relation to the activity);
 - (b) the consumer impact of a relevant activity; 15
 - (c) the whole-system impact of a relevant activity;
 - (d) the desirability of facilitating innovation in relation to the carrying out of relevant activities.
- (2) The reference in subsection (1)(b) to the consumer impact of a relevant activity is a reference to the impact (or likely impact) of— 20
 - (a) the behaviour of persons who carry out the activity on existing and future consumers, and
 - (b) the behaviour of existing and future consumers on the carrying out of the activity.
- (3) The reference in subsection (1)(c) to the whole-system impact of a relevant activity is a reference to the impact (or likely impact) of— 25
 - (a) the carrying out of the activity, and
 - (b) the behaviour of existing and future consumers in relation to the carrying out of the activity,
 in relation to the carrying out of other relevant activities. 30

119 Duty to have regard to strategy and policy statement

- (1) The ISOP must, when carrying out its functions, have regard to the strategic priorities set out in the current strategy and policy statement.
- (2) The ISOP must give notice to the Secretary of State if at any time the ISOP concludes that a policy outcome contained in the current strategy and policy statement is not realistically achievable. 35
- (3) A notice under subsection (2) must include—
 - (a) the grounds on which the conclusion was reached;

- (b) what (if anything) the ISOP is doing or proposes to do for the purpose of furthering the delivery of the outcome so far as reasonably practicable.
- (4) In this section –
“the current strategy and policy statement” means the statement for the time being designated under section 131(1) of the Energy Act 2013;
“policy outcome” and “strategic priorities” have the same meaning as in Part 5 of the Energy Act 2013 (see section 131(5) of that Act). 5
- (5) Part 5 of the Energy Act 2013 is amended as follows.
- (6) In section 131 (designation of strategy and policy statement) – 10
(a) in subsection (2)(c), after “Authority” insert “, the Independent System Operator and Planner”;
(b) in subsection (5), after the definition of “the 1986 Act” insert –
““Independent System Operator and Planner” means the person for the time being designated under section 116(1) of the Energy Act 2023;”. 15
- (7) Section 134 (review of strategy and policy statement) is amended as follows.
- (8) In subsection (4), after paragraph (b) insert –
“(ba) the Independent System Operator and Planner has given notice to the Secretary of State under section 119(2) of the Energy Act 2023 since the relevant time,”. 20
- (9) After subsection (5) insert –
“(5A) The Secretary of State may also review the strategy and policy statement at any other time if the Secretary of State considers it appropriate to do so in preparation for or in connection with the designation of a person under section 116(1) of the Energy Act 2023 (Independent System Operator and Planner).” 25
- (10) In subsection (10), after paragraph (a) insert –
“(aa) the Independent System Operator and Planner,”.
- (11) In section 135(4) (procedural requirements in relation to strategy and policy statement), after paragraph (a) insert –
“(aa) the Independent System Operator and Planner,”. 30

Licences

120 Licensing of electricity system operator activity

- (1) Part 1 of the Electricity Act 1989 is amended as follows. 35

- (2) In section 4(1) (prohibition on unlicensed supply, transmission etc of electricity), after paragraph (c) insert—
- “(ca) co-ordinates and directs the flow of electricity onto and over transmission systems by means of which the transmission of electricity takes place;”.
- 5
- (3) Section 6 (licences authorising supply, etc) is amended as follows.
- (4) In subsection (1), after paragraph (d) insert—
- “(da) subject to subsections (1ZB) and (2ZA), a licence authorising a person to co-ordinate and direct the flow of electricity onto and over transmission systems by means of which the transmission of electricity takes place (“an electricity system operator licence”);”.
- 10
- (5) After subsection (1) insert—
- “(1ZA) Subject to subsection (2ZA), the Secretary of State may grant an electricity system operator licence.
- 15
- (1ZB) The first electricity system operator licence may only be granted by the Secretary of State.
- (1ZC) For the purposes of this section, references to the grant of an electricity system operator licence include the giving of a direction under section 121 of the Energy Act 2023 in respect of a transmission licence.”
- 20
- (6) After subsection (2) insert—
- “(2ZA) A person may not be granted an electricity system operator licence unless the same person—
- (a) already holds a licence granted under section 7AA of the Gas Act 1986, or
- (b) is granted such a licence at the same time as the person is granted an electricity system operator licence.”
- 25
- (7) In subsection (2A), for “(d)” substitute “(da)”.
- (8) In subsection (8), after “term of the licence” insert “and subject to ”.
- (9) After subsection (8) insert—
- “(8A) If a person who holds an electricity system operator licence ceases at any time to hold a licence under section 7AA of the Gas Act 1986, the person is to be treated as ceasing to hold the electricity system operator licence at the same time.”
- 30
- (10) In section 7A (transfer of licences), after subsection (11) insert—
- “(11ZA) An electricity system operator licence may not be transferred to a person unless a licence granted under section 7AA of the Gas Act 1986 is also transferred to the same person at the same time.”
- 35

- (11) In section 83 of this Act (modifications of licences etc) –
- (a) in subsection (1)(a) for “of the Electricity Act 1989 (transmission licences)” substitute “or (da) of the Electricity Act 1989 (transmission and electricity system operator licences)”;
 - (b) in subsection (1)(c), for “6(1)(b)” substitute “6(1)(b) or (da)”. 5

121 Direction for transmission licence to have effect as electricity system operator licence

- (1) The Secretary of State may (instead of granting an electricity system operator licence) direct that a pre-commencement transmission licence is to have effect as an electricity system operator licence. 10
- (2) A direction under this section may provide that a licence that has effect by virtue of the direction includes such terms and conditions as are specified, or of a description specified, in the direction (regardless of whether or the extent to which those terms and conditions were included in the pre-commencement transmission licence). 15
- (3) A direction under this section may provide for the continued effect (in accordance with the direction) of rights, liabilities and obligations that have effect immediately before the relevant date in connection with –
- (a) a pre-commencement transmission licence,
 - (b) a document maintained in accordance with the conditions of such a licence, or 20
 - (c) an agreement that gives effect to such a document.
- (4) In subsection (3), “the relevant date” means the date on which the direction takes effect.
- (5) A direction under this section may make – 25
- (a) incidental, consequential, supplementary and transitional provision;
 - (b) such amendments relating to the revocation of a pre-commencement transmission licence as the Secretary of State considers appropriate;
 - (c) different provision for different purposes.
- (6) Before giving a direction under this section, the Secretary of State must consult – 30
- (a) the GEMA, and
 - (b) such other persons as the Secretary of State considers appropriate.
- (7) Subsection (6) may be satisfied by consultation before the passing of this Act (as well as by consultation after that time). 35
- (8) In this Part –
- “electricity system operator licence” means a licence under section 6(1)(da) of the Electricity Act 1989 (as inserted by section 120);

“pre-commencement transmission licence” means a licence under section 6(1)(b) of the Electricity Act 1989 that is in force immediately before this section comes into force.

122 Licensing of gas system planning activity

- (1) The Gas Act 1986 is amended as follows. 5
- (2) In section 5 (prohibition on unlicensed activities), in subsection (1) –
 - (a) omit the “or” at the end of paragraph (c);
 - (b) after that paragraph insert –
 - “(ca) carries out planning and forecasting functions of the Independent System Operator and Planner;” 10
 - (c) after subsection (10) insert –
 - “(10A) In subsection (5)(1)(ca), “planning and forecasting functions of the Independent System Operator and Planner” means functions that –
 - (a) are conferred by or by virtue of an enactment on a person who is designated under section 116(1) of the Energy Act 2023, and 15
 - (b) relate to strategic planning and forecasting in connection with the development of pipe-line systems operated by gas transporters for the conveyance of gas.” 20
- (3) After section 7A insert –

“7AA Licensing of a person carrying out gas system planner functions

- (1) Subject to subsections (3) and (4), the Authority may grant a licence authorising a person to carry out planning and forecasting functions of the Independent System Operator and Planner (“a gas system planner licence”). 25
- (2) Subject to subsection (4), the Secretary of State may grant a gas system planner licence.
- (3) The first gas system planner licence may only be granted by the Secretary of State. 30
- (4) A person may not be granted a gas system planner licence unless either of the following paragraphs applies to the person –
 - (a) the person –
 - (i) already holds an electricity system operator licence, or
 - (ii) is treated as holding such a licence by virtue of a direction under section 121 of the Energy Act 2023; 35
 - (b) the person is granted an electricity system operator licence, or is treated by virtue of a direction under section 121 of the Energy Act 2023 as having been granted such a licence, at the same time as the person is granted a gas system planner licence. 40

- (5) In this section—
- “electricity system operator licence” means a licence under section 6(1)(da) of the Electricity Act 1989;
 - “planning and forecasting functions of the Independent System Operator and Planner” has the meaning given by section 5(10A).” 5
- (4) In section 7B (licences: general)—
- (a) in subsection (3), after “contained in it” insert “and subject to subsection (3A)”;
 - (b) after subsection (3) insert— 10
- “(3A) If a person who holds a gas system planner licence ceases at any time to hold a licence under section 6(1)(da) of the Electricity Act 1989, the person is to be treated as ceasing to hold the gas system planner licence at the same time.”
- (5) In section 8AA (transfer of licences), after subsection (11) insert— 15
- “(11ZA) A gas system planner licence may not be transferred to a person unless a licence granted under section 6(1)(da) of the Electricity Act 1989 is also transferred to the same person at the same time.”

123 Modification of licences etc

- (1) A relevant authority may modify— 20
- (a) the conditions of a particular relevant licence;
 - (b) the standard conditions of relevant licences of a particular type;
 - (c) a relevant document.
- (2) A relevant authority may revoke a pre-commencement transmission licence where— 25
- (a) the licence authorises the holder to co-ordinate and direct the flow of electricity onto and over a transmission system by means of which the transmission of electricity takes place, and
 - (b) the first electricity system operator licence has been granted to a person. 30
- (3) A relevant authority may exercise the power under subsection (1) or (2) only—
- (a) in preparation for the designation of a person under section 116(1), or
 - (b) in connection with or in consequence of the designation of a person under that provision. 35
- (4) A relevant authority may also exercise the power under subsection (1) where—
- (a) the operation or management of a relevant document is affected by steps taken in connection with the designation of a person under section 116(1) or by the preparation for such a designation, and

- (b) the authority considers it appropriate to exercise the power in connection with the operation or management of a relevant document.
- (5) The Secretary of State may direct the GEMA to exercise the power under subsection (1) or (2) if the Secretary of State considers it appropriate for the GEMA to exercise that power. 5
- (6) A relevant authority may not exercise the power under subsection (1) or (2) after the end of the period of 3 years beginning with the day on which the first designation under section 116(1) has effect.
- (7) In this section—
 “pre-commencement transmission licence” has the same meaning as in section 121; 10
 “relevant authority” means the Secretary of State or the GEMA;
 “relevant document” means a document maintained in accordance with the conditions of a relevant licence.
- 124 Procedure relating to modifications under section 123** 15
- (1) Before making a modification under section 123, a relevant authority must—
 (a) publish a notice about the proposed modification,
 (b) send a copy of the notice to the persons listed in subsection (2), and
 (c) consider any representations made within the period specified in the notice about the proposed modification or the date from which it would take effect. 20
- (2) The persons mentioned in subsection (1)(b) are—
 (a) each relevant licence holder;
 (b) the GEMA (where the relevant authority is the Secretary of State) or the Secretary of State (where the relevant authority is the GEMA); 25
 (c) the National Association of Citizens Advice Bureaux;
 (d) the Scottish Association of Citizens Advice Bureaux;
 (e) Consumer Scotland;
 (f) the General Consumer Council for Northern Ireland, unless the relevant authority does not consider it appropriate for the Council to be sent a copy of the notice in a particular case; 30
 (g) where the proposed modification relates to a licence for the purposes of section 5 of the Gas Act 1986, the Health and Safety Executive;
 (h) such other persons as the relevant authority considers appropriate.
- (3) A notice under subsection (1) must— 35
 (a) state that the relevant authority proposes to make a modification;
 (b) set out the proposed modification and its effect;
 (c) specify the date from which the relevant authority proposes that the modification will have effect;
 (d) state the reasons why the relevant authority proposes to make the modification. 40

- (4) If, after complying with subsections (1) to (3) in relation to a modification, the relevant authority decides to make the modification, it must publish a notice about the decision.
- (5) A notice under subsection (4) must –
- (a) state that the relevant authority has decided to make the modification; 5
 - (b) set out the modification and its effect;
 - (c) specify the date from which the modification has effect;
 - (d) state how the relevant authority has taken account of any representations made in the period specified in the notice under subsection (1); 10
 - (e) state the reason for any differences between the modification set out in the notice and the proposed modification.
- (6) A notice under this section about a modification or decision must be published in such manner as the relevant authority considers appropriate for bringing it to the attention of those likely to be affected by the making of the modification or decision. 15
- (7) References in this section to the making of a modification, in relation to a relevant licence, include references to the revocation of the licence.
- (8) In this section, “relevant licence holder” –
- (a) in relation to the modification of standard conditions of relevant licences of any type, means the holder of a licence of that type –
 - (i) that is to be modified by the inclusion of a new standard condition, or
 - (ii) that includes any standard conditions to which the modification relates that are in effect at the end of the period specified by virtue of subsection (1)(c); 25
 - (b) in relation to the modification of a condition of a particular relevant licence (other than a standard condition), means the holder of that licence;
 - (c) in relation to the modification of a document maintained in accordance with the conditions of a relevant licence of a particular type, means the holder of a relevant licence of that type; 30
 - (d) in relation to the revocation of a relevant licence, means the holder of that licence.
- (9) In this section, “relevant authority” means the Secretary of State or the GEMA. 35

Advice, analysis and information

125 Provision of advice, analysis or information

- (1) The ISOP must, so far as reasonably practicable, comply with a request by a person within subsection (2) for the provision of advice, analysis or information to the person in connection with – 40

- (a) any of the ISOP’s functions,
 - (b) any of the objectives listed in section 117(1), or
 - (c) any of the matters listed in section 118(1).
- (2) The persons within this subsection are—
- (a) a Minister of the Crown (within the meaning of the Ministers of the Crown Act 1975: see section 8(1) of that Act); 5
 - (b) the GEMA.
- (3) The ISOP must, so far as reasonably practicable, comply with a request made under subsection (1) within such period, and in such form and manner, as the person making the request may reasonably require. 10

126 Power to require information from regulated persons etc

- (1) The ISOP may by notice request from a person within subsection (2) such information as the ISOP reasonably requires in connection with the exercise of any of its functions.
- (2) A person is within this subsection if— 15
- (a) the person carries out a relevant activity, or
 - (b) the ISOP reasonably considers that the person intends to carry out a relevant activity.
- (3) A person to whom a request is made under subsection (1) must, so far as reasonably practicable, provide the requested information within such period, and in such form and manner, as may be specified in the notice. 20
- (4) Where a requirement under subsection (3) is imposed on a regulated person (as defined by section 25(8) of the Electricity Act 1989), it is enforceable by the GEMA as if it were a relevant requirement imposed on the person for the purposes of section 25 of that Act. 25
- (5) Where a requirement under subsection (3) is imposed on a regulated person (as defined by section 28(8) of the Gas Act 1986), it is enforceable by the GEMA as if it were a relevant requirement imposed on the person for the purposes of section 28 of that Act.
- (6) Where neither of subsections (4) and (5) applies, the duty imposed under subsection (3) on a person is enforceable by the ISOP in civil proceedings— 30
- (a) for an injunction,
 - (b) for specific performance of a statutory duty under section 45 of the Court of Session Act 1988, or
 - (c) for any other appropriate remedy or relief. 35
- (7) Nothing in this section requires a disclosure of information that would contravene the data protection legislation (within the meaning of the Data Protection Act 2018 - see section 3 of that Act).
In determining whether a disclosure would do so, the duty imposed by subsection (3) is to be taken into account. 40

127 Duty to keep developments in energy sector under review

The ISOP must keep under review developments relating to the energy sector that may be relevant to the carrying out of any of the ISOP’s functions.

Transfers, pensions and financial assistance

128 Transfers

5

Schedule 7 contains –

- (a) in Part 1, provision about transfer schemes relating to the ISOP;
- (b) in Part 2, related provision about transfers and other provision in connection with the designation of a person as the ISOP.

129 Pension arrangements

10

Schedule 8 contains provision about pension arrangements in connection with the ISOP.

130 Financial assistance for the ISOP

- (1) The Secretary of State may provide financial assistance to the ISOP.
- (2) Financial assistance under this section may be provided in any form and in particular may be provided by way of –
 - (a) grant,
 - (b) loan,
 - (c) guarantee or indemnity, or
 - (d) the acquisition of shares in or securities of a body corporate. 20
- (3) Financial assistance under this section may be provided subject to such conditions as the Secretary of State considers appropriate (which may include conditions about repayment with or without interest or other return). 15

131 Cross-sectoral funding

- (1) In section 7 of the Electricity Act 1989 (conditions of licences: general), in subsection (3A) –
 - (a) for “or a distribution licence” substitute “, a distribution licence or an electricity system operator licence”;
 - (b) in paragraph (a), for “his charges for the transmission or distribution of electricity” substitute “the charges payable to the holder in connection with the transmission or distribution of electricity, or in connection with the exercise of any other functions under or by virtue of the licence,”; 30
 - (c) in paragraph (b), for “licence holders” substitute “holders of licences under section 6 or under Part 1 of the Gas Act 1986”. 35

- (2) In section 9 of that Act (general duties of licence holders), after subsection (2A) insert –
- “(2B) The conditions of a licence held by a person to which a duty imposed by subsection (1) or (2) applies may include a condition requiring the person, in performing the duty, to have regard to the interests of existing and future consumers in relation to gas conveyed through pipes (within the meaning of the Gas Act 1986).” 5
- (3) In section 7B of the Gas Act 1986 (licences: general), in subsection (5)(b) –
- (a) after “section 7” insert “or 7AA”;
- (b) in sub-paragraph (i), for “his charges for the conveyance of gas” substitute “the charges payable to the holder in connection with the conveyance of gas, or in connection with the exercise of any other functions under or by virtue of the licence,”; 10
- (c) in sub-paragraph (ii), for the words from “licences under” to “above” substitute “licences under this Part or under section 6 of the Electricity Act 1989”. 15
- (4) In section 9 of that Act (general powers and duties of gas transporters), after subsection (2) insert –
- “(2A) The conditions of a licence held by a gas transporter may include a condition requiring the gas transporter, in performing a duty under subsection (1), (1A) or (2), to have regard to the interests of existing and future consumers in relation to electricity conveyed by distribution systems or transmission systems (within the meaning of the Electricity Act 1989).” 20
- Other* 25
- 132 Principal objective and general duties of Secretary of State and GEMA under Part 4**
- (1) Sections 3A to 3D of the Electricity Act 1989 and sections 4AA to 4B of the Gas Act 1986 (principal objective and general duties) apply in relation to the functions of the Secretary of State under sections 116 and 121 as they apply in relation to functions under Part 1 of the Act in question. 30
- (2) Where the Secretary of State or the GEMA has functions under section 123, 124 or 126 in relation to a licence under section 6(1) of the Electricity Act 1989, sections 3A to 3D of that Act apply in relation to those functions as they apply in relation to functions under Part 1 of that Act. 35
- (3) Where the Secretary of State or the GEMA has functions under section 123, 124 or 126 in relation to a licence under section 7, 7ZA, 7A, 7AA, 7AB or 7AC of the Gas Act 1986, sections 4AA to 4B of that Act apply in relation to those functions as they apply in relation to functions under Part 1 of that Act.

133 Minor and consequential amendments

Schedule 9 contains further amendments to the Electricity Act 1989 and the Gas Act 1986.

134 Interpretation of Part 4

- (1) In this Part – 5
- “distribution system” has the same meaning as in Part 1 of the Electricity Act 1989 (see section 4(4) of that Act);
 - “electricity system operator licence” has the meaning given by section 121(8);
 - “gas” has the same meaning as in Part 1 of the Gas Act 1986 (see section 48(1) of that Act); 10
 - “relevant activity” has the meaning given by section 117(5);
 - “relevant licence” means a licence for the purposes of section 4 of the Electricity Act 1989 or section 5 of the Gas Act 1986 (prohibitions on unlicensed activities); 15
 - “transmission system” has the same meaning as in Part 1 of the Electricity Act 1989 (see section 4(4) of that Act).
- (2) References in this Part to the distribution, generation, supply or transmission of electricity are to be construed in accordance with section 4(4) of the Electricity Act 1989. 20
- (3) References in this Part to the ISOP’s functions include references to –
- (a) any function of a kind described in section 115(2), including any function conferred on the ISOP by or by virtue of a relevant licence or a document maintained in accordance with the conditions of such a licence; 25
 - (b) any other activity that a person for the time being designated as the ISOP carries out wholly or partly as a result of the designation (whether or not the person is required to carry out the activity);
 - (c) any function or activity that is ancillary to the carrying out of a function within paragraph (a) or an activity within paragraph (b). 30

135 Regulations under Part 4

Regulations under this Part are subject to the negative procedure.

PART 5

GOVERNANCE OF GAS AND ELECTRICITY INDUSTRY CODES

*Key definitions for Part***136 Designation of codes etc**

- (1) In this Part, “designated document” means a document that— 5
- (a) is maintained in accordance with the conditions of a relevant licence, and
- (b) is designated for the purposes of this Part by notice given by the Secretary of State.
- (2) The designation of a document has effect from the time specified in the notice under subsection (1)(b). 10
- (3) A notice under subsection (1)(b) must be published in such manner as the Secretary of State considers appropriate for bringing it to the attention of those likely to be affected by the designation.
- (4) The Secretary of State may revoke the designation of a document under this section. 15
- (5) The Secretary of State may not designate a document, or revoke the designation of a document, except so as to give effect to a recommendation of the GEMA.
- (6) Before making a recommendation to the Secretary of State for the purposes of subsection (5), the GEMA must consult such persons as it considers appropriate. 20
- (7) Subsection (6) does not apply in relation to the designation of a document where, immediately before being designated, the document is (or is treated as) a qualifying document within the meaning of Schedule Schedule 10. 25

137 Meaning of “code manager” and “code manager licence”

- (1) In this Part, “code manager”, in relation to a designated document, means the holder of a code manager licence in respect of the document.
- (2) In this Part, “code manager licence” means a licence under section 7AC of the Gas Act 1986 or section 6(1)(g) of the Electricity Act 1989. 30
- (3) See sections 139 and 140, which contain amendments to the Gas Act 1986 and the Electricity Act 1989 in relation to the licences mentioned in subsection (2).

138 Designation of central systems

- (1) In this Part, “designated central system” means a central system that is designated for the purposes of this Part by notice given by the Secretary of State.
- (2) “Central system” means an information technology system which has one or both of the following functions—
 - (a) to support the operation of the provisions of one or more designated documents;
 - (b) to process, transmit or store data in connection with the operation of the provisions of one or more designated documents.
- (3) The designation of a central system has effect from the time specified in the notice under subsection (1).
- (4) A notice under subsection (1) in relation to a central system must also specify the person (referred to in this Part as the “responsible body”) who is responsible, for the purposes of this Part, for operating or procuring the operation of the central system.
- (5) A notice under subsection (1) must be published in such manner as the Secretary of State considers appropriate for bringing it to the attention of those likely to be affected by the designation.
- (6) The Secretary of State may revoke the designation of a central system under this section.
- (7) The Secretary of State may not designate a central system, or revoke the designation of a central system, except so as to give effect to a recommendation of the GEMA.
- (8) Before making a recommendation to the Secretary of State for the purposes of subsection (7), the GEMA must consult such persons as it considers appropriate.
- (9) Subsection (8) does not apply in relation to the designation of a central system where—
 - (a) immediately before being designated, the central system is a qualifying central system within the meaning of Schedule Schedule 10, and
 - (b) the designation does not involve any change to the responsible body in relation to the central system.
- (10) The Secretary of State may by notice provide—
 - (a) that the person who is the responsible body in relation to a designated central system is to cease to be the responsible body in relation to that system, and
 - (b) that a person specified in a notice under this paragraph is instead to be the responsible body in relation to the designated central system.
- (11) The Secretary of State may not give a notice under subsection (10) except so as to give effect to a recommendation of the GEMA.

*Licensing and selection of code manager***139 Licence under Gas Act 1986 for performance of code management function**

- (1) Part 1 of the Gas Act 1986 is amended as follows.
- (2) Section 5 (prohibition on unlicensed activities) is amended as follows.
- (3) After subsection (1)(d) insert “ or 5
 - (e) performs the function of code manager in relation to a designated gas licence document (see further subsections (11A) and (11B)),”.
- (4) After subsection (11) insert – 10
 - “(11A) A reference in this Part to a person (“P”) performing the function of code manager in relation to a designated gas licence document is a reference to making arrangements, with the persons to whom subsection (11B) applies, under which P is responsible for the governance of the document.
 - (11B) This subsection applies to the holder of a licence for the purposes of section 5 where a condition of the licence – 15
 - (a) requires the holder to comply with, or to enter into arrangements that conform with, the designated gas licence document in question, or
 - (b) imposes obligations on the holder that do not apply to the holder where the holder complies with that document.” 20
- (5) In subsection (12) – 25
 - (a) omit the “and” after the definition of “relevant information”;
 - (b) at the appropriate place insert –
““designated gas licence document” means a document that is – 25
 - (a) maintained in accordance with the conditions of a licence for the purposes of section 5, and
 - (b) designated under section 136 of the Energy Act 2023;”.
- (6) After section 7AB insert – 30
“7AC Licensing of a person performing code manager function 30
 - (1) The Authority may grant a licence (“a code manager licence”) authorising a person to perform the function of code manager in respect of a designated gas licence document.
 - (2) Where a designated gas licence document is also a designated electricity licence document, a person may not be granted a code manager licence in respect of the document unless the same person is at the same time granted a licence under section 6(1)(g) of the Electricity Act 1989. 35

- (3) In this section—
“designated electricity licence document” has the same meaning as in section 4 of the Electricity Act 1989;
“designated gas licence document” has the same meaning as in section 5.” 5
- (7) Section 7B (licences: general) is amended as follows.
- (8) In subsection (5A)—
(a) after “smart meter communication licence” (in the first place it occurs) insert “or in a code manager licence”;
(b) for “smart meter communication licence” (in the second place it occurs) substitute “a licence of the same type”. 10
- (9) In subsection (5B)—
(a) for “Secretary of State or the Authority” substitute “relevant authority”;
(b) in paragraph (b)(ii), after “licence” insert “or (in the case of an application for a code manager licence) apply for a licence otherwise than as part of a competition”. 15
- (10) In subsection (5C), after “smart meter communication licence” insert “or in a code manager licence”.
- (11) In subsection (5D), for “the Secretary of State or the Authority” substitute “the relevant authority”. 20
- (12) In subsection (5E)—
(a) in paragraph (a), for “Secretary of State or the Authority (as appropriate)” substitute “relevant authority”;
(b) in paragraph (b), for “Secretary of State or the Authority (as appropriate)” substitute “relevant authority”. 25
- (13) After subsection (5F) insert—
“(5FA) In subsections (5B) to (5E), “the relevant authority” means—
(a) in relation to a smart meter communication licence, the Secretary of State or the Authority;
(b) in relation to a code manager licence, the Authority.” 30
- (14) In section 8AA (transfer of licences), after subsection (11A) insert—
“(11B) Where the holder of a code manager licence is also the holder of a licence under section 6(1)(g) of the Electricity Act 1989, the code manager licence may not be transferred to a person unless the licence under section 6(1)(g) of that Act is transferred to the same person at the same time.” 35

140 Licence under Electricity Act 1989 for performance of code management function

- (1) Part 1 of the Electricity Act 1989 is amended as follows.

- (2) Section 4 (prohibition on unlicensed supply, etc) is amended as follows.
- (3) In subsection (1)–
- (a) omit the “or” after paragraph (d);
 - (b) after paragraph (e) insert “ or
 - (f) performs the function of code manager in relation to a designated electricity licence document (see further subsections (3H) and (3I)),”.
- (4) After subsection (3G) insert–
- “(3H) A reference in this Part to a person (“P”) performing the function of code manager in relation to a designated electricity licence document is a reference to making arrangements, with the persons to whom subsection (3I) applies, under which P is responsible for the governance of the document.
- (3I) This subsection applies to the holder of a licence for the purposes of section 4 where a condition of the licence requires the holder to comply with the designated electricity licence document in question.”
- (5) In subsection (6), at the appropriate place insert–
- ““designated electricity licence document” means a document that is–
- (a) maintained in accordance with the conditions of a licence for the purposes of section 4, and
 - (b) designated under section 136 of the Energy Act 2023;”.
- (6) Section 6 (licences authorising supply, etc) is amended as follows.
- (7) In subsection (1)–
- (a) omit the “or” after paragraph (e);
 - (b) after paragraph (f) insert “, or
 - (g) a licence authorising a person to perform the function of code manager in relation to a designated electricity licence document (“a code manager licence”).”
- (8) After subsection (2B) insert–
- “(2C) Where a designated electricity licence document is also a designated gas licence document, a person may not be granted a code manager licence in relation to the document unless the same person is at the same time granted a licence under section 7AC of the Gas Act 1986.”
- (9) For subsection (10) substitute–
- “(10) In this section–
- “designated electricity licence document” has the same meaning as in section 4;
 - “designated gas licence document” has the same meaning as in section 5 of the Gas Act 1986;

“premises” has the same meaning as in section 4.”

- (10) Section 7 (conditions of licences: general) is amended as follows.
- (11) In subsection (3B)–
- (a) after “smart meter communication licence” (in the first place it occurs) insert “or in a code manager licence”; 5
 - (b) for “smart meter communication licence” (in the second place it occurs) substitute “a licence of the same type”.
- (12) In subsection (3C)–
- (a) for “Secretary of State or the Authority” substitute “relevant authority”;
 - (b) in paragraph (b)(ii), after “licence” insert “or (in the case of an application for a code manager licence) apply for a licence otherwise than as part of a competition”. 10
- (13) In subsection (3D), after “smart meter communication licence” insert “or in a code manager licence”.
- (14) In subsection (3E), for “the Secretary of State or the Authority” substitute “the relevant authority”. 15
- (15) In subsection (3F)–
- (a) in paragraph (a), for “Secretary of State or the Authority (as appropriate)” substitute “relevant authority”;
 - (b) in paragraph (b), for “Secretary of State or the Authority (as appropriate)” substitute “relevant authority”. 20
- (16) In subsection (3G)(a), after “licence” insert “or (as the case may be) code manager licence”.
- (17) After subsection (3G) insert–
- “(3GA) In subsections (3C) to (3F), “the relevant authority” means– 25
- (a) in relation to a smart meter communication licence, the Secretary of State or the Authority;
 - (b) in relation to a code manager licence, the Authority.”
- (18) In section 7A (transfer of licences), after subsection (11A) insert–
- “(11B) Where the holder of a code manager licence is also the holder of a licence under section 7AC of the Gas Act 1986, the code manager licence may not be transferred to a person unless the licence under section 7AC of that Act is transferred to the same person at the same time.” 30
- 141 Selection of code manager** 35
- (1) The GEMA must determine whether the selection of the person who is to be the code manager in relation to a designated document is to be made–
- (a) on a non-competitive basis, in accordance with regulations made by the Secretary of State under section 142, or

- (b) on a competitive basis, in accordance with regulations made by the GEMA under section 143.
- (2) The Secretary of State may by regulations make—
 - (a) provision about the making of determinations under subsection (1) by the GEMA (which may include provision specifying criteria to be applied by the GEMA in making determinations); 5
 - (b) provision enabling the GEMA, in circumstances specified in the regulations, to change the basis on which the selection of a code manager is to be made.
- (3) The Secretary of State may by regulations— 10
 - (a) specify requirements to be met by or in relation to a person in order for the person to be selected as the code manager in relation to a designated document;
 - (b) specify persons, or persons of a particular description, who may or may not be selected to be a code manager in relation to a designated document. 15

142 Selection on a non-competitive basis

- (1) The Secretary of State may by regulations make provision about the selection by the GEMA, otherwise than on a competitive basis, of the person who is to be the code manager in relation to a designated document. 20
- (2) Regulations under this section may make provision by reference to a determination by the GEMA or to the opinion of the GEMA as to any matter.
- (3) Regulations under this section must make provision so as to ensure that a person (“P”) may not be selected to be the code manager in relation to a designated document unless the GEMA is satisfied that P would not, if selected, have a financial or other interest likely to prejudice the discharge by P of the functions of code manager. 25
- (4) The provision that may be made by virtue of subsection (1) includes provision for the selection by the GEMA of a person (other than an individual) formed by the GEMA. 30

143 Selection on a competitive basis

- (1) The GEMA may by regulations make provision for a determination by the GEMA on a competitive basis of the person who is to be selected to be the code manager in relation to a designated document.
- (2) Regulations under this section may make provision about the procedure relating to the making of such a determination, which may include provision— 35
 - (a) in prescribed cases, for the publication of a proposal to select a code manager in relation to a designated document;
 - (b) for the inclusion in such a proposal of an invitation to apply for selection; 40

- (c) imposing conditions in relation to the making of applications (whether in pursuance of a proposal published as mentioned in paragraph (a) or otherwise);
 - (d) restricting the making of applications and imposing requirements as to the period within which they must be made; 5
 - (e) for regulating the manner in which applications are considered or determined;
 - (f) authorising or requiring the GEMA, when determining whom to select, to have regard to the person's suitability for being selected.
- (3) Regulations under this section may make provision by reference to a determination by the GEMA or to the opinion of the GEMA as to any matter. 10
- (4) Regulations under this section must make provision so as to ensure that a person (“P”) may not be selected to be the code manager in relation to a designated document unless the GEMA is satisfied that P would not, if selected, have a financial or other interest likely to prejudice the discharge by P of the functions of code manager. 15
- (5) The approval of the Secretary of State is required for the making of regulations under this section.
- (6) In this section, “prescribed” means prescribed by or determined in accordance with regulations made by the GEMA. 20

Strategic direction statement for designated documents

144 Strategic direction statement

- (1) The GEMA must, each year, prepare and publish a statement setting out a strategic direction for designated documents.
- (2) A statement prepared and published under subsection (1) is referred to in this Part as a “strategic direction statement”. 25
- (3) A strategic direction statement must in particular –
- (a) contain a strategic assessment of government policies, and of developments relating to the energy sector, that the GEMA considers will or may require the making of modifications to designated documents; 30
 - (b) cover such other matters relating to designated documents as the Secretary of State may specify in regulations.
- (4) In preparing a strategic direction statement, the GEMA must have regard to any advice given to it by the Independent System Operator and Planner so far as relevant to the matters referred to in subsection (3). 35
- (5) Before publishing a strategic direction statement in any year, the GEMA must –
- (a) publish a notice containing a draft of the document,

- (b) send a copy of the notice to the persons listed in subsection (6), and
 - (c) consider any representations about the draft made within the period specified in the notice.
- (6) The persons referred to in subsection (5)(b) are—
- (a) the Secretary of State; 5
 - (b) the National Association of Citizens Advice Bureaux;
 - (c) the Scottish Association of Citizens Advice Bureaux;
 - (d) Consumer Scotland.
- (7) A notice under subsection (5) must be published by the GEMA in whatever way it considers appropriate for the purpose of bringing the matters contained in it to the attention of persons likely to be affected by them. 10

145 Transfer of functions under section 144 to Independent System Operator and Planner

- (1) The Secretary of State may by regulations amend section 144 so as to provide for functions under that section to be exercisable by the Independent System Operator and Planner (instead of by the GEMA). 15
- (2) Before making regulations under this section, the Secretary of State must consult—
- (a) the GEMA,
 - (b) the Independent System Operator and Planner, and 20
 - (c) any other persons whose interests are likely to be affected by the proposal.
- (3) Regulations under this section—
- (a) must repeal section 144(4);
 - (b) must add the GEMA to the list of persons in section 144(6); 25
 - (c) may make such other amendments to section 144 as the Secretary of State considers appropriate.

Modifications and directions

146 Modification of designated documents by GEMA

- (1) The GEMA may modify a designated document if any of subsections (2) to (6) applies. 30
- (2) This subsection applies where the GEMA considers that—
- (a) the designated document needs to be modified as a matter of urgency,
 - (b) the making of the modification is likely to be delayed if done in accordance with the normal modification procedures for the document, 35
 - and
 - (c) such a delay would have adverse effects on—
 - (i) consumers, or

- (ii) any person with rights or obligations under the document, other than the GEMA.
- (3) This subsection applies where the GEMA considers that a financial or other interest of the code manager in respect of the matter to which the modification relates is likely to prejudice the making of the modification if done in accordance with the normal modification procedures for the document. 5
- (4) This subsection applies where the GEMA considers that—
 - (a) the modification is required for the purpose of implementing a strategic direction statement under section 144, and
 - (b) the nature of the modification (for example, its complexity) is such that it needs to be made under this section rather than in accordance with the normal modification procedures for the designated document. 10
- (5) This subsection applies where the GEMA considers that the modification is required in connection with the incorporation of the whole or part of the provision made by the designated document into another document (whether or not a designated document). 15
- (6) This subsection applies where the GEMA considers that the modification is required in consequence of the exercise of any power conferred by Schedule 10 (transitional provisions) in relation to a different document.
- (7) The Secretary of State may by regulations make— 20
 - (a) provision specifying requirements to be met in relation to the exercise of the power under subsection (1);
 - (b) provision supplementing subsections (2) to (6).
- (8) References in this section to the normal modification procedures for a designated document are to provision, relating to the procedure for modifying the document, that— 25
 - (a) is contained in the document, or
 - (b) applies pursuant to any condition of a licence in accordance with which the document is maintained.
- 147 Modification under section 146** 30
- (1) Before making a modification under section 146, the GEMA must—
 - (a) publish a notice about the proposed modification,
 - (b) send a copy of the notice to the persons listed in subsection (2), and
 - (c) consider any representations made within the period specified in the notice about the proposed modification or the date from which it would take effect. 35
- (2) The persons mentioned in subsection (1)(b) are—
 - (a) the Secretary of State,
 - (b) the code manager in relation to the designated document to which the proposed modification relates, and 40

- (c) such other persons as the GEMA considers appropriate.
- (3) A notice under subsection (1) must –
- (a) state that the GEMA proposes to make a modification;
 - (b) set out the proposed modification and its effect;
 - (c) specify the date from which the GEMA proposes that the modification will have effect; 5
 - (d) state –
 - (i) why the GEMA is seeking to make the modification under section 146 (by reference to whichever of subsections (2) to (6) of section 146 applies), and 10
 - (ii) the reasons for the proposed modification.
- (4) If, within the period specified by virtue of subsection (1)(c), the Secretary of State directs the GEMA not to make the proposed modification, the GEMA must comply with the direction.
- (5) If, after complying with subsections (1) to (3) in relation to a proposed modification, the GEMA decides to make a modification, it must publish a notice about the decision. 15
- (6) A notice under subsection (5) must –
- (a) state that the GEMA has decided to make the modification;
 - (b) set out the modification and its effect; 20
 - (c) specify the date from which the modification has effect;
 - (d) state how the GEMA has taken account of any representations made in the period specified in the notice under subsection (1);
 - (e) state the reason for any differences between the modification set out in the notice and the proposed modification. 25
- (7) A notice under this section about a proposed modification or a decision must be published in such manner as the GEMA considers appropriate for bringing it to the attention of those likely to be affected by the making of the modification or decision.
- 148 Directions relating to designated central systems** 30
- (1) The GEMA may give a direction to the responsible body in relation to a designated central system for the purpose of ensuring that the body –
- (a) complies with its obligations under a relevant designated document, or
 - (b) takes such steps as the GEMA considers may be necessary for the efficient operation or implementation of the provisions of a relevant designated document. 35
- (2) When determining whether to give a direction under this section, the GEMA must have regard to the ability of the responsible body to whom the direction would be given – 40

- (a) to recover any costs reasonably incurred by the body in complying with the direction, and
 - (b) to comply with the direction without contravening any obligations of the body under a relevant designated document or in relation to the operation of the designated central system. 5
- (3) A responsible body must comply with a direction given to it under this section.
- (4) In this section and section 149, “relevant designated document”, in relation to a designated central system, means a designated document in respect of which the central system has a function mentioned in section 138(2). 10

149 Directions under section 148

- (1) Before giving a direction under section 148, the GEMA must—
 - (a) publish a notice about the proposed direction,
 - (b) send a copy of the notice to the persons listed in subsection (2), and
 - (c) consider any representations made within the period specified in the notice about the proposed direction or the date from which it would take effect. 15
- (2) The persons mentioned in subsection (1)(b) are—
 - (a) the responsible body to whom the direction is proposed to be given, and
 - (b) the code manager in relation to the relevant designated document. 20
- (3) A notice under subsection (1) must—
 - (a) state that the GEMA proposes to give a direction;
 - (b) set out the proposed direction and its effect;
 - (c) specify the date from which the GEMA proposes that the direction will have effect; 25
 - (d) state the reasons why the GEMA proposes to give the direction.
- (4) If, after complying with subsections (1) to (3) in relation to a direction, the GEMA decides to give a direction, it must publish a notice about the decision.
- (5) A notice under subsection (4) must—
 - (a) state that the GEMA has decided to give the direction;
 - (b) set out the direction and its effect;
 - (c) specify the date from which the direction has effect;
 - (d) state how the GEMA has taken account of any representations made in the period specified in the notice under subsection (1); 30
 - (e) state the reason for any differences between the direction set out in the notice and the proposed direction. 35
- (6) A notice under this section about a proposed direction or a decision must be published in such manner as the GEMA considers appropriate for bringing

it to the attention of those likely to be affected by the making of the direction or decision.

General objectives and reports

- 150 Principal objective and general duties of Secretary of State and GEMA under Part 5** 5
- Sections 4AA to 4B of the Gas Act 1986 and sections 3A to 3D of the Electricity Act 1989 (principal objective and general duties) apply in relation to the functions under this Part of the Secretary of State and of the GEMA as they apply in relation to functions of the Secretary of State and of the GEMA under Part 1 of that Act. 10
- 151 GEMA’s annual report to cover matters relating to designated documents**
- (1) Section 5 of the Utilities Act 2000 (annual and other reports of the GEMA) is amended as follows.
- (2) After subsection (3) insert—
- “(3A) The annual report for each year must also include an overview of— 15
- (a) developments relating to documents designated for the purposes of Part 5 of the Energy Act 2023 (governance of gas and electricity industry codes);
- (b) decisions made by the Authority during the year in relation to such documents, including details of any modifications made under section 146 of the Energy Act 2023.” 20

Other

- 152 Regulations under Part 5**
- (1) Regulations under this Part are subject to the negative procedure, subject to subsection (2). 25
- (2) Regulations under section 145 are subject to the affirmative procedure.
- 153 Interpretation of Part 5**
- In this Part—
- “central system” and “designated central system” have the meaning given by section 138; 30
- “code manager”, in relation to a designated document, has the meaning given by section 137(1);
- “code manager licence” has the meaning given by section 137(2);
- “designated document” has the meaning given by section 136(1);

“the Independent System Operator and Planner” means the person for the time being designated under section 116(1);

“relevant licence” means a licence for the purposes of section 4 of the Electricity Act 1989 or section 5 of the Gas Act 1986 (prohibitions on unlicensed activities);

“responsible body”, in relation to a designated central system, has the meaning given by section 138(4).

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154 Transitional provision and pension arrangements

- (1) Schedule 10 contains transitional provision in connection with this Part.
- (2) Schedule 11 contains provision about pension arrangements in connection with this Part.

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155 Minor and consequential amendments

Schedule 12 contains minor and consequential amendments in connection with this Part.

PART 6

15

MARKET REFORM AND CONSUMER PROTECTION

Competition

156 Competitive tenders for electricity projects

Schedule 13 contains amendments of the Electricity Act 1989 in connection with enabling competitive tendering for electricity projects.

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157 Mergers of energy network enterprises

- (1) Schedule 14 makes provision about mergers of energy network enterprises.
- (2) The Secretary of State must carry out a review of the operation of sections 68A to 68F of, and Schedule 5A to, the Enterprise Act 2002 (inserted by Schedule 14) before the end of the period of 5 years beginning with the day on which paragraph 2 of Schedule 14 to this Act comes into force.
- (3) The Secretary of State must set out the conclusions of the review in a report.
- (4) The report must, in particular—
 - (a) set out the objectives of the provisions subject to review,
 - (b) assess the extent to which those objectives have been achieved, and
 - (c) assess whether those objectives remain appropriate and, if so, the extent to which those objectives could be achieved in a way that imposes less regulation.
- (5) The Secretary of State must lay the report before Parliament.

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*Multi-purpose interconnectors***158 Licence required for operation of multi-purpose interconnector**

- (1) Section 4 of the Electricity Act 1989 (prohibition on unlicensed supply etc of electricity) is amended in accordance with subsections (2) to (5).
- (2) In subsection (1) – 5
- (a) omit the “or” after paragraph (d);
- (b) after paragraph (d) insert –
- “(da) participates in the operation of a multi-purpose interconnector; or”.
- (3) After subsection (3C) insert – 10
- “(3CA) A reference in this Part to participating in the operation of a multi-purpose interconnector is a reference to –
- (a) co-ordinating and directing the flow of electricity into or through a multi-purpose interconnector; or
- (b) making a multi-purpose interconnector available for use for the conveyance of electricity, 15
- and a person is not to be regarded as participating in the operation of an interconnector or as participating in the transmission of electricity by reason only of activities constituting participation in the operation of a multi-purpose interconnector.” 20
- (4) In subsection (3D), after “(3C)(b)” insert “and (3CA)(b)”.
- (5) After subsection (3E) insert –
- “(3EA) In this Part “multi-purpose interconnector” means so much of an electric line or other electrical plant as –
- (a) is situated at a place within the jurisdiction of Great Britain; 25
and
- (b) subsists for both –
- (i) the conveyance of electricity (whether in both directions or in only one) between Great Britain and a place within the jurisdiction of another country or territory, and 30
- (ii) the conveyance of electricity generated in offshore waters (whether in both directions or in only one) between a generating station and a substation or another generating station, or between two or more substations.”
- (6) In section 5 of the Electricity Act 1989 (exemptions from prohibition), in subsection (1), after “(d)” insert “, (da)”. 35
- (7) Section 6 of the Electricity Act 1989 (licences authorising supply, etc) is amended in accordance with subsections (8) to (10).
- (8) In subsection (1) –

- (a) omit the “or” after paragraph (e);
 - (b) after paragraph (e) insert—
 - “(ea) a licence authorising a person to participate in the operation of a multi-purpose interconnector (“an MPI licence”); or”.
- (9) After subsection (2A) insert—
- “(2AA) The same person may not be the holder of an MPI licence and the holder of a licence falling within any of paragraphs (a) to (e) of subsection (1).”
- (10) After subsection (6D) insert—
- “(6E) An MPI licence authorising participation in the operation of a multi-purpose connector—
- (a) must specify the multi-purpose interconnector or multi-purpose interconnectors in relation to which participation is authorised;
 - (b) may limit the forms of participation in the operation of a multi-purpose interconnector which are authorised by the licence.”
- (11) In section 64(1) of the Electricity Act 1989 (interpretation of Part 1), at the appropriate place insert—
- ““multi-purpose interconnector” has the meaning given by section 4(3EA);”.

159 Standard conditions for MPI licences

- (1) The Secretary of State must, before subsection (6) comes into force, determine standard conditions for MPI licences.
- (2) Those standard conditions may contain provision—
 - (a) for a standard condition included in an MPI licence not to have effect until brought into operation in such manner, and in such circumstances, as may be specified in or determined under the standard conditions;
 - (b) for the effect of a standard condition included in an MPI licence to be suspended in such manner, and in such circumstances, as may be so specified or determined; or
 - (c) for a standard condition included in such a licence the effect of which is for the time being suspended to be brought back into operation in such manner, and in such circumstances, as may be so specified or determined.
- (3) The Secretary of State must publish the standard conditions determined by the Secretary of State under this section.
- (4) The publication must be in such manner as the Secretary of State considers appropriate.

- (5) The standard conditions determined by the Secretary of State have effect subject to any modifications made under –
- (a) Part 1 of the Electricity Act 1989,
 - (b) section 37 or 45 of the Energy Act 2013, or
 - (c) this Act. 5
- (6) In section 8A of Electricity Act 1989 (standard conditions of licences), after subsection (1B) insert –
- “(1C) Subject to subsection (2), each condition which by virtue of section 159 of the Energy Act 2023 is a standard condition for the purposes of MPI licences is incorporated, by reference, in each MPI licence granted on or after the day on which subsection (6) of that section comes into force.” 10
- (7) In this section, “MPI licence” means a licence under section 6(1)(ea) of the Electricity Act 1989 (inserted by section 158 of this Act).

160 Operation of multi-purpose interconnectors: independence 15

- (1) In the italic heading above section 10A of the Electricity Act 1989, after “interconnectors” insert “and multi-purpose interconnectors”.
- (2) After section 10N of the Electricity Act 1989 insert –
- “10NA Electricity transmission and the operation of multi-purpose interconnectors: independence** 20
- (1) A person who, for any qualifying period, holds an MPI licence and participates in the operation of a multi-purpose interconnector must ensure that the person is certified by the Authority under section 10D throughout that period.
- (2) Sections 10B to 10N apply for the purposes of subsection (1) as they apply for the purposes of section 10A(3), but as if –
- (a) references to an electricity interconnector were references to a multi-purpose interconnector;
 - (b) references to an interconnector licence (or to a licence under section 6(1)(e)) were to an MPI licence (or to a licence under section 6(1)(ea)). 30
- (3) In this section, “qualifying period” means a period beginning on or after the day on which section 160 of the Energy Act 2023 comes into force.”
- (3) In section 10O(1) of the Electricity Act 1989 (interpretation), for “10N” substitute “10NA”. 35

161 Grant of MPI licences to existing operators

- (1) This section applies where a person holds a licence under section 6(1)(e) of the Electricity Act 1989 (interconnector licence) or an offshore transmission licence on the day on which section 158 of this Act comes into force.
- (2) The Secretary of State has power to grant an MPI licence to that person under section 6 of the Electricity Act 1989. 5
- (3) Sections 6A(5), 7 and 8A of the Electricity Act 1989 (notice of licence and licence conditions) have effect in relation to the grant of a licence by the Secretary of State by virtue of this section as if—
 - (a) references in those provisions to the Authority included references to the Secretary of State, and 10
 - (b) in section 8A—
 - (i) in subsection (4)(b), the words “the Secretary of State,” were omitted, and
 - (ii) subsection (5) were omitted. 15
- (4) Before granting a licence to a person by virtue of this section, the Secretary of State must consult—
 - (a) that person,
 - (b) the GEMA, and
 - (c) such other persons as the Secretary of State considers appropriate. 20
- (5) Subsection (4) may be satisfied by consultation before this section comes into force (as well as by consultation after that time).
- (6) In this section—

“MPI licence” means a licence under section 6(1)(ea) of the Electricity Act 1989 (inserted by section 158 of this Act); 25

“offshore transmission licence” has the same meaning as in Part 1 of the Electricity Act 1989 (see section 64(1) of that Act).

162 Power to make consequential etc provision

- (1) The Secretary of State may by regulations make consequential, supplementary, incidental, transitional or saving provision in connection with sections 158 to 161. 30
- (2) The provision that may be made by virtue of subsection (1) includes provision amending, repealing or revoking an Act of Parliament or retained direct EU legislation.
- (3) Before making regulations under subsection (1), the Secretary of State must consult—
 - (a) the GEMA, and
 - (b) such other persons as the Secretary of State considers appropriate. 35
- (4) Regulations under subsection (1) are subject to the affirmative procedure.

163 Consequential amendments relating to multi-purpose interconnectors

Schedule 15 contains minor and consequential amendments.

*Electricity storage***164 Electricity storage**

In section 4 of the Electricity Act 1989 (prohibition on unlicensed generation etc of electricity), after subsection (3) insert— 5

“(3ZA) In subsection (1)(a), the reference to a person who generates electricity includes a reference to a person who generates electricity from stored energy.

(3ZB) In subsection (3ZA), “stored energy” means energy that— 10
(a) was converted from electricity, and
(b) is stored for the purpose of its future reconversion into electricity.”

*Reduction targets: carbon emissions and home-heating costs***165 Payment as alternative to complying with certain energy company obligations** 15

(1) In section 33BC of the Gas Act 1986 (promotion of reductions in carbon emissions: gas transporters and gas suppliers), after subsection (7B) insert—

“(7C) The order may make provision as to circumstances in which a transporter or supplier may meet the whole or any part of a carbon emissions reduction target by making a buy-out payment. 20

(7D) In this section, “buy-out payment” means a payment—
(a) of an amount (“the buy-out price”) determined by the Secretary of State,
(b) to a person approved by the Administrator (an “approved person”), 25
(c) for a purpose approved by the Administrator (an “approved purpose”).

(7E) Provision made by virtue of subsection (7C) may include provision about the determination by the Secretary of State of the buy-out price, including provision— 30

(a) enabling the Secretary of State to set different buy-out prices—
(i) for different parts of the period to which the order relates;
(ii) for different cases (including different buy-out prices for different transporters or suppliers); 35
(b) requiring the Secretary of State to publish the buy-out price.

- (7F) If the order makes provision by virtue of subsection (7C), the order may also make provision—
- (a) as to the procedure to be followed by the Administrator in approving a person as an approved person or a purpose as an approved purpose; 5
 - (b) specifying criteria by reference to which the Administrator is to determine whether to approve a person or purpose.
- (7G) Provision made by virtue of subsection (7C) may include further provision about buy-out payments, including in particular provision—
- (a) as to the procedure to be followed by a transporter or supplier who proposes to make a buy-out payment, including provision— 10
 - (i) requiring a transporter or supplier to notify the Administrator of specified matters by a specified time;
 - (ii) as to circumstances in which a transporter or supplier must make the buy-out payment to which notification given to the Administrator relates; 15
 - (iii) about the process for seeking approval of a person as an approved person, or of a purpose as an approved purpose; 20
 - (b) preventing a transporter or supplier from treating a buy-out payment as a payment pursuant to any other obligation (whether statutory or contractual), or vice versa;
 - (c) setting out circumstances in which a requirement imposed on a transporter or supplier by provision made by virtue of subsection (5)(ba) or (bb) may be— 25
 - (i) met, in whole or in part, by the making of a buy-out payment;
 - (ii) varied as a result of a buy-out payment;
 - (d) about the effect of provision included in the order by virtue of subsection (7)(c) to (e) on a person’s ability to meet the whole or any part of a carbon emissions reduction target by making a buy-out payment. 30
- (7H) Where an order includes provision for the making of a buy-out payment, the references in subsections (5)(be) and (7)(b) to action include a reference to the making of a buy-out payment.” 35
- (2) In section 33BCA of the Gas Act 1986 (Scottish Ministers’ promotion of reductions in carbon emissions: gas suppliers) —
- (a) in subsection (3)—
 - (i) in paragraph (b), after “(7)(a)” insert “, (7C), (7E)”;
 - (ii) after paragraph (c) insert— 40
 - “(ca) in subsection (7F), for “order makes” is substituted “Secretary of State has made”;

- (cb) in subsection (7G), for “(7C)” is substituted “(7F)”;
- (cc) in subsection (7H), for “an order includes” is substituted “the Secretary of State has made”;;
- (iii) in paragraph (g), after “place” insert “other than in subsection (7D)(a)”;
- (b) in subsection (9)(a), for “or (7)(a)” substitute “, (7)(a), (7C) or (7E)”.
- (3) In section 33BDA of the Gas Act 1986 (Scottish Ministers’ promotion of reductions in home-heating costs: gas suppliers) –
- (a) in subsection (3) –
- (i) in paragraph (c), after “(7)(a)” insert “, (7C), (7E)”;
- (ii) after paragraph (d) insert –
- “(da) in section 33BC(7F) as applied by subsection (4), for “order makes” is substituted “Secretary of State has made”;
- (db) in section 33BC(7G) as applied by subsection (4), for “(7C)” is substituted “(7F)”;
- (dc) in section 33BC(7H) as applied by subsection (4), for “an order includes” is substituted “the Secretary of State has made”;;
- (iii) in paragraph (h), after “subsection (4)” insert “other than in section 33BC(7D)(a)”;
- (b) in subsection (9)(b), for “or (7)(a)” substitute “(7)(a), (7C) or (7E)”.
- (4) In section 41A of the Electricity Act 1989 (promotion of reductions in carbon emissions: electricity distributors and electricity suppliers), after subsection (7B) insert –
- “(7C) The order may make provision as to circumstances in which a distributor or supplier may meet the whole or any part of a carbon emissions reduction target by making a buy-out payment.
- (7D) In this section, “buy-out payment” means a payment –
- (a) of an amount (“the buy-out price”) determined by the Secretary of State,
- (b) to a person approved by the Administrator (an “approved person”),
- (c) for a purpose approved by the Administrator (an “approved purpose”).
- (7E) Provision made by virtue of subsection (7C) may include provision about the determination by the Secretary of State of the buy-out price, including provision –
- (a) enabling the Secretary of State to set different buy-out prices –
- (i) for different parts of the period to which the order relates;

- (ii) for different cases (including different buy-out prices for different distributors or suppliers);
 - (b) requiring the Secretary of State to publish the buy-out price.
- (7F) If the order makes provision by virtue of subsection (7C), the order may also make provision – 5
 - (a) as to the procedure to be followed by the Administrator in approving a person as an approved person or a purpose as an approved purpose;
 - (b) specifying criteria by reference to which the Administrator is to determine whether to approve a person or purpose. 10
- (7G) Provision made by virtue of subsection (7C) may include further provision about buy-out payments, including in particular provision – 15
 - (a) as to the procedure to be followed by a distributor or supplier who proposes to make a buy-out payment, including provision – 15
 - (i) requiring a distributor or supplier to notify the Administrator of specified matters by a specified time;
 - (ii) as to circumstances in which a distributor or supplier must make the buy-out payment to which notification given to the Administrator relates; 20
 - (iii) about the process for seeking approval of a person as an approved person, or of a purpose as an approved purpose;
 - (b) preventing a distributor or supplier from treating a buy-out payment as a payment pursuant to any other obligation (whether statutory or contractual), or vice versa; 25
 - (c) setting out circumstances in which a requirement imposed on a distributor or supplier by provision made by virtue of subsection (5)(ba) or (bb) may be –
 - (i) met, in whole or in part, by the making of a buy-out payment; 30
 - (ii) varied as a result of a buy-out payment;
 - (d) about the effect of provision included in the order by virtue of subsection (7)(c) to (e) on a person’s ability to meet the whole or any part of a carbon emissions reduction target by making a buy-out payment. 35
- (7H) Where an order includes provision for the making of a buy-out payment, the references in subsections (5)(be) and (7)(b) to action include a reference to the making of a buy-out payment.”
- (5) In section 41AA of the Electricity Act 1989 (Scottish Ministers’ promotion of reductions in carbon emissions: electricity suppliers) – 40
 - (a) in subsection (3) –
 - (i) in paragraph (b), after “(7)(a)” insert “, (7C), (7E)”;

- (ii) after paragraph (c) insert—
 - “(ca) in subsection (7F), for “order makes” is substituted “Secretary of State has made”;
 - (cb) in subsection (7G), for “(7C)” is substituted “(7F)”;
 - (cc) in subsection (7H), for “an order includes” is substituted “the Secretary of State has made”;
 - (iii) in paragraph (g), after “place” insert “other than in subsection (7D)(a)”;
 - (b) in subsection (9)(a), for “or (7)(a)” substitute “, (7)(a), (7C) or (7E)”.
- (6) In subsection 41BA of the Electricity Act 1989 (Scottish Ministers’ promotion of reductions in home-heating costs: electricity suppliers)—
- (a) in subsection (3)—
 - (i) in paragraph (c), after “(7)(a)” insert “, (7C), (7E)”;
 - (ii) after paragraph (d) insert—
 - “(da) in section 41A(7F) as applied by subsection (4), for “order makes” is substituted “Secretary of State has made”;
 - (db) in section 41A(7G) as applied by subsection (4), for “(7C)” is substituted “(7F)”;
 - (dc) in section 41A(7H) as applied by subsection (4), for “an order includes” is substituted “the Secretary of State has made”;
 - (iii) in paragraph (h), after “subsection (4)” insert “other than in section 41A(7D)(a)”;
 - (b) in subsection (9)(b), for “or (7)(a)” substitute “, (7)(a), (7C) or (7E)”.

Smart meters

166 Smart meters: extension of time for exercise of powers

- (1) In section 88(5) of the Energy Act 2008 (expiry of power to amend licence conditions etc: smart meters), for “1 November 2023” substitute “1 November 2028”.
- (2) In the Gas Act 1986—
 - (a) in section 8AA(10D) (expiry of provisions requiring proposed transfer of smart meter communication licence to be notified to Secretary of State), for “1 November 2023” substitute “1 November 2028”;
 - (b) in section 41HB(2) (time limit for exercise of power to provide for activities connected with smart meters to be licensable activities), for “1 November 2023” substitute “1 November 2028”.
- (3) In the Electricity Act 1989—

- (a) in section 7A(10D) (expiry of provisions requiring proposed transfer of smart meter communication licence to be notified to Secretary of State), for “1 November 2023” substitute “1 November 2028”;
 - (b) in section 56FB(2) (time limit for exercise of power to provide for activities connected with smart meters to be licensable activities), for “1 November 2023” substitute “1 November 2028”. 5
- (4) In the Smart Meters Act 2018, omit section 1.

PART 7

HEAT NETWORKS

CHAPTER 1

10

REGULATION OF HEAT NETWORKS

167 Relevant heat network

- (1) In this Chapter, “relevant heat network” means—
- (a) a district heat network, or
 - (b) a communal heat network. 15
- (2) In this section—
- “communal heat network” means a heat network by means of which heating, cooling or hot water is supplied only to a single building divided into separate premises or persons in those premises;
 - “district heat network” means a heat network by means of which heating, cooling or hot water is supplied to two or more buildings or persons in those buildings; 20
 - “heat network” means a network that, by distributing a liquid or a gas, enables the transfer of thermal energy for the purpose of supplying heating, cooling or hot water to a building or persons in that building (and includes any appliance the main purpose of which is to heat or cool the liquid or gas). 25
- (3) For the purposes of subsection (2), a network is not excluded from being a heat network only by reason of its being designed to rely wholly or in part on heat pumps particular to the buildings or premises served by the network. 30
- (4) The Secretary of State may by regulations amend this section for the purposes of changing the definitions of “relevant heat network”, “district heat network”, “communal heat network” and “heat network”.
- (5) Regulations under this section are subject to the negative procedure.

168 The Regulator

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- (1) In this Chapter, “the Regulator” means—
- (a) in relation to England and Wales and Scotland, the GEMA, and

(b) in relation to Northern Ireland, the NIAUR.

- (2) The Secretary of State may by regulations provide for functions of the Regulator in relation to England and Wales and Scotland to be carried out, to the extent specified in the regulations, by a person or body other than the GEMA. 5
- (3) The Department may by regulations provide for functions of the Regulator in relation to Northern Ireland to be carried out, to the extent specified in the regulations, by a person or body other than the NIAUR.
- (4) The Secretary of State may by regulations make such amendments of this Part as appear to the Secretary of State to be appropriate in consequence of provision made by virtue of subsection (2) or (3). 10
- (5) The Department may by regulations make such amendments of this Part as appear to the Department to be appropriate in consequence of provision made by virtue of subsection (3).
- (6) Regulations made by the Secretary of State under this section are subject to the affirmative procedure. 15
- (7) The power of the Department to make regulations under this section is exercisable by statutory rule for the purposes of the Statutory Rules (Northern Ireland) Order 1979 (S.I. 1979/1573 (N.I. 12)).
- (8) Regulations made by the Department under this section may not be made unless a draft of the regulations has been laid before and approved by a resolution of the Northern Ireland Assembly. 20

169 Alternative dispute resolution for consumer disputes

- (1) The Department may by regulations amend the Alternative Dispute Resolution for Consumer Disputes (Competent Authorities and Information) Regulations 2015 (S.I. 2015/542) so as to provide for a person who, or a body which, from time to time carries out to any extent in relation to Northern Ireland the functions conferred on the Regulator by this Chapter to be a competent authority for the purposes of those regulations. 25
- (2) The power of the Department to make regulations under this section is exercisable by statutory rule for the purposes of the Statutory Rules (Northern Ireland) Order 1979. 30
- (3) Regulations made by the Department under this section may not be made unless a draft of the regulations has been laid before and approved by a resolution of the Northern Ireland Assembly. 35

170 Heat networks regulations

- (1) The appropriate authority may by regulations make provision for the purposes of –
- (a) regulating relevant heat networks, or

- (b) conferring powers in relation to the development or maintenance of relevant heat networks.
- (2) Schedule 16 contains further provision about the power to make regulations under this section.
- (3) The provision made in Schedule 16 is without prejudice to the generality of subsection (1). 5
- (4) Regulations under this section may –
 - (a) contain such consequential, incidental, supplementary, transitional or saving provisions as the appropriate authority considers appropriate;
 - (b) make different provision for different purposes; 10
 - (c) provide for a person to exercise discretion in dealing with any matter.
- (5) Regulations made by the Secretary of State by virtue of subsection (4)(a) may include provisions amending or repealing primary legislation.
- (6) Regulations made by the Department by virtue of subsection (4)(a) may include provisions amending or repealing Northern Ireland legislation. 15
- (7) Before making any regulations under this section, the appropriate authority is to consult such persons or bodies as it may consider appropriate.
- (8) Before making regulations by virtue of any of Parts 3, 4, 7, 8 and 11 of Schedule 16 containing provision within the devolved competence of the Scottish Ministers, the Secretary of State is to consult the Scottish Ministers. 20
- (9) For the purposes of this section, a provision is within the devolved competence of the Scottish Ministers if and to the extent that it would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament.
- (10) It is immaterial for the purposes of subsection (7) or (8) whether consultation is carried out before or after the coming into force of this section. 25
- (11) In this section –
 - “the appropriate authority” means –
 - (a) in relation to England and Wales and Scotland, the Secretary of State; 30
 - (b) in relation to Northern Ireland, the Department;
 - “primary legislation” means –
 - (a) an Act of Parliament,
 - (b) an Act of the Scottish Parliament,
 - (c) an Act or Measure of Senedd Cymru, or 35
 - (d) Northern Ireland legislation.

171 Heat networks regulations: procedure

- (1) Regulations made by the Secretary of State under section 170 are subject to the negative procedure, subject to subsection (2).

-
- (2) A statutory instrument containing any of the following regulations (whether alone or with other regulations) is subject to the affirmative procedure –
- (a) the first regulations to be made by the Secretary of State under section 170;
 - (b) regulations under section 170 which are made by virtue of – 5
 - (i) paragraph 12(1) of Schedule 16,
 - (ii) paragraph 23(1) of Schedule 16, or
 - (iii) paragraph 32 of Schedule 16;
 - (c) regulations under section 170 which create an offence or provide for an increase in the penalty for an existing offence; 10
 - (d) regulations under section 170 which amend or repeal any provision of primary legislation (as defined in section 170).
- (3) The power of the Department to make regulations under section 170 is exercisable by statutory rule for the purposes of the Statutory Rules (Northern Ireland) Order 1979. 15
- (4) Statutory rules containing regulations made by the Department under section 170 are subject to negative resolution (within the meaning of section 41(4) of the Interpretation Act (Northern Ireland) 1954 (c. 33 (N.I.))), subject to subsection (5).
- (5) Regulations made by the Department under section 170 containing any of the following regulations (whether alone or with other regulations) may not be made unless a draft of the regulations has been laid before and approved by a resolution of the Northern Ireland Assembly – 20
- (a) the first regulations to be made by the Department under section 170;
 - (b) regulations under section 170 which are made by virtue of – 25
 - (i) paragraph 12(1) of Schedule 16, or
 - (ii) paragraph 32 of Schedule 16;
 - (c) regulations under section 170 which create an offence or provide for an increase in the penalty for an existing offence;
 - (d) regulations under section 170 which amend or repeal any provision of Northern Ireland legislation. 30

172 Recovery of costs by GEMA and NIAUR

- (1) The conditions of a licence under section 7, 7ZA, 7A or 7AB of the Gas Act 1986 or section 6 of the Electricity Act 1989 may require payment by the licence holder of sums relating to costs within subsection (2). 35
- (2) The costs within this subsection are –
- (a) costs of the GEMA –
 - (i) under regulations made under section 170, or
 - (ii) in its capacity as the licensing authority for the purposes of the Heat Networks (Scotland) Act 2021 (asp 9), if the GEMA is designated as such under section 173(1) of this Act, 40

- (b) costs of a person other than the GEMA in carrying out, by virtue of section 168(2) or paragraph 5 of Schedule 16, functions of the Regulator,
 - (c) costs of holders of licences issued under Part 4 of Schedule 16 (code manager licences),
 - (d) costs incurred by the Secretary of State in giving financial assistance under regulations made by virtue of paragraph 50 of Schedule 16 (special administration regime), 5
 - (e) costs incurred by a person or body in providing, or arranging for the provision of, consumer advocacy and advice in relation to heat network consumers, and 10
 - (f) costs not within any of paragraphs (a) to (e) incurred by a person in exercising a function in relation to heat networks in England, Wales or Scotland (whether by virtue of regulations under section 170 or otherwise).
- (3) The conditions of a licence under Article 8 of the Gas (Northern Ireland) Order 1996 (S.I. 1996/275 (N.I. 2)) or Article 10 of the Electricity (Northern Ireland) Order 1992 (S.I. 1992/231 (N.I. 1)) may require payment by the licence holder of sums relating to costs within subsection (4). 15
- (4) The costs within this subsection are –
- (a) costs of the NIAUR under regulations made under section 170, 20
 - (b) costs of a person other than the NIAUR in carrying out, by virtue of section 168(3) or paragraph 5 of Schedule 16, functions of the Regulator,
 - (c) costs incurred by the Department in giving financial assistance under regulations made by virtue of paragraph 50 of Schedule 16 (special administration regime), 25
 - (d) costs incurred by a person or body in providing, or arranging for the provision of, consumer advocacy and advice in relation to heat network consumers, and
 - (e) costs not within any of paragraphs (a) to (d) incurred by a person in exercising a function in relation to heat networks in Northern Ireland (whether by virtue of regulations under section 170 or otherwise). 30

173 Heat networks: licensing authority in Scotland

- (1) The Secretary of State may by regulations designate the GEMA as the licensing authority for the purposes of the Heat Networks (Scotland) Act 2021 (asp 9).
- (2) Regulations under subsection (1) are subject to the negative procedure. 35
- (3) In section 4 of the Heat Networks (Scotland) Act 2021 (meaning of “licensing authority”) –
 - (a) at the beginning insert “(1)”;
 - (b) after the subsection (1) so formed insert –
 - “(2) Subsection (1) is subject to subsection (3). 40

- (3) If the Secretary of State designates the Gas and Electricity Markets Authority as the licensing authority for the purposes of this Act by regulations under section 173(1) of the Energy Act 2023, references in this Act to the licensing authority are references to the Gas and Electricity Markets Authority.” 5

174 Heat networks: enforcement in Scotland

- (1) The Secretary of State may by regulations amend the Heat Networks (Scotland) Act 2021 for the purpose of making provision about monitoring compliance with, or enforcement of, conditions of heat networks licences issued under section 5(5) of that Act. 10
- (2) Regulations under this section may, in particular, make provision corresponding to the provision described in paragraphs 6 to 10, 37 to 40, 43, 72 and 73 of Schedule 16.
- (3) Regulations under this section must provide for an offence created by the regulations – 15
- (a) to be triable only summarily, and
 - (b) to be punishable on conviction with imprisonment for a period not exceeding 3 months or a fine not exceeding level 1 on the standard scale (or both).

175 Interpretation of Chapter 1 20

In this Chapter –

- “the Department” means the Department for the Economy in Northern Ireland;
- “heat network” has the meaning given by section 167;
- “the NIAUR” means the Northern Ireland Authority for Utility Regulation; 25
- “the Regulator” has the meaning given by section 168;
- “relevant heat network” has the meaning given by section 167.

CHAPTER 2

HEAT NETWORK ZONES 30

Zones regulations

176 Regulations about heat network zones

- (1) The Secretary of State may by regulations make provision about heat network zones (“zones regulations”).
- (2) A heat network zone is an area in England that is designated as such under zones regulations by virtue of being appropriate for the construction and operation of one or more district heat networks. 35

- (3) The provision made by this Chapter is without prejudice to the generality of subsection (1).
- (4) Subject to subsection (5), zones regulations are subject to the affirmative procedure.
- (5) Zones regulations which make provision of the kind described in section 179(1)(c) or (4)(c) or 180(2)(c) or (6) (and no other provision) are subject to the negative procedure. 5
- (6) If, apart from this section, a draft of an instrument containing zones regulations would be treated for the purposes of the standing orders of either House of Parliament as a hybrid instrument, it is to proceed in that House as if it were not such an instrument. 10

Heat Network Zones Authority and zone coordinators

177 Heat Network Zones Authority

- (1) Zones regulations may designate a person to act as the Heat Network Zones Authority (referred to in this Chapter as “the Authority”). 15
- (2) The purpose of the Authority is to carry out functions in relation to heat network zones conferred on it by zones regulations.
- (3) The Secretary of State may, but need not, be designated for the purposes of subsection (1).
- (4) Zones regulations may provide for the Authority to delegate any of its functions to persons specified in the regulations. 20

178 Zone coordinators

- (1) Zones regulations may make provision about zone coordinators.
- (2) The purpose of zone coordinators is to carry out functions conferred on them by zones regulations in relation to particular heat network zones. 25
- (3) Regulations made by virtue of subsection (1) may –
 - (a) make provision for, or in connection with, the designation of a person as a zone coordinator by a local authority for its area, or a part or parts of its area (including the local authority designating itself);
 - (b) make provision for, or in connection with, the designation of a person as a zone coordinator by two or more local authorities for their areas or parts of their areas (including the local authorities designating one of themselves); 30
 - (c) make provision for, or in connection with, the establishment of a body by one or more local authorities which is intended to be designated as a zone coordinator in accordance with regulations made by virtue of paragraph (a) or (b); 35
 - (d) make provision about the funding of zone coordinators;

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- (e) make provision about the governance of zone coordinators;
 - (f) make provision about zone coordinators cooperating with the Regulator in relation zone coordinators’ functions or the Regulator’s functions;
 - (g) make provision for the Authority to perform any function of a zone coordinator in circumstances, and subject to requirements, specified by the regulations; 5
 - (h) make provision for the Authority to direct a zone coordinator to perform any of its functions in the manner the Authority considers appropriate in circumstances, and subject to requirements, specified by the regulations. 10
- (4) Regulations made by virtue of subsection (3)(a) and (b) may make provision for the Authority to require a local authority, or two or more local authorities –
- (a) to designate a person as a zone coordinator in circumstances, and subject to requirements, specified by the regulations; 15
 - (b) to designate a person as a zone coordinator where a local authority (or local authorities) fail to comply with a requirement imposed by virtue of paragraph (a).
- (5) In this section, “local authority” means –
- (a) a county, district or parish council in England; 20
 - (b) a London borough council;
 - (c) the Common Council of the City of London;
 - (d) the Council of the Isles of Scilly;
 - (e) a combined authority established under section 103 of the Local Democracy, Economic Development and Construction Act 2009; 25
 - (f) another body or person specified by zones regulations.

Identification, designation and review of zones

179 Identification, designation and review of zones

- (1) Zones regulations may make provision for, or in connection with –
 - (a) the identification by the Authority and zone coordinators of areas which are appropriate for the construction and operation of one or more district heat networks, 30
 - (b) the designation of those areas as heat network zones by zone coordinators or the Authority, and
 - (c) the review by zone coordinators, or the Authority, of the designation of areas as heat network zones. 35
- (2) Regulations made by virtue of subsection (1)(a) must require the identification of areas to be carried out in accordance with the zoning methodology established under section 180.
- (3) Regulations made by virtue of subsection (1)(b) may – 40

- (a) make provision about the variation or revocation of designations by zone coordinators or the Authority;
 - (b) make provision about procedure;
 - (c) make provision about the publication of designations (and the variation or revocation of designations); 5
 - (d) require zone coordinators to notify the Authority of designations (and the variation or revocation of designations);
 - (e) make provision for, or in connection with, the maintenance by the Authority of a register of areas designated as heat network zones.
- (4) Regulations made by virtue of subsection (3)(a) may, in particular – 10
- (a) specify the circumstances in which a zone coordinator or the Authority may vary or revoke a designation;
 - (b) specify the factors a zone coordinator or the Authority may or must take into consideration in determining whether to vary or revoke a designation; 15
 - (c) impose on zone coordinators or the Authority requirements as to consultation.
- (5) Regulations made by virtue of subsection (1)(c) may –
- (a) make provision about the circumstances in which reviews must be carried out and the frequency of reviews; 20
 - (b) set out the criteria against which the designation of areas as heat network zones is to be reviewed;
 - (c) impose on zone coordinators or the Authority requirements as to consultation;
 - (d) make provision requiring reports of reviews to be published. 25

180 Zoning methodology

- (1) Zones regulations may make provision for a methodology (to be known as “the zoning methodology”) for the Authority and zone coordinators to identify areas which are appropriate for the construction and operation of one or more district heat networks. 30
- (2) Regulations made by virtue of subsection (1) may include in the zoning methodology –
- (a) the criteria for determining whether an area is appropriate;
 - (b) the roles of the Authority and zone coordinators;
 - (c) requirements as to consultation; 35
 - (d) provision about how the identification of areas is to be recorded, including provision about the use of maps;
 - (e) requirements as to publication of areas which have been identified.
- (3) Zones regulations may make provision for, or in connection with, the Authority publishing documents elaborating on one or more aspects of the zoning methodology. 40

- (4) Regulations made by virtue of subsection (3) may –
 - (a) require the Authority and zone coordinators to comply with any requirements set out in a document when applying the zoning methodology;
 - (b) make provision for the Authority to amend or replace a document. 5
- (5) Zones regulations may make provision for the Authority to issue guidance in relation to the zoning methodology.
- (6) Zones regulations may make provision about the Secretary of State carrying out reviews of the zoning methodology.
- (7) Regulations made by virtue of subsection (6) may – 10
 - (a) make provision about the circumstances in which reviews must be carried out and the frequency of reviews;
 - (b) set out the criteria against which the zoning methodology is to be reviewed;
 - (c) impose on the Secretary of State requirements as to consultation; 15
 - (d) make provision for the Authority or zone coordinators to consult persons on behalf of the Secretary of State;
 - (e) make provision requiring reports of reviews to be published.

181 Requests for information in connection with section 179 or 180

- (1) Zones regulations may make provision about the Authority and zone coordinators requesting information in connection with their functions under regulations made by virtue of section 179 or 180. 20
- (2) Regulations made by virtue of subsection (1) may provide for –
 - (a) the Authority or a zone coordinator to request information by notice from a person of a description specified in the regulations; 25
 - (b) the requested information to be provided within the period, and in the form and manner, specified in the notice;
 - (c) the Authority or zone coordinator to impose a penalty on a person for not complying with the notice;
 - (d) the disclosing of information requested by the zone coordinator not to breach any obligation of confidence owed by the person making the disclosure or any other restriction on the disclosure of information (however imposed); 30
 - (e) a request for information not to require a disclosure of information if disclosure would contravene the data protection legislation (but for a requirement imposed by virtue of regulations made by virtue of subsection (1) to be taken into account in determining whether a disclosure would do so); 35
 - (f) zone coordinators to delegate functions conferred on them by regulations made by virtue of subsection (1) to a description of person, and in the circumstances and subject to the conditions, specified by the regulations. 40

Heat networks within zones

182 Heat networks within zones

- (1) Zones regulations may make provision about heat networks within heat network zones.
- (2) Regulations made by virtue of subsection (1) may, in particular –
 - (a) make provision imposing requirements on persons of a description specified in the regulations for the purpose of securing that buildings of types specified by the regulations situated within a heat network zone are connected to a district heat network within the zone –
 - (i) in circumstances specified by the regulations, and 10
 - (ii) within a time specified by, or determined in accordance with, the regulations;
 - (b) make provision about zone coordinators giving notice of requirements imposed by regulations made by virtue of paragraph (a) to persons on whom requirements are imposed; 15
 - (c) make provision about the grant by zone coordinators of exemptions from requirements imposed by regulations made by virtue of paragraph (a);
 - (d) make provision imposing requirements on persons of a description specified in the regulations for the purpose of securing that buildings of types specified by the regulations situated within a heat network zone are installed with communal heat networks –
 - (i) in circumstances specified by the regulations,
 - (ii) within a time specified by, or determined in accordance with, the regulations, and 25
 - (iii) in a manner that would allow the communal heat networks to be connected to a district heat network;
 - (e) make provision for, or in connection with, the requesting of information from a person, by notice given by a zone coordinator, about a source of thermal energy located on the person’s premises that may be suitable to supply a district heat network within a heat network zone; 30
 - (f) make provision for, or in connection with, the imposition of a requirement on a person, by notice given by a zone coordinator, to allow the installation of equipment on the person’s premises, and the connection of that equipment to a district heat network, to enable a source of thermal energy located on the premises to supply a district heat network within a heat network zone; 35
 - (g) make provision imposing requirements on persons of a description specified in the regulations for the purpose of securing that machinery and other equipment of types specified by the regulations are designed, and installed on premises, in a manner which would enable thermal energy generated by the machinery or other equipment to be supplied to a district heat network within a heat network zone; 40

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- (h) make provision about the terms on which thermal energy is supplied to a district heat network in pursuance of regulations made by virtue of paragraph (f) or (g) (including in particular provision about the amount that may be charged);
 - (i) make provision for, or in connection with, the setting by zone coordinators of limits on emissions of targeted greenhouse gases resulting from district heat networks within heat network zones; 5
 - (j) make provision about zone coordinators affording a grace period to a person who is required to comply with a limit imposed under regulations made by virtue of paragraph (i). 10
- (3) Regulations made by virtue of subsection (2)(c) may –
- (a) specify the criteria in accordance with which a zone coordinator is to determine an application for an exemption;
 - (b) make provision about procedure;
 - (c) specify how, and on what grounds, a refusal to grant an exemption may be appealed. 15
- (4) Regulations made by virtue of subsection (2)(e) may –
- (a) specify the information about the source of thermal energy that may be requested;
 - (b) require the requested information to be provided within the period, and in the form and manner, specified in the notice; 20
 - (c) provide for the disclosing of information requested by the zone coordinator not to breach any obligation of confidence owed by the person making the disclosure or any other restriction on the disclosure of information (however imposed); 25
 - (d) provide for a request for information not to require a disclosure of information if disclosure would contravene the data protection legislation (but for a requirement imposed by virtue of regulations made by virtue of subsection (2)(e) to be taken into account in determining whether a disclosure would do so); 30
 - (e) provide for zone coordinators to delegate functions conferred on them by regulations made by virtue of subsection (2)(e) to a description of person, and in circumstances and subject to conditions, specified by the regulations.
- (5) Regulations made by virtue of subsection (2)(f) may – 35
- (a) specify the types of sources of thermal energy in respect of which a zone coordinator may or must impose a requirement on a person and in what circumstances;
 - (b) make provision about the period within which a person must comply with a requirement; 40
 - (c) specify how, and on what grounds, a requirement imposed on a person in respect of a source of thermal energy may be appealed.
- (6) Regulations made by virtue of subsection (2)(i) may –
- (a) specify the manner and form in which the limits are to be set;

- (b) require zone coordinators to obtain the consent of the Authority before setting a limit.
- (7) Regulations made by virtue of subsection (2)(j) may –
 - (a) specify the circumstances in which a zone coordinator may or must afford a person a grace period; 5
 - (b) make provision for the Authority to issue guidance about grace periods;
 - (c) make provision about procedure;
 - (d) specify how, and on what grounds, a refusal to grant a grace period may be appealed. 10
- (8) In subsection (2)(d), “communal heat network” has the meaning given by section 168(2).
- (9) In subsection (2)(i), “emissions” and “targeted greenhouse gas” have the same meaning as in the Climate Change Act 2008 (see sections 24 and 97 of that Act). 15
- (10) In subsections (2)(j) and (7), “grace period” means a period to comply before enforcement action is taken.

183 Delivery of district heat networks within zones

- (1) Zones regulations may make provision about the delivery of district heat networks within heat network zones. 20
- (2) Regulations made by virtue of subsection (1) may, in particular –
 - (a) make provision about zone coordinators deciding –
 - (i) what district heat networks may be constructed and operated within a heat network zone;
 - (ii) who will design, construct, operate and maintain district heat networks within heat network zones; 25
 - (b) make provision about zone coordinators designing, constructing, operating or maintaining district heat networks within heat network zones, or arranging for their design, construction, operation or maintenance; 30
 - (c) make provision about the giving of advice by the Authority to zone coordinators about the delivery of district heat networks within heat network zones.
- (3) Regulations made by virtue of subsection (2)(a)(ii) may –
 - (a) make provision for the construction, operation or maintenance of district heat networks within heat network zones to be subject to the consent of zone coordinators; 35
 - (b) make provision for the grant by zone coordinators of an exclusive right to design, construct, operate or maintain district heat networks within heat network zones or parts of heat network zones. 40
- (4) Regulations made by virtue of subsection (3)(b) may –

- (a) make provision for the Authority to publish the standard conditions that zone coordinators must use when granting an exclusive right (and for the Authority to amend or replace the standard conditions);
 - (b) specify the circumstances in which zone coordinators may grant an exclusive right. 5
- (5) Regulations made by virtue of subsection (2)(a) may –
- (a) specify the manner and form of zone coordinators’ decisions under regulations made by virtue of subsection (2)(a);
 - (b) make provision for a zone coordinator to vary or revoke a decision;
 - (c) specify considerations a zone coordinator may or must take into account when making, varying or revoking a decision; 10
 - (d) make provision about procedure;
 - (e) make provision about the publication of a decision (or the variation or revocation of a decision);
 - (f) specify how, and on what grounds, a decision, or a variation or revocation of a decision, may be appealed; 15
 - (g) make provision for a zone coordinator to lose the power to decide the matters specified in subsection (2)(a)(i) and (ii), and instead for those matters to no longer be subject to the zone coordinator’s control, if the zone coordinator does not take steps specified by the regulations within a time specified by the regulations. 20

Enforcement

184 Enforcement of heat network zone requirements

- (1) Zones regulations may make provision about the enforcement of heat network zone requirements. 25
- (2) Regulations made by virtue of subsection (1) may, in particular, provide for a zone coordinator –
 - (a) to issue a notice requiring a person to demonstrate compliance with a heat network zone requirement where the zone coordinator suspects that the person is not complying with the requirement; 30
 - (b) to issue a notice specifying steps a person is required to take in order to comply with a heat network zone requirement where the zone coordinator is satisfied that the person is not complying with the requirement;
 - (c) to impose a penalty on a person for the contravention of – 35
 - (i) a heat network zone requirement, or
 - (ii) a requirement imposed by a notice under regulations made by virtue of paragraph (a) or (b).
- (3) Regulations made by virtue of subsection (2)(a) or (b) may –
 - (a) make provision about the period within which a person must comply with a notice; 40

- (b) make provision about procedure;
 - (c) specify how, and on what grounds, a notice may be appealed.
- (4) In this section, “heat network zone requirement” means a requirement imposed by or by virtue of regulations made by virtue of section 182 or 183.

185 Penalties 5

- (1) Zones regulations made by virtue of section 181(2)(c) or 184(2)(c) may –
- (a) make provision about the maximum amount that may be imposed by way of penalty;
 - (b) make provision about procedure;
 - (c) specify how, and on what grounds, the imposition or amount of penalty may be appealed; 10
 - (d) specify how a penalty may be recovered;
 - (e) require sums received by way of penalty to be paid into the Consolidated Fund or to persons specified by the regulations.
- (2) Zones regulations may provide for the publication of guidance by the Authority with respect to – 15
- (a) the imposition of penalties under regulations made by virtue of section 181(2)(c) or 184(2)(c), and
 - (b) the determination of their amount.

Records, information and reporting 20

186 Records, information and reporting

- (1) Zones regulations may make provision requiring zone coordinators to collect information specified by the regulations which – 25
- (a) is relevant to identifying areas which are appropriate for the construction and operation of one or more district heat networks, or
 - (b) relates to areas designated as heat network zones.
- (2) Zones regulations may make provision requiring zone coordinators to maintain records of – 30
- (a) information provided to zone coordinators in response to requests for information made by zone coordinators under regulations made by virtue of section 181 or 182(2)(e);
 - (b) information zone coordinators are required to collect by regulations made by virtue of subsection (1) of this section;
 - (c) other information provided to, collected by, or otherwise brought into the possession of zone coordinators by virtue of their functions under zones regulations. 35
- (3) Zones regulations may make provision enabling or requiring zone coordinators to provide information specified by the regulations from their records to –
- (a) to other zone coordinators;

- (b) the Authority;
 - (c) the Regulator.
- (4) Zone regulations may require the Authority to maintain records of—
- (a) information provided to the Authority in response to requests for information made by the Authority under regulations made by virtue of section 181; 5
 - (b) information provided by zone coordinators to the Authority in accordance with regulations made by virtue of subsection (3) of this section;
 - (c) other information provided to, collected by, or otherwise brought into the possession of the Authority by virtue of its functions under zones regulations. 10
- (5) Zones regulations may make provision enabling or requiring the Authority to provide information specified by the regulations from its records to—
- (a) zone coordinators; 15
 - (b) the Regulator.
- (6) Zones regulations may make provision—
- (a) for the disclosure of information by a zone coordinator or the Authority in accordance with regulations made by virtue of subsection (3) or (5) not to breach any obligation of confidence owed by the zone coordinator or the Authority or any other restriction on the disclosure of information (however imposed); 20
 - (b) for regulations made by virtue of subsection (3) or (5) not to authorise or require disclosure of information if disclosure would contravene the data protection legislation (but for a power conferred, or requirement imposed, by regulations made by virtue of subsection (3) or (5) to be taken into account in determining whether a disclosure would do so). 25

Interpretation

187 Interpretation of Chapter 2 30

In this Chapter—

- “the Authority” means the person designated as the Heat Network Zones Authority by regulations made by virtue of section 177(1);
- “the data protection legislation” has the same meaning as in the Data Protection Act 2018 (see section 3 of that Act); 35
- “district heat network” has the meaning given by section 167(2);
- “heat network” has the meaning given by section 167(2);
- “heat network zone” has the meaning given by section 176(2);
- “the Regulator” has the meaning given by section 168(1)(a);
- “zone coordinator” means a person designated as such under regulations made by virtue of section 178(3)(a); 40

“zones regulations” means regulations under section 176;
“the zoning methodology” has the meaning given by section 180(1).

PART 8

ENERGY SMART APPLIANCES AND LOAD CONTROL

CHAPTER 1

5

INTRODUCTORY

188 Energy smart appliances and load control

- (1) The following definitions apply for the purposes of this Part.
- (2) “Energy smart appliance” means an appliance which is capable of adjusting the immediate or future flow of electricity into or out of itself or another appliance in response to a load control signal; and includes any software or other systems which enable or facilitate the adjustment to be made in response to the signal. 10
- (3) The functionality described in subsection (2) is referred to as the “energy smart function”. 15
- (4) “Load control signal” means a digital communication sent via a relevant electronic communications network to an energy smart appliance for the purpose of causing or otherwise facilitating such an adjustment.
- (5) For the purposes of subsection (2) an adjustment to the flow of electricity into or out of an appliance is made in response to a load control signal whether it is made in response to – 20
 - (a) the sending of the signal, or
 - (b) the sending of the signal and one or more additional factors.
- (6) The sending of a load control signal to an energy smart appliance is referred to as “load control”. 25
- (7) Regulations under section 189, excluding regulations under section 189(6), are referred to as “energy smart regulations”.

CHAPTER 2

ENERGY SMART APPLIANCES

189 Energy smart regulations

30

- (1) The Secretary of State may by regulations make provision about energy smart appliances that are –
 - (a) capable of being used in connection with any of the purposes specified in subsection (2), or
 - (b) charge points (for electric vehicles). 35

- (2) The specified purposes are –
- (a) refrigeration;
 - (b) cleaning tableware;
 - (c) washing or drying textiles;
 - (d) storing energy that – 5
 - (i) was converted from electricity, and
 - (ii) is stored for the purpose of its future reconversion into electricity;
 - (e) heating; 10
 - (f) air conditioning or ventilation.
- (3) In making such regulations, the Secretary of State must, in particular, have regard to the desirability of ensuring that –
- (a) the energy smart function or compatibility with that function is incorporated into appliances in a manner that is compliant with the regulations, 15
 - (b) the energy smart function does not undermine the delivery of a consistent and stable supply of electricity,
 - (c) the energy smart function in any energy smart appliance is capable of operating in response to load control signals from any person carrying out load control, and 20
 - (d) communications, software, systems and personal and other data used in connection with energy smart appliances are secure or otherwise protected, for purposes including the protection of end-users.
- (4) Such regulations may, in particular –
- (a) make provision about all energy smart appliances or any description of energy smart appliances; 25
 - (b) impose technical or other requirements in relation to such appliances, including requirements to display or otherwise provide information about appliances;
 - (c) prohibit the placing on the market of, or other activities in connection with, relevant appliances (see section 190(3)); 30
 - (d) make provision about the recall of appliances to prevent, or in response to, non-compliance with the regulations;
 - (e) make provision for the Secretary of State to issue guidance about prohibitions or requirements imposed by or under the regulations; 35
 - (f) provide for the enforcement of the regulations.
- (5) Such regulations may impose prohibitions or requirements on any person, including any person making, supplying, importing or distributing energy smart appliances or carrying out load control (but see section 190(6)).
- (6) The Secretary of State may by regulations – 40
- (a) make provision about the meaning that “relevant electronic communications network” is to have for the purposes of this Part;
 - (b) amend the list of purposes in subsection (2).

- (7) In this Chapter, “charge point” has the same meaning as in Part 2 of the Automated and Electric Vehicles Act 2018 (see section 9 of that Act).

190 Prohibitions and requirements: supplemental

- (1) Requirements imposed by energy smart regulations may, in particular, refer or relate to— 5
- (a) published documents and standards (as they have effect from time to time);
 - (b) a list, published by the Secretary of State, of such documents and standards;
 - (c) requirements (however described) imposed by or under any enactment or Act of the Scottish Parliament. 10
- (2) Prohibitions imposed by energy smart regulations may, in particular, relate to—
- (a) the providing of load control for appliances that are not compliant with the regulations; 15
 - (b) the modification of appliances in a manner that would cause them to cease to be compliant with the regulations.
- (3) The following kinds of appliances are “relevant appliances” for the purposes of section 189(4)(c) —
- (a) energy smart appliances that are not compliant with requirements or particular requirements of energy smart regulations; 20
 - (b) appliances without the energy smart function, or that are not compatible with the energy smart function of another appliance, and are—
 - (i) charge points (for electric vehicles), or 25
 - (ii) electrical heating appliances.
- (4) The reference in subsection (3)(b)(ii) to electrical heating appliances includes a reference to heat pumps.
- (5) In this Chapter, “modification of appliances” has the meaning given by energy smart regulations. 30
- (6) Energy smart regulations may not provide for a prohibition to be contravened by an end-user of an appliance (in their capacity as such) or for such a person to be enforced against as described in section 191 or 192.

191 Enforcement

- (1) Provision for the enforcement of energy smart regulations may, in particular, include provision of a kind described in this section, section 192 or section 193. 35
- (2) Energy smart regulations may include provision to ensure compliance with any prohibition or requirement imposed by or under the regulations, including provision— 40

-
- (a) designating authorities to carry out enforcement (referred to in this Chapter as “enforcement authorities”);
 - (b) requiring persons to—
 - (i) maintain information;
 - (ii) monitor compliance and report non-compliance; 5
 - (iii) take specified steps to remedy non-compliance;
 - (c) requiring persons to supply evidence of their compliance to enforcement authorities;
 - (d) conferring powers of entry, including by reasonable force;
 - (e) conferring powers of inspection, search and seizure; 10
 - (f) conferring powers to require the production of information or things held at, or electronically accessible from, entered premises;
 - (g) conferring powers to enable the testing of energy smart appliances by enforcement authorities, including powers to require the provision of sample appliances and powers to make test purchases; 15
 - (h) conferring functions, including functions involving the exercise of a discretion.
- (3) Regulations conferring powers described in subsection (2)(d), (e) or (f) must provide that persons exercising those powers are to produce evidence of their authority if required to do so. 20
- (4) The regulations may not allow entry to premises by reasonable force without a warrant issued by a justice of the peace or, in Scotland, a sheriff or summary sheriff.
- (5) Energy smart regulations may allow enforcement authorities to impose requirements by written notice on persons to— 25
- (a) produce information or things;
 - (b) make appliances compliant with energy smart regulations;
 - (c) stop or limit—
 - (i) the placing on the market of, or other activities in connection with, appliances, 30
 - (ii) the providing of load control to appliances, or
 - (iii) the modification of appliances,
 for the purpose of preventing or mitigating non-compliance with energy smart regulations;
 - (d) recall appliances to prevent, or in response to, non-compliance with energy smart regulations. 35
- (6) Regulations that allow an enforcement authority to impose requirements may also provide for—
- (a) the authority to apply to a court or tribunal in connection with a failure to comply with a requirement, and 40
 - (b) for the court or tribunal, if satisfied that such a failure has occurred, to make an order for the purpose of securing compliance with the requirement.

- (7) Such an order may require a person to take, or refrain from taking, steps specified in the order (including at, by or until specified times).
- (8) Energy smart regulations may make provision to enable an enforcement authority to accept an enforcement undertaking from a person where the authority has reasonable grounds to suspect that the person has failed to comply with any prohibition or requirement imposed by or under the regulations. 5
- (9) An "enforcement undertaking" is an undertaking to take such action to secure compliance with the regulations as may be specified in the undertaking within such period as may be so specified. 10
- (10) Provision made by virtue of subsection (8) must include provision that unless the person from whom the undertaking was accepted has failed to comply with the undertaking or any part of it—
 - (a) that person may not at any time be convicted of an offence in respect of the act or omission to which the undertaking relates, and 15
 - (b) the enforcement authority may not impose on that person any penalty which it would otherwise have power to impose under the regulations.
- (11) Provision made by virtue of subsection (8) may include any provision of a kind mentioned in section 50(5) of the Regulatory Enforcement and Sanctions Act 2008. 20
- (12) The Secretary of State may make payments or provide other resources to, or in respect of, enforcement authorities in connection with the exercise of functions under energy smart regulations.
- (13) Energy smart regulations may provide for an enforcement authority to issue guidance about the enforcement of the regulations and the exercise by the authority of its functions under the regulations. 25

192 Sanctions, offences and recovery of costs

- (1) Energy smart regulations may provide for sanctions to be imposed on persons in relation to—
 - (a) non-compliance with a prohibition or requirement imposed by or under such regulations; 30
 - (b) providing false or misleading information in relation to any such prohibition or requirement.
- (2) The regulations may, in particular, provide for the imposition of civil penalties, including graduated or multiple penalties in connection with a continuous or serious act or omission. 35
- (3) Energy smart regulations may create offences relating to—
 - (a) contraventions (by act or omission) of requirements imposed by enforcement authorities;
 - (b) knowingly giving false or misleading information to enforcement authorities; 40

-
- (c) the obstruction (by act or omission) of persons acting on behalf of enforcement authorities;
 - (d) the impersonation of persons acting on behalf of enforcement authorities.
- (4) Regulations which create an offence must provide for the offence to be triable only summarily. 5
 - (5) Regulations may not provide for an offence to be punishable with imprisonment.
 - (6) Regulations may provide for enforcement authorities to recover costs.
- 193 Appeals against enforcement action** 10
- (1) Energy smart regulations that provide for the imposition of a requirement or civil penalty by an enforcement authority must include provision for a right of appeal to a court or tribunal against that requirement or penalty.
 - (2) Provision falling within subsection (1) includes, in particular, provision –
 - (a) as to the jurisdiction of the court or tribunal to which an appeal may be made; 15
 - (b) as to the grounds on which an appeal may be made;
 - (c) as to the procedure for making an appeal (including any fee which may be payable);
 - (d) suspending the imposition of the requirement or penalty, pending determination of the appeal; 20
 - (e) as to the powers of the court or tribunal to which an appeal is made;
 - (f) as to how any sum payable in pursuance of a decision of the court or tribunal is to be recoverable.
 - (3) In relation to the imposition of a requirement, the regulations may provide for persons other than the person against whom the requirement was imposed to also have a right of appeal. 25
 - (4) The provision referred to in subsection (2)(e) includes provision conferring on the court or tribunal to which an appeal is made power –
 - (a) to confirm or withdraw the requirement or penalty; 30
 - (b) to vary or remove a part of the requirement;
 - (c) to vary the amount of the penalty;
 - (d) to award costs or, in Scotland, expenses.
 - (5) If the Secretary of State considers it appropriate for the purpose of, or in consequence of, any provision falling within subsection (2)(a), (c), (e) or (f), the regulations may revoke or amend any subordinate legislation. 35
 - (6) In this section “subordinate legislation” has the meaning given in section 21(1) of the Interpretation Act 1978 and includes an instrument made under –
 - (a) an Act of the Scottish Parliament;
 - (b) a Measure or Act of the Senedd Cymru. 40

194 Regulations: procedure and supplemental

- (1) Regulations under section 189 may provide for exemptions or exceptions.
- (2) Energy smart regulations may make provision about the sharing of information between an enforcement authority and the GEMA for the purposes of their functions in relation to energy smart appliances and load control. 5
- (3) The Secretary of State must consult such persons as the Secretary of State thinks fit before making regulations under section 189 that –
 - (a) make a description of appliance subject to energy smart regulations;
 - (b) amend the list of purposes in section 189(2).
- (4) Subsection (3) may be satisfied by consultation before, as well as by consultation after, the passing of this Act. 10
- (5) The first energy smart regulations, and any regulations under section 189 that (with or without other provision) amend the list of purposes in section 189(2) or create a criminal offence (see section 192), are subject to the affirmative procedure. 15
- (6) Any other regulations under section 189 are subject to the negative procedure.

CHAPTER 3

LICENSING OF LOAD CONTROL

195 Power to amend licence conditions etc: load control

- (1) The Secretary of State may modify – 20
 - (a) the conditions of a licence granted under section 6(1) of the Electricity Act 1989;
 - (b) the standard conditions incorporated in such licences by virtue of section 8A of that Act;
 - (c) the conditions of a licence granted under section 7A(1) or 7AB of the Gas Act 1986; 25
 - (d) the standard conditions incorporated in such licences by virtue of section 8 of that Act;
 - (e) a document maintained in accordance with the conditions of a licence granted under section 6(1) of the Electricity Act 1989 or section 7A(1) or 7AB of the Gas Act 1986, or an agreement that gives effect to a document so maintained. 30
- (2) The Secretary of State may exercise the power conferred by subsection (1) for the purposes of facilitating, promoting, ensuring the security of, or otherwise regulating load control or other activities falling within section 56FBA(2) of the Electricity Act 1989. 35
- (3) Modifications made to the conditions of a licence may include provisions of a kind mentioned in section 7 of the Electricity Act 1989 or section 7B of the Gas Act 1986 (as appropriate) and may in particular –

-
- (a) regulate or prohibit the provision of load control in relation to appliances that are not compliant with energy smart regulations or any technical standards specified in or under a condition;
 - (b) regulate the provision of load control in relation to appliances that are compliant with energy smart regulations or any technical standards specified in or under a condition; 5
 - (c) require the holder of a licence to supply information to the Secretary of State or the GEMA (or both) so as to enable them to assess any matter relating to the purposes mentioned in subsection (2);
 - (d) require the holder of the licence to enter (or refrain from entering) into an agreement of a specified kind, or with a specified person; 10
 - (e) require the holder of a licence to supply information about tariffs (including to such persons, and in such a format, specified in or under a condition).
- (4) The power conferred by subsection (1) – 15
 - (a) may be exercised to make different provision in relation to different areas or different classes of customer;
 - (b) may be exercised generally, only in relation to specified cases or subject to exceptions (including provision for a case to be excepted only so long as specified conditions are satisfied); 20
 - (c) may be exercised differently in different cases or circumstances;
 - (d) includes a power to make incidental, supplementary, consequential or transitional modifications.
 - (5) The power conferred by subsection (1) may not be exercised after the period of 10 years beginning with the day on which this section comes into force. 25
 - (6) The Secretary of State may, by regulations, extend (or further extend) that period.
 - (7) Regulations under subsection (6) – 30
 - (a) may not extend the period (or any extended period) by more than three years at a time, and
 - (b) are subject to the affirmative procedure.
 - (8) In this section “modify” includes remove or fail to incorporate and “modification” is to be construed accordingly.

196 Power to amend licence conditions etc: procedure

- (1) Before making a modification, the Secretary of State must consult – 35
 - (a) the holder of any licence being modified,
 - (b) the GEMA, and
 - (c) such other persons as the Secretary of State considers appropriate.
- (2) Subsection (1) may be satisfied by consultation before, as well as by consultation after, the passing of this Act. 40

- (3) The Secretary of State must specify the date upon which any modification is to have effect.
- (4) The Secretary of State must publish details of any modifications as soon as reasonably practicable after they are made.
- (5) In this section “modification” means a modification under section 195. 5

197 Load control: supplemental

- (1) A modification under section 195 of part of a standard condition of a licence does not prevent any other part of the condition from continuing to be regarded as a standard condition for the purposes of Part 1 of the Gas Act 1986 or Part 1 of the Electricity Act 1989. 10
- (2) Where the Secretary of State makes modifications under section 195(1)(b) or (e) of the standard conditions of a licence of any type, the GEMA must—
 - (a) make the same modification of those standard conditions for the purposes of their incorporation in licences of that type granted after that time, and 15
 - (b) publish the modification.

198 Application of general duties to functions relating to load control

- (1) Sections 4AA to 4B of the Gas Act 1986 (principal objectives and general duties) apply to the carrying out, as respects the matters mentioned in subsection (2), of functions conferred on the Secretary of State or the GEMA by or under sections 195 to 197. 20
- (2) The matters are—
 - (a) activities required to be authorised by gas licences,
 - (b) such licences and the conditions of such licences,
 - (c) documents maintained in accordance with the conditions of such licences, or agreements that give effect to documents so maintained, and 25
 - (d) companies holding such licences.
- (3) In section 4AA(2)(b) of the Gas Act 1986 (duty to have regard to ability of licence holders to finance obligations) for “or sections 26 to 29 of the Energy Act 2010” substitute “, sections 26 to 29 of the Energy Act 2010, or sections 195 to 197 of the Energy Act 2023”. 30
- (4) Sections 3A to 3D of the Electricity Act 1989 (principal objectives and general duties) apply to the carrying out, as respects the matters mentioned in subsection (5), of functions conferred on the Secretary of State or the GEMA by or under sections 195 to 197. 35
- (5) The matters are—
 - (a) activities required to be authorised by electricity licences,
 - (b) such licences and the conditions of such licences,

- (c) documents maintained in accordance with the conditions of such licences, or agreements that give effect to documents so maintained, and
- (d) companies holding such licences.
- (6) In section 3A(2)(b) of the Electricity Act 1989 (duty to have regard to ability of licence holders to finance obligations) for “or the Nuclear Energy (Financing) Act 2022” substitute “, the Nuclear Energy (Financing) Act 2022 or sections 195 to 197 of the Energy Act 2023”. 5
- (7) In section 33(1) of the Utilities Act 2000 (standard conditions of electricity licences)– 10
- (a) omit the “or” at the end of paragraph (i), and
- (b) after paragraph (j) insert “or,
- (k) under sections 195 to 197 of the Energy Act 2023.”
- (8) In this section– 15
- “electricity licence” means a licence for the purposes of section 4 of the Electricity Act 1989 (prohibition on unlicensed activities);
- “gas licence” means a licence for the purposes of section 5 of the Gas Act 1986 (prohibition on unlicensed activities).
- 199 Licensing of activities relating to load control**
- Schedule 17, which amends the Electricity Act 1989, provides for the licensing of load control. 20

PART 9

ENERGY PERFORMANCE OF PREMISES

200 Power to make energy performance regulations

- (1) The Secretary of State may make regulations for any of these purposes– 25
- (a) enabling or requiring the energy usage or energy efficiency of premises to be assessed, certified and publicised;
- (b) enabling or requiring possible improvements in the energy usage or energy efficiency of premises to be identified and recommended;
- (c) restricting or prohibiting the marketing and disposal of premises on the basis of whether their energy usage or energy efficiency has been assessed, certified or publicised. 30
- (2) In this Part regulations under this section are referred to as “energy performance regulations”.
- (3) Energy performance regulations may– 35
- (a) provide for–
- (i) the regulations to apply to specified descriptions of premises, or

- (ii) specified descriptions of premises to be excluded from the application of the regulations;
 - (b) confer functions on any person;
 - (c) provide for functions to be exercisable only if specified conditions are met (including conditions as to the eligibility of persons to exercise the functions); 5
 - (d) provide for the energy usage or energy efficiency of premises to be assessed or certified by reference to information that is obtained, produced or kept otherwise than under energy performance regulations; 10
 - (e) impose requirements on any person;
 - (f) make provision for the purpose of securing compliance with requirements imposed by or under energy performance regulations (see section 202);
 - (g) authorise or require, or restrict or prohibit, the supply or keeping of information (including authorising or requiring supply or keeping of information that would otherwise be prohibited); 15
 - (h) provide for the charging of fees.
- (4) A reference in this Part to publicising the energy usage and energy efficiency of premises includes – 20
 - (a) displaying energy performance information in the premises to which it relates;
 - (b) arranging for energy performance information to be entered into a record of such information (including a record that is publicly accessible); 25
 - (c) reporting energy performance information;
 - (d) supplying energy performance information.
- (5) In this Part –
 - “certified” means certified in accordance with energy performance regulations; 30
 - “disposal of premises” includes leasing or letting of premises;
 - “energy performance information” means information about the energy usage or energy efficiency of premises;
 - “premises” means –
 - (a) a building or a part of a building (including any equipment, systems or facilities used by the building or the part), or 35
 - (b) any equipment, systems or facilities used by a building or a part of a building;
 - “specified” means specified in energy performance regulations.

201 Energy performance regulations relating to new premises 40

- (1) The power to make energy performance regulations is exercisable in relation to new premises.

- (2) Accordingly, in section 200 (except in the definition of “premises” in section 200(5))—
- (a) a reference to premises includes new premises;
 - (b) a reference to the energy usage and energy efficiency of premises includes the anticipated energy usage and energy efficiency of new premises. 5
- (3) In this section “new premises” means premises—
- (a) which are being constructed or adapted, or
 - (b) which it is proposed to construct or adapt.

202 Sanctions 10

- (1) The enforcement provision that may be made includes provision—
- (a) for a person with public functions to enforce a requirement imposed by or under energy performance regulations;
 - (b) about the sanctions for non-compliance with a requirement imposed by or under energy performance regulations; 15
 - (c) about the sanctions for the provision of false information in connection with such a requirement;
 - (d) about the sanctions for obstruction of, or impersonation of, an enforcement authority or a person acting for an enforcement authority.
- (2) Energy performance regulations may provide for the imposition of civil penalties by enforcement authorities in relation to cases falling within subsection (1)(b), (c) or (d); but the regulations may not provide for a civil penalty that exceeds £15,000. 20
- (3) Energy performance regulations may provide for the creation of criminal offences in relation to cases falling within subsection (1)(b), (c) or (d); but the regulations may not provide for a criminal offence to be punishable— 25
- (a) with imprisonment for a term exceeding 12 months, or
 - (b) with a fine of more than level 5 on the standard scale.
- (4) Where energy performance regulations make provision for a civil penalty, the regulations must also include provision for a right of appeal to a court or tribunal against the imposition of the penalty. 30
- (5) Provision falling within subsection (4) includes, in particular, provision—
- (a) as to the jurisdiction of the court or tribunal to which an appeal may be made;
 - (b) as to the grounds on which an appeal may be made; 35
 - (c) as to the procedure for making an appeal (including any fee which may be payable);
 - (d) suspending the imposition of the penalty, pending determination of the appeal;
 - (e) as to the powers of the court or tribunal to which an appeal is made; 40

- (f) as to how any sum payable in pursuance of a decision of the court or tribunal is to be recoverable.
- (6) The provision referred to in subsection (5)(e) includes provision conferring on the court or tribunal to which an appeal is made power –
 - (a) to confirm the penalty; 5
 - (b) to withdraw the penalty;
 - (c) to vary the amount of the penalty;
 - (d) to award costs.
- (7) The Secretary of State may, by regulations, amend the amount specified in subsection (2) for the purpose of reflecting inflation. 10
- (8) In this section –
 - “enforcement authority” means a person on whom energy performance regulations confer the function of enforcing any requirement imposed by or under energy performance regulations;
 - “enforcement provision” means provision falling within section 200(3)(f). 15

203 Regulations under Part 9

- (1) Regulations under this Part may amend, repeal or revoke provision made by or under –
 - (a) an Act of Parliament, or
 - (b) an Act or Measure of Senedd Cymru. 20
- (2) Regulations under this Part containing any of the following (with or without other provision) are subject to the affirmative procedure –
 - (a) provision creating a criminal offence or civil penalty (but excluding provision modifying the circumstances in which a person is guilty of an existing offence or liable for an existing civil penalty); 25
 - (b) provision specifying a civil penalty amount;
 - (c) provision amending or repealing provision made by an Act of Parliament.
- (3) Regulations under this Part –
 - (a) may make provision about application to the Crown; and 30
 - (b) may also, to the extent that they bind the Crown, restrict or modify the application of the regulations.

PART 10

ENERGY SAVINGS OPPORTUNITY SCHEMES

*Establishment and application of schemes***204 Energy savings opportunity schemes**

- (1) The Secretary of State may by regulations (“ESOS regulations”) make provision for the establishment and operation of one or more energy savings opportunity schemes. 5
- (2) An “energy savings opportunity scheme” is a scheme under which obligations are imposed on undertakings to which the scheme applies for one or more of the ESOS purposes. 10
- (3) The ESOS purposes are –
- (a) enabling or requiring the energy consumption for which an undertaking is responsible, or the greenhouse gas emissions resulting from that consumption, to be assessed, audited, reported and published; 15
 - (b) enabling or requiring possible energy savings or emissions reductions to be identified and recommended;
 - (c) enabling or requiring the costs and benefits of possible energy savings or emissions reductions to be assessed;
 - (d) encouraging or requiring undertakings to produce plans or set targets for achieving energy savings or emissions reductions; 20
 - (e) encouraging or requiring undertakings to take action for the purpose of achieving energy savings or emissions reductions;
 - (f) encouraging or requiring undertakings to achieve energy savings or emissions reductions. 25
- (4) An energy saving is a reduction in the energy consumption for which an undertaking is responsible.
- (5) An emissions reduction is a reduction in the greenhouse gas emissions that result from the energy consumption for which an undertaking is responsible (whether or not that consumption is also reduced). 30
- (6) ESOS regulations may make provision about determining –
- (a) the energy consumption for which an undertaking is responsible;
 - (b) the greenhouse gas emissions resulting from that consumption.
- (7) ESOS regulations may –
- (a) impose requirements on any person; 35
 - (b) confer functions on any person;
 - (c) provide for a person to exercise discretion in dealing with any matter.
- (8) The provision made by this Part is without prejudice to the generality of subsection (1).

- (9) For the purposes of this Part—
- (a) the scheme established by the Energy Savings Opportunity Scheme Regulations 2014 (S.I. 2014/1643) is to be treated as having been established by provision made under subsection (1);
 - (b) a reference to a scheme administrator includes a reference to a compliance body within the meaning given by those Regulations. 5

205 Application of energy savings opportunity schemes

- (1) ESOS regulations may provide for—
- (a) an energy savings opportunity scheme to apply to specified descriptions of undertakings; 10
 - (b) specified descriptions of undertakings to be excluded from the application of the scheme.
- (2) ESOS regulations may make provision about circumstances in which—
- (a) two or more participants are to be treated for the purposes of the regulations as if they were a single participant; 15
 - (b) an obligation imposed under the regulations on one participant is to be treated as if it had been imposed on a different participant.
- (3) The provisions of this Part relating to energy consumption apply to energy consumed by assets located, or activities carried on—
- (a) wholly or partly in the United Kingdom; 20
 - (b) wholly or partly in an offshore area;
 - (c) where subsection (4) applies, elsewhere.
- (4) ESOS regulations may make provision about circumstances in which the energy consumption for which a participant is, for the purposes of the regulations, responsible may include energy consumed by— 25
- (a) assets located elsewhere than in the United Kingdom or an offshore area, or
 - (b) activities carried on elsewhere than in the United Kingdom or an offshore area.
- (5) The provisions of this Part relating to greenhouse gas emissions apply to the emissions resulting from energy consumption to which this Part applies whether such emissions occur in the United Kingdom, in an offshore area or elsewhere. 30
- (6) ESOS regulations may make provision about the attribution of energy consumption to participants, including in particular provision about the treatment for the purposes of the regulations of— 35
- (a) a participant’s consumption of energy generated by that participant;
 - (b) energy consumption by a person over whom a participant has control or influence;
 - (c) energy consumption shared between a participant and one or more other participants or other persons; 40

- (d) energy consumed by assets held on trust by or for a participant.
- (7) In this section, "offshore area" means—
- (a) waters landward of the seaward limit of the territorial sea adjacent to the United Kingdom,
 - (b) any designated area within the meaning of section 1(7) of the Continental Shelf Act 1964, and
 - (c) any area for the time being designated under section 41(3) of the Marine and Coastal Access Act 2009,
- and includes the places above those areas and the bed and subsoil of the sea within those areas.

Assessments, energy savings and emissions reductions

206 Requirement for assessment of energy consumption

- (1) ESOS regulations may require the carrying out of assessments of—
- (a) a participant's energy consumption;
 - (b) the greenhouse gas emissions resulting from that consumption.
- Such an assessment is referred to as an "ESOS assessment".
- (2) The provision that may be made by virtue of subsection (1) includes in particular provision about—
- (a) the frequency of ESOS assessments;
 - (b) the period or periods to which assessments must relate;
 - (c) how assessments are to be carried out;
 - (d) the information that must be provided or obtained for the purposes of an assessment;
 - (e) the matters that must be taken into account in an assessment;
 - (f) record-keeping in relation to an assessment.
- (3) ESOS regulations may make provision requiring an ESOS assessment, or specified parts of an ESOS assessment, to be carried out, approved or audited by a person appointed by a participant (referred to as "an assessor").
- (4) Regulations made by virtue of subsection (1) may include provision enabling or requiring an ESOS assessment to include recommendations relating to energy savings or emissions reductions.
- (5) The provision that may be made by virtue of subsection (4) includes in particular provision about—
- (a) the matters about which recommendations may, must, or must not be made;
 - (b) the matters that must be taken into account in making a recommendation;
 - (c) the carrying out of a cost-benefit analysis before including a recommendation in a report.

- (6) "Cost-benefit analysis", in relation to a recommendation or requirement to take action, means –
- (a) an estimate of the likely costs to a participant of acting in accordance with the recommendation or requirement;
 - (b) an estimate of the energy savings or emissions reductions likely to result from such action; 5
 - (c) an analysis of the costs referred to in paragraph (a) together with an analysis of the savings or reductions referred to in paragraph (b) and of any other benefits likely to arise.
- (7) ESOS regulations may make provision about the reporting of ESOS assessments, including in particular provision – 10
- (a) about the production of written reports;
 - (b) about the form and content of such reports;
 - (c) about the dissemination of such reports within an undertaking and between related undertakings. 15
- (8) ESOS regulations may make provision requiring a participant to notify a scheme administrator of specified matters relating to the participant's compliance with requirements imposed by virtue of this section and may in particular include provision – 20
- (a) about the procedure for giving such notice;
 - (b) about the form and content of notices;
 - (c) about the publication of certain information contained within a notice;
 - (d) requiring a participant to justify its choice of assessor.
- (9) ESOS regulations may provide for any requirement imposed by virtue of subsection (1) – 25
- (a) to be treated as having been complied with by a participant in specified circumstances, or
 - (b) not to apply to a participant in specified circumstances.

207 Assessors

- (1) ESOS regulations may confer functions on an assessor in relation to assessing, monitoring and reporting on compliance with requirements imposed by the regulations. 30
- (2) ESOS regulations may provide that a participant may only appoint as an assessor a person of a specified description.
- (3) A description may be specified for the purposes of subsection (2) by reference to any criteria, including by reference to – 35
- (a) a person's competence, qualifications or experience;
 - (b) a person's inclusion in a designated list or register;
 - (c) a person's membership of a designated body;
 - (d) a person's participation in an designated accreditation scheme; 40
 - (e) a person's relationship to a participant.

- (4) For the purposes of this section, "designated" means designated by the Secretary of State or a scheme administrator in accordance with ESOS regulations.
- (5) A body may only be designated for the purposes of this section if the body is willing to be so designated. 5
- (6) ESOS regulations may make provision about –
- (a) the giving of designations for the purposes of subsection (4);
 - (b) reviewing such designations;
 - (c) circumstances in which such a designation may be removed;
 - (d) maintaining and publishing a list of such designations. 10
- (7) ESOS regulations may make provision enabling a list or register of persons who may, or who may not, be appointed as an assessor for the purposes of subsection (2) to be maintained by –
- (a) a designated body;
 - (b) a scheme administrator; 15
 - (c) the Secretary of State.
- (8) ESOS regulations may confer functions or impose requirements on a person responsible for maintaining a designated list or register and may in particular include provision –
- (a) about the process for including a person in a list or register; 20
 - (b) about the details to be included in a list or register;
 - (c) for ensuring those details remain up to date;
 - (d) about the publication of a list or register;
 - (e) for the purpose of ensuring that a person included in a list or register continues to meet the criteria for appointment as an assessor; 25
 - (f) for the purpose of ensuring the quality of ESOS assessments;
 - (g) about the temporary or permanent removal of a person from a list or register in specified circumstances.
- (9) The regulations may make provision authorising a scheme administrator to share reports, notices or other information relating to an energy savings opportunity scheme with a designated body for the purposes referred to in subsection (8)(e) or (f). 30
- (10) ESOS regulations may make provision –
- (a) enabling the Secretary of State or a scheme administrator to give a direction relating to the maintenance of a list or register; 35
 - (b) requiring a person responsible for maintaining a list or register to comply with such a direction.

208 ESOS action plans

- (1) ESOS regulations may require participants to produce ESOS action plans.
- (2) An "ESOS action plan" is a written statement of – 40

- (a) any action a participant proposes to take for the purpose of achieving energy savings or emissions reductions;
 - (b) any energy savings or emissions reductions targets a participant intends to achieve.
- (3) Where an ESOS action plan does not include any proposals for taking such action or any such targets, provision made by virtue of subsection (1) may require that a participant include an explanation in the plan. 5
- (4) ESOS regulations may make provision about the production of ESOS action plans, including in particular provision about—
 - (a) when a participant must produce a plan; 10
 - (b) the period to which a plan must relate;
 - (c) the form and content of a plan;
 - (d) the matters that must be taken into account in producing a plan.
- (5) ESOS regulations may make provision about the publication of ESOS action plans. 15

209 Action to achieve energy savings or emissions reductions

- (1) ESOS regulations may make provision—
 - (a) imposing requirements (other than the requirements referred to in paragraph (b)) on participants so as to encourage them to—
 - (i) take specified action for the purpose of achieving energy savings or emissions reductions, or 20
 - (ii) achieve specified energy savings or emissions reductions, or
 - (b) requiring participants to—
 - (i) take specified action for the purpose of achieving energy savings or emissions reductions, or 25
 - (ii) achieve specified energy savings or emissions reductions.
- (2) The kinds of action that may be specified for the purposes of subsection (1) are—
 - (a) taking action in accordance with a recommendation made in an ESOS assessment; 30
 - (b) taking action in accordance with an ESOS action plan;
 - (c) taking any other action of a specified kind;
 - (d) taking action to achieve a target included in an ESOS action plan;
 - (e) taking action to achieve any other specified outcome;
 - (f) adopting processes, practices or systems of a specified kind; 35
 - (g) conforming to specified standards.
- (3) The provision that may be made by virtue of subsection (1)(a) includes in particular—
 - (a) provision requiring a participant to report—

- (i) on whether the participant has taken the specified action, or on the steps taken by the participant towards doing so, or
 - (ii) on whether the participant has achieved the specified energy savings or emissions reductions, or on the progress made by the participant towards doing so; 5
- (b) provision requiring a participant to provide an explanation for any of the matters mentioned in paragraph (a).
- (4) Provision made by virtue of subsection (1)(b) may include a requirement for a participant to report on action taken or energy savings or emissions reductions achieved. 10
- (5) Regulations made by virtue of subsection (1) may make provision –
 - (a) requiring participants to produce and retain evidence;
 - (b) about the verification of matters about which the participant has reported;
 - (c) about the publication of reports. 15
- (6) ESOS regulations may –
 - (a) specify the requirements imposed on a participant by virtue of subsection (1) by reference to a cost-benefit analysis;
 - (b) specify circumstances in which a participant is required to take action;
 - (c) impose a requirement to take a specified action on all participants in an energy savings opportunity scheme, or on all participants of a specified description. 20

Administration, enforcement and appeals

210 Scheme administration

- (1) ESOS regulations may appoint one or more public authorities to carry out functions with respect to – 25
 - (a) administering an energy savings opportunity scheme;
 - (b) monitoring compliance with, and enforcing requirements imposed by, the regulations.
- (2) A person appointed by virtue of subsection (1) is referred to as a "scheme administrator". 30
- (3) The regulations may make provision for a scheme administrator to authorise another person to exercise specified functions of the scheme administrator.
- (4) Regulations made by virtue of subsection (1) may in particular include provision about – 35
 - (a) the obtaining of information by, and the provision of information to, a scheme administrator;
 - (b) the determination by a scheme administrator of information in default of its being provided;
 - (c) the auditing and verification of information; 40

- (d) the keeping, production and inspection of records;
 - (e) the determination by a scheme administrator of whether an undertaking is a participant in an energy savings opportunity scheme;
 - (f) cooperation and information sharing between scheme administrators.
- (5) ESOS regulations may make provision imposing requirements on a participant relating to the provision of such facilities and services, including transport and accommodation, as may be necessary to facilitate the carrying out of any of the scheme administrator’s functions. 5
- (6) ESOS regulations may confer functions on a scheme administrator in relation to the publication of information relating to an energy savings opportunity scheme or its participants. 10
- (7) ESOS regulations may make provision—
- (a) about the giving of guidance by a scheme administrator or the Secretary of State in connection with the operation of an energy savings opportunity scheme; 15
 - (b) requiring specified persons to have regard to such guidance.
- (8) ESOS regulations may make provision requiring the payment by participants to the scheme administrator of fees for or in connection with the carrying out by the scheme administrator of the scheme administrator’s functions.
- (9) ESOS regulations may confer a power on a national authority to require a scheme administrator to provide the authority with such information— 20
- (a) relating to an energy savings opportunity scheme, and
 - (b) relevant to the exercise of the authority’s functions, as the authority requests.
- (10) In this section— 25
- “national authority” means—
- (a) the Secretary of State;
 - (b) the Welsh Ministers;
 - (c) the Scottish Ministers;
 - (d) the Department for the Economy in Northern Ireland; 30
- “public authority” means a person with functions of a public nature.

211 Enforcement, penalties and offences

- (1) ESOS regulations may authorise a scheme administrator—
- (a) to require the production of documents or the provision of information by any person; 35
 - (b) to question the officers of an undertaking;
 - (c) to enter premises with a warrant;
 - (d) to inspect premises and anything on premises and when doing so—
- (i) to take measurements, photographs, recordings or copies;
 - (ii) to seize documents or records; 40

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- (iii) to require any person at the premises to provide facilities and assistance to the extent that is within that person’s control;
 - (e) to issue a notice requiring a participant to take steps specified in the notice for the purpose of—
 - (i) demonstrating compliance with requirements imposed by or under ESOS regulations, or 5
 - (ii) remedying a failure to comply with such requirements.
 - (2) ESOS regulations may make provision requiring a participant to give notice to a scheme administrator where the participant is unlikely to comply, or has failed to comply, with a requirement imposed by or under the regulations. 10
 - (3) ESOS regulations may provide that a person is liable to one or more penalties in respect of—
 - (a) a failure to comply with a requirement imposed on the person by or under the regulations;
 - (b) making a false or misleading statement in connection with an energy savings opportunity scheme. 15
 - (4) The provision that may be made by virtue of subsection (3) includes provision—
 - (a) for the publication of specified information relating to the failure to comply; 20
 - (b) authorising a scheme administrator to impose a financial penalty.
 - (5) Where by virtue of subsection (3) ESOS regulations provide for the imposition of a financial penalty, the regulations—
 - (a) must provide for the penalty to be paid to the scheme administrator or such other person as the regulations may specify; 25
 - (b) may specify the amount of the penalty or provide for the amount to be determined by the scheme administrator in accordance with the regulations;
 - (c) may provide for the payment of a further penalty (of an amount specified by or determined in accordance with the regulations) for each day on which the failure to comply is not remedied; 30
 - (d) may specify how the penalty may be recovered.
 - (6) ESOS regulations may create offences relating to energy savings opportunity schemes.
 - (7) Regulations made by virtue of subsection (6) may provide for an offence created by the regulations to be triable— 35
 - (a) only summarily, or
 - (b) either summarily or on indictment.
 - (8) Regulations made by virtue of subsection (6) may provide for an offence created by the regulations to be punishable with a fine. 40
 - (9) Regulations may—
 - (a) provide for defences against offences;

- (b) make provision about matters of procedure and evidence in proceedings relating to offences;
 - (c) include provision about the liability of a director, manager, secretary or other officer of a body corporate, or a partner of a Scottish partnership, or of a person purporting to act in such a capacity, where an offence under the regulations –
 - (i) is committed with the consent or connivance of such a person, or
 - (ii) is attributable to neglect on the part of such a person.
- (10) References in this section to a scheme administrator include references to a person authorised by a scheme administrator in accordance with provision in ESOS regulations made by virtue of section 210(3).

212 Appeals

- (1) ESOS regulations may confer rights of appeal against –
 - (a) decisions made in relation to an energy savings opportunity scheme, and
 - (b) penalties imposed or enforcement action taken for failure to comply with the requirements of the regulations.
- (2) The regulations must specify the court, tribunal or person who is to hear and determine an appeal.
- (3) The provision that may be made by virtue of subsection (1) includes, in particular, provision about –
 - (a) the grounds on which an appeal may be made;
 - (b) the procedure for making an appeal (including any fee which may be payable);
 - (c) suspending the effect of any decision, penalty or enforcement action pending determination of the appeal;
 - (d) the powers of the court, tribunal or person to which an appeal is made.

Procedure etc for regulations

213 ESOS regulations: procedure etc

- (1) Before making ESOS regulations, the Secretary of State must consult –
 - (a) such persons likely to be affected by the regulations as the Secretary of State considers appropriate;
 - (b) to the extent that the regulations contain provision within Welsh devolved competence, the Welsh Ministers;
 - (c) to the extent that the regulations contain provision within Scottish devolved competence, the Scottish Ministers;
 - (d) to the extent that the regulations contain provision within Northern Ireland devolved competence, the Department for the Economy in Northern Ireland.

- (2) Subsection (1) may be satisfied by consultation before this section comes into force (as well as by consultation after that time).
- (3) ESOS regulations may make consequential provision including provision amending or repealing primary legislation.
- (4) ESOS regulations may create exceptions to any requirement imposed by the regulations. 5
- (5) ESOS regulations may –
- (a) make provision about application to the Crown;
 - (b) to the extent that they bind the Crown, restrict or modify the application of the regulations. 10
- (6) ESOS regulations containing any of the following (with or without other provision) are subject to the affirmative procedure –
- (a) provision extending the descriptions of undertaking to which the regulations apply;
 - (b) provision made by virtue of section 209(1)(b) of a kind not previously provided for in ESOS regulations; 15
 - (c) provision conferring on a scheme administrator enforcement powers of a kind not previously provided for in ESOS regulations;
 - (d) provision creating penalties;
 - (e) provision increasing the amount of financial penalties by more than is necessary to reflect changes in the value of money; 20
 - (f) provision creating an offence or increasing the fine for an existing offence;
 - (g) provision for the payment of a new fee;
 - (h) provision amending or repealing primary legislation. 25
- (7) Any other ESOS regulations are subject to the negative procedure.
- (8) In this section, “primary legislation” means –
- (a) an Act,
 - (b) an Act of the Scottish Parliament,
 - (c) a Measure or Act of Senedd Cymru, or 30
 - (d) Northern Ireland legislation.

Directions and financial assistance

214 Directions to scheme administrators

- (1) The Secretary of State may give directions to a scheme administrator.
- (2) The power to give directions under this section includes a power to vary or revoke the directions. 35
- (3) A scheme administrator must comply with any direction given to it under this section.

215 Financial assistance to scheme administrators and participants

- (1) The Secretary of State may give, or arrange for the giving of, financial assistance to—
 - (a) scheme administrators;
 - (b) participants.
- (2) "Financial assistance" means grants, loans, guarantees or indemnities, or any other kind of financial assistance.
- (3) Financial assistance under this section may be given subject to such conditions as may be determined by, or in accordance with arrangements made by, the Secretary of State.

Interpretation of Part 10

216 Interpretation of Part 10

- (1) In this Part—
 - “assessor” has the meaning given by section 206(3);
 - “cost benefit analysis” has the meaning given by section 206(6);
 - “emissions reduction” has the meaning given by section 204(5);
 - “energy consumption” has the meaning given by ESOS regulations;
 - “energy saving” has the meaning given by section 204(4);
 - “energy savings opportunity scheme” has the meaning given by section 204(2);
 - “ESOS action plan” has the meaning given by section 208(2);
 - “ESOS assessment” has the meaning given by section 206(1);
 - “ESOS regulations” means regulations made under section 204(1);
 - “greenhouse gas” has the meaning given by section 92 of the Climate Change Act 2008;
 - “participant” means an undertaking to which an energy savings opportunity scheme applies;
 - “related undertaking”, in relation to a participant, means a fellow subsidiary undertaking of, or a group undertaking in relation to, that participant;
 - “scheme administrator” has the meaning given by section 210(2);
 - “specified” means specified in ESOS regulations;
 - “undertaking”, “group undertaking” and “fellow subsidiary undertaking” have the meanings given by section 1161 of the Companies Act 2006.
- (2) For the purposes of this Part, provision—
 - (a) is within Welsh devolved competence if it would be within the legislative competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006);

- (b) is within Scottish devolved competence if it would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament;
- (c) is within Northern Ireland devolved competence if it—
 - (i) would be within the legislative competence of the Northern Ireland Assembly if it were contained in an Act of that Assembly, and 5
 - (ii) would not, if it were contained in a Bill in the Northern Ireland Assembly, result in the Bill requiring the consent of the Secretary of State under section 8 of the Northern Ireland Act 1998. 10

PART 11

CORE FUEL SECTOR RESILIENCE

CHAPTER 1

INTRODUCTION 15

217 General objective

The functions of the Secretary of State under this Part must be exercised with a view to—

- (a) ensuring that economic activity in the United Kingdom is not adversely affected by disruptions to core fuel sector activities, and 20
- (b) reducing the risk of emergencies affecting fuel supplies.

218 “Core fuel sector activity” and other key concepts

- (1) In this Part “core fuel sector activity” means an activity of a kind mentioned in subsection (2), so far as the activity—
 - (a) is carried on in the United Kingdom in the course of a business, and 25
 - (b) contributes (directly or indirectly) to the supply of core fuels to consumers in the United Kingdom or persons carrying on business in the United Kingdom.
- (2) The kinds of activity are—
 - (a) storing oil or renewable transport fuel; 30
 - (b) handling oil or renewable transport fuel;
 - (c) the carriage of oil or renewable transport fuel by sea or inland water;
 - (d) transporting oil or renewable transport fuel by road or rail;
 - (e) conveying oil or renewable transport fuel by pipes;
 - (f) processing or producing oil or renewable transport fuel (whether by refining, blending or otherwise). 35
- (3) In subsection (2) the references to “oil” do not include crude oil which has not yet entered any refinery or terminal in the United Kingdom.

- (4) In this Part “core fuels” means—
- (a) crude oil based fuels, and
 - (b) renewable transport fuels.
- (5) In this Part “core fuel sector resilience” means the capability of core fuel sector participants to— 5
- (a) manage the risk of,
 - (b) reduce the potential adverse impact of, and
 - (c) facilitate recovery from,
- disruptions to core fuel sector activities.
- (6) In this Part “core fuel sector participant” means— 10
- (a) a person carrying on core fuel sector activities;
 - (b) a Part 11 facility owner.
- (7) For the purposes of this Part there is “continuity of supply of core fuels” where the supply of core fuels to consumers in all areas of the United Kingdom, and persons carrying on business in all areas of the United Kingdom— 15
- (a) is reliable and continuous, and
 - (b) is maintained at normal levels.
- (8) In subsection (7) “normal levels” means levels that—
- (a) are not substantially below average monthly levels of supply in the United Kingdom (taking account of regional variations), and 20
 - (b) are consistent with a reasonable balance between supply and demand.
- (9) For the purposes of subsection (8) “average monthly levels” are to be calculated by reference to levels of supply in the five years preceding the calculation.
- (10) In this Part “relevant activities or assets”— 25
- (a) in relation to a person carrying on core fuel sector activities, means the person’s core fuel sector activities (and includes any land or assets under the person’s control that are associated with those activities);
 - (b) in relation to a Part 11 facility owner, means the owned facility.
- (11) In this Part— 30
- (a) “Part 11 facility owner” means the owner of a pipeline, terminal, or other facility or infrastructure which is used, or any part of which is used, for the purposes of core fuel sector activities;
 - (b) in relation to a Part 11 facility owner, “the owned facility” means the facility or infrastructure mentioned in paragraph (a). 35
- (12) In subsection (11) “owner”, in relation to any facility or infrastructure, means—
- (a) a person in whom the facility or infrastructure is vested, or
 - (b) a lessee of the facility or infrastructure.

- (13) In this Part references to a “person carrying on core fuel sector activities” include any person carrying on such activities (whether or not as the owner of the oil or renewable transport fuel).

CHAPTER 2

POWERS FOR RESILIENCE PURPOSES

5

Directions

219 Directions to particular core fuel sector participants

- (1) The Secretary of State may, for the purpose of maintaining or improving core fuel sector resilience, direct a person to whom this section applies to do anything in relation to the person’s relevant activities or assets (for example, to acquire and install specific equipment, or carry out specific works, at the person’s own expense). 10
- (2) The Secretary of State may not give a direction under subsection (1) unless the Secretary of State considers that the persons to whom this section applies have failed to make sufficient progress with the steps that the Secretary of State considers necessary for maintaining or improving core fuel sector resilience. 15
- (3) Where there is disruption to, or a failure of, continuity of supply of core fuels, the Secretary of State may direct a person to whom this section applies to do anything in relation to the person’s relevant activities or assets which the Secretary of State considers necessary or expedient for the purpose of – 20
- (a) restoring continuity of supply of core fuels, or
- (b) counteracting the disruption or failure, or its potential adverse impact.
- (4) If the Secretary of State considers that there is a significant risk of disruption to, or a failure of, continuity of supply of core fuels, the Secretary of State may direct a person to whom this section applies to do anything in relation to the person’s relevant activities or assets which the Secretary of State considers necessary or expedient for the purpose of – 25
- (a) reducing the risk, or
- (b) reducing the potential adverse impact of the disruption or failure. 30
- (5) The Secretary of State may not make a direction under subsection (1), (3) or (4) unless the Secretary of State considers – 35
- (a) that, the corresponding cases (if any) are not sufficiently numerous to justify making regulations under section 222, or
- (b) that, by reason of urgency, it is not practicable to achieve the aims of the direction by regulations under section 222.
- (6) In subsection (5)(a) the reference to “corresponding cases” is to persons to whom this section applies in relation to whom the Secretary of State considers it would be appropriate to take action corresponding to the direction.

- (7) This section applies to the following persons—
- (a) a person carrying on core fuel sector activities in the course of a business which has capacity in excess of 500,000 tonnes;
 - (b) a Part 11 facility owner if the owned facility has capacity in excess of 20,000 tonnes. 5
- (8) For the purposes of this Part—
- (a) a business “has capacity in excess of” a specified number of tonnes if in the most recently ended calendar year core fuel sector activities were carried on in that business in relation to more than that number of tonnes of core fuel; 10
 - (b) a facility or infrastructure “has capacity in excess of” a specified number of tonnes if in the most recently ended calendar year it was used for the purposes of core fuel sector activities in relation to more than that number of tonnes of core fuels.

220 Procedure for giving directions 15

- (1) Before giving a person a direction under section 219 the Secretary of State must give the person a written notice accompanied by a draft of the proposed direction.
- (2) The notice under subsection (1) must—
- (a) state that the Secretary of State proposes to give the person a direction in the form of the accompanying draft; 20
 - (b) explain why the Secretary of State proposes to give the direction;
 - (c) state when it is intended that the direction will come into effect;
 - (d) specify a period within which the person may make written representations with respect to the proposal. 25
- (3) The period specified under subsection (2)(d) must begin with the date on which the notice is given to the person and must be not less than 14 days.
- (4) Before giving a direction under section 219, the Secretary of State must consult—
- (a) so far as the direction relates to relevant activities or assets in England, Scotland or Wales, the Health and Safety Executive; 30
 - (b) so far as the direction relates to relevant activities or assets in England, the Environment Agency;
 - (c) so far as the direction relates to relevant activities or assets in Scotland, the Scottish Environment Protection Agency; 35
 - (d) so far as the direction relates to relevant activities or assets in Wales, the Natural Resources Body for Wales;
 - (e) so far as the direction relates to relevant activities or assets in Northern Ireland—
 - (i) the Health and Safety Executive for Northern Ireland, and 40
 - (ii) the Department of Agriculture, Environment and Rural Affairs in Northern Ireland;

- (f) any other persons the Secretary of State thinks appropriate.
- (5) The Secretary of State must decide whether to give the person the proposed direction (with or without modifications), after considering any representations made by –
- (a) the person mentioned in subsection (1), and 5
 - (b) any person consulted in accordance with subsection (4).
- (6) The Secretary of State must give written notice of that decision to the person mentioned in subsection (1).
- (7) If the decision is to give the proposed direction, the notice must –
- (a) contain the direction, and 10
 - (b) state the time when the direction is to take effect.
- (8) Consultation under subsection (4) with the Environment Agency, the Scottish Environment Protection Agency or the Natural Resources Body for Wales must be with reference to that body’s functions under the Control of Major Accident Hazards Regulations 2015 (S.I. 2015/483). 15
- (9) Consultation under subsection (4) with the Department of Agriculture, Environment and Rural Affairs in Northern Ireland must be with reference to the department’s functions under the Control of Major Accident Hazards Regulations (Northern Ireland) 2015 (S.R. (N.I.) 2015 No. 325).
- 221 Offence of failure to comply with a direction** 20
- Any person who, without reasonable excuse, fails to comply with a direction given to the person under section 219 commits an offence and is liable –
- (a) on summary conviction in England and Wales, to imprisonment for a term not exceeding the general limit in a magistrates’ court or a fine (or both); 25
 - (b) on summary conviction in Scotland, to imprisonment for a term not exceeding 12 months or a fine not exceeding the statutory maximum (or both);
 - (c) on summary conviction in Northern Ireland, to imprisonment for a term not exceeding 6 months or a fine not exceeding the statutory maximum (or both); 30
 - (d) on conviction on indictment, to imprisonment for a term not exceeding 2 years or a fine (or both).

Corresponding powers to make regulations

- 222 Corresponding powers to make regulations** 35
- (1) The Secretary of State may, for the purpose of maintaining or improving core fuel sector resilience, by regulations require persons of a class or description specified in the regulations to do anything in relation to their relevant activities or assets.

- (2) The Secretary of State may not make any provision by regulations under subsection (1) unless the Secretary of State considers that the persons mentioned in paragraphs (a) and (b) of subsection (5) have failed to make sufficient progress with the steps that the Secretary of State considers necessary for maintaining or improving core fuel sector resilience. 5
- (3) Where there is disruption to, or a failure of, continuity of supply of core fuels, the Secretary of State may by regulations require persons of a class or description specified in the regulations to do anything in relation to their relevant activities or assets which the Secretary of State considers necessary or expedient for the purpose of— 10
- (a) restoring continuity of supply of core fuels, or
 - (b) counteracting the disruption or failure, or its potential adverse impact.
- (4) If the Secretary of State considers that there is a significant risk of disruption to, or a failure of, continuity of supply of core fuels, the Secretary of State may by regulations require persons of a class or description specified in the regulations to do anything in relation to their relevant activities or assets which the Secretary of State considers necessary or expedient for the purpose of— 15
- (a) reducing the risk, or
 - (b) reducing the potential adverse impact of the disruption or failure. 20
- (5) A class or description specified for the purposes of subsection (1), (3) or (4) may not include persons other than—
- (a) persons carrying on core fuel sector activities in the course of a business which has capacity in excess of 1,000 tonnes, or
 - (b) Part 11 facility owners whose owned facility has capacity in excess of 1,000 tonnes. 25
- (6) Regulations under this section may provide that any person who, without reasonable excuse, fails to comply with a requirement imposed by the regulations commits an offence.
- (7) Before making regulations under this section the Secretary of State must consult— 30
- (a) so far as the regulations relate to relevant activities or assets in England, Scotland or Wales, the Health and Safety Executive;
 - (b) so far as the regulations relate to relevant activities or assets in England, the Environment Agency; 35
 - (c) so far as the regulations relate to relevant assets or activities in Scotland, the Scottish Environment Protection Agency;
 - (d) so far as the regulations relate to relevant activities or assets in Wales, the Natural Resources Body for Wales;
 - (e) so far as the regulations relate to relevant activities or assets in Northern Ireland— 40
- (i) the Health and Safety Executive for Northern Ireland, and

- (ii) the Department of Agriculture, Environment and Rural Affairs in Northern Ireland;
- (f) any other persons the Secretary of State thinks appropriate.
- (8) Regulations under this section are subject to the affirmative procedure.
- (9) Consultation under subsection (7) with the Environment Agency, the Scottish Environment Protection Agency or the Natural Resources Body for Wales must be with reference to that body’s functions under the Control of Major Accident Hazards Regulations 2015 (S.I. 2015/483). 5
- (10) Consultation under subsection (7) with the Department of Agriculture, Environment and Rural Affairs in Northern Ireland must be with reference to the department’s functions under the Control of Major Accident Hazards Regulations (Northern Ireland) 2015 (S.R. (N.I.) 2015 No. 325). 10

Information

223 Power to require information

- (1) The Secretary of State may by notice in writing require any of the following to provide the Secretary of State with information relating to their relevant activities or assets— 15
 - (a) a person carrying on core fuel sector activities in the course of a business which has capacity in excess of 1,000 tonnes;
 - (b) a Part 11 facility owner whose owned facility has capacity in excess of 1,000 tonnes. 20
- (2) The Secretary of State may by notice in writing require a relevant wetstock manager to provide the Secretary of State with information relating to the relevant activities or assets of a person carrying on core fuel sector activities to whom the relevant wetstock manager provides stock management services. 25
- (3) In this Part “relevant wetstock manager” means a person who provides to persons who make retail supplies of core fuels in the United Kingdom stock management services in respect of such supplies.
- (4) The Secretary of State may only require information under this section for the purpose of maintaining or improving core fuel sector resilience. 30
- (5) A notice under subsection (1) or (2) may—
 - (a) specify the manner in which information is to be provided;
 - (b) specify time limits for providing information;
 - (c) require information to be provided at specified intervals.
- (6) Before giving a person a notice under subsection (1) or (2) the Secretary of State must— 35
 - (a) notify the person in writing of the proposed contents of the notice and of the period within which the person may make written representations with respect to the proposed requirement, and

- (b) consider any representations made by the person.
- (7) The period notified under subsection (6)(a) must begin on the date on which the notification is given and (subject to subsection (8)) must be not less than 14 days.
- (8) The Secretary of State may notify a period under subsection (6)(a) that is less than 14 days but not less than 7 days if the Secretary of State considers that it is necessary to do so by reason of urgency. 5

224 Duty to report incidents

- (1) If at any time a person –
 - (a) knows, or has reason to suspect, that a notifiable incident is occurring or has occurred, and 10
 - (b) meets the condition in paragraph (a), (b) or (c) of subsection (2), that person must notify the Secretary of State of the incident as soon as possible.
- (2) The conditions mentioned in subsection (1)(b) are that – 15
 - (a) the person is carrying on core fuel sector activities in the course of a business which has capacity in excess of 500,000 tonnes;
 - (b) the person is a Part 11 facility owner in whose case the owned facility has capacity in excess of 500,000 tonnes;
 - (c) the person is of a class or description specified in regulations made by the Secretary of State under this subsection. 20
- (3) In this section “notifiable incident”, in relation to a person, means an incident which affects the person’s relevant activities or assets in such a way as to create a significant risk of, or cause –
 - (a) disruption to, or 25
 - (b) a failure of,the continuity of supply of core fuels.
- (4) The Secretary of State may by notice in writing require a person who has given a notice under subsection (1) to provide further information about the incident. 30
- (5) Before giving a person a notice under subsection (4) the Secretary of State must –
 - (a) notify the person in writing of –
 - (i) the proposed contents of the notice, and
 - (ii) the period within which the person may make written representations with respect to the proposal, and 35
 - (b) consider any representations made by the person.
- (6) The period notified under subsection (5)(a)(ii) must begin on the date on which the notification is given and (subject to subsection (7)) must be not less than 14 days. 40

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- (7) The Secretary of State may notify a period under subsection (5)(a)(ii) that is less than 14 days but not less than 7 days if the Secretary of State considers that it is necessary to do so by reason of urgency.
- (8) A notice under subsection (4) may specify –
- (a) the manner in which information is to be provided, and 5
 - (b) time limits for providing information.
- (9) Where a notification under subsection (1) is not made in writing, it must be confirmed in writing as soon as possible.
- (10) Regulations under subsection (2)(c) may specify the meaning that “relevant activities or assets” is to have in subsection (3) in relation to persons of a class or description of persons specified in the regulations. 10
- (11) Regulations under subsection (2)(c) are subject to the affirmative procedure.
- 225 Contravention of requirement under section 223 or 224**
- (1) A person who, without reasonable excuse, fails to comply with a requirement imposed by a notice under section 223(1) or (2) or 224(4) commits an offence. 15
- (2) A person who, without reasonable excuse, fails to comply with section 224(1) commits an offence.
- (3) A person who commits an offence under this section is liable –
- (a) on summary conviction in England and Wales, to imprisonment for a term not exceeding the general limit in a magistrates’ court or a fine (or both); 20
 - (b) on summary conviction in Scotland, to imprisonment for a term not exceeding 12 months or a fine not exceeding the statutory maximum (or both);
 - (c) on summary conviction in Northern Ireland, to imprisonment for a term not exceeding 6 months or a fine not exceeding the statutory maximum (or both); 25
 - (d) on conviction on indictment, to imprisonment for a term not exceeding 2 years or a fine (or both).
- 226 Provision of information at specified intervals** 30
- (1) The Secretary of State may by regulations require any of the following to provide to the Secretary of State, at intervals specified in the regulations, information relating to their relevant activities or assets –
- (a) a person carrying on core fuel sector activities in the course of a business which has capacity in excess of 1,000 tonnes; 35
 - (b) a Part 11 facility owner whose owned facility has capacity in excess of 1,000 tonnes.
- (2) The Secretary of State may by regulations require a relevant wetstock manager to provide to the Secretary of State, at intervals specified in the regulations,

information relating to the relevant activities or assets of a person carrying on core fuel sector activities to whom the relevant wetstock manager provides stock management services.

- (3) The power to make regulations under this section may only be exercised for the purpose of maintaining or improving core fuel sector resilience. 5
- (4) The regulations may make provision about –
 - (a) the information to be provided;
 - (b) the manner in which information is to be provided;
 - (c) time limits for providing information.
- (5) Regulations under this section may provide that any person who, without reasonable excuse, fails to comply with a requirement imposed by the regulations commits an offence. 10
- (6) Regulations under this section are subject to the affirmative procedure.

227 Disclosure of information held by the Secretary of State

- (1) Subsection (2) applies to information held by the Secretary of State which was provided to the Secretary of State under section 223, 224 or 226. 15
 - (2) The information may be disclosed –
 - (a) to any government department or devolved authority for the purpose of –
 - (i) maintaining or improving core fuel sector resilience, or 20
 - (ii) restoring, or counteracting a disruption to, or failure of, continuity of supply of core fuels (or counteracting the potential adverse impact of any such disruption or failure), or
 - (b) if the disclosure is necessary for the purpose of criminal proceedings.
 - (3) Nothing in this section authorises the making of a disclosure which – 25
 - (a) contravenes the data protection legislation (as defined in section 3 of the Data Protection Act 2018), or
 - (b) is prohibited by any of Parts 1 to 7 of, or Chapter 1 of Part 9 of, the Investigatory Powers Act 2016.
- In determining whether a disclosure would fall within paragraph (a) or (b), the powers conferred by this section are to be taken into account. 30
- (4) In subsection (2) “devolved authority” means –
 - (a) the Welsh Ministers,
 - (b) the Scottish Ministers, or
 - (c) a Northern Ireland department. 35

228 Disclosure of information by HMRC

- (1) His Majesty’s Revenue and Customs (or anyone acting on their behalf) may disclose information to the Secretary of State for the purpose of facilitating

the exercise by the Secretary of State of functions relating to core fuel sector resilience.

- (2) A person who receives information as a result of this section may not—
- (a) use the information for a purpose other than that mentioned in subsection (1), or 5
 - (b) further disclose the information,
 except with the consent of the Commissioners for His Majesty’s Revenue and Customs (which may be general or specific).
- (3) If a person discloses information in contravention of subsection (2)(b) which relates to a person whose identity— 10
- (a) is specified in the disclosure, or
 - (b) can be deduced from it,
- section 19 of the Commissioners for Revenue and Customs Act 2005 (offence of wrongful disclosure) applies in relation to that disclosure as it applies in relation to a disclosure of information in contravention of section 20(9) of that Act. 15
- (4) This section does not limit the circumstances in which information may be disclosed under section 18(2) of the Commissioners for Revenue and Customs Act 2005 or under any other enactment or rule of law.
- (5) Nothing in this section authorises the making of a disclosure which— 20
- (a) contravenes the data protection legislation (as defined in section 3 of the Data Protection Act 2018), or
 - (b) is prohibited by any of Parts 1 to 7 of, or Chapter 1 of Part 9 of, the Investigatory Powers Act 2016.
- In determining whether a disclosure would fall within paragraph (a) or (b), the powers conferred by this section are to be taken into account. 25

Appeal against notice or direction

229 Appeal against notice or direction

- (1) A person to whom a direction under section 219 or a notice under section 223 or 224(4) is given may appeal to the First-tier Tribunal against the direction or notice on the ground that the decision to give it— 30
- (a) is based on an error of fact,
 - (b) is wrong in law, or
 - (c) is unfair or unreasonable.
- (2) On an appeal under this section the Tribunal may— 35
- (a) confirm or cancel the direction or notice, or
 - (b) refer the matter back to the Secretary of State for reconsideration with such directions (if any) as the Tribunal considers appropriate.

CHAPTER 3

ENFORCEMENT

Offences

230 False statements etc

- (1) It is an offence for a person to make a statement which the person knows is false or materially misleading – 5
- (a) in responding to a requirement imposed by the Secretary of State –
 - (i) under section 223 (power to require information),
 - (ii) under section 224(4) (duty to report incidents), or
 - (iii) under regulations under section 226 (provision of information at specified intervals), or 10
 - (b) in making any other statement to the Secretary of State in connection with any of the Secretary of State’s functions under this Part.
- (2) A person who commits an offence under this section is liable –
- (a) on summary conviction in England and Wales, to imprisonment for a term not exceeding the general limit in a magistrates’ court or a fine (or both); 15
 - (b) on summary conviction in Scotland, to imprisonment for a term not exceeding 12 months or a fine not exceeding the statutory maximum (or both); 20
 - (c) on summary conviction in Northern Ireland, to imprisonment for a term not exceeding 6 months or a fine not exceeding the statutory maximum (or both);
 - (d) on conviction on indictment, to imprisonment for a term not exceeding 2 years or a fine (or both). 25

231 Offences under regulations

- (1) This section applies to regulations under –
- (a) section 222 (corresponding powers to make regulations);
 - (b) section 226 (provision of information at specified intervals).
- (2) Regulations to which this section applies may provide for an offence under the regulations to be triable – 30
- (a) only summarily, or
 - (b) either summarily or on indictment.
- (3) Regulations to which this section applies may provide for an offence under the regulations that is triable either way to be punishable – 35
- (a) on summary conviction in England and Wales with imprisonment for a term not exceeding the period specified or a fine (or both);

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- (b) on summary conviction in Scotland or Northern Ireland with imprisonment for a term not exceeding the period specified or a fine not exceeding the statutory maximum (or both);
 - (c) on conviction on indictment, with imprisonment for a term not exceeding the period specified, which may not exceed two years, or a fine (or both). 5
 - (4) A period specified under subsection (3)(a) may not exceed the general limit in a magistrates' court.
 - (5) A period specified under subsection (3)(b) may not exceed –
 - (a) in relation to Scotland, 12 months; 10
 - (b) in relation to Northern Ireland, 6 months.
 - (6) Regulations to which this section applies may provide for a summary offence under the regulations to be punishable –
 - (a) with imprisonment for a term not exceeding the period specified,
 - (b) with – 15
 - (i) in England and Wales, a fine (or a fine not exceeding an amount specified, which must not exceed level 4 on the standard scale), or
 - (ii) in Scotland or Northern Ireland, a fine not exceeding the amount specified, which must not exceed level 5 on the standard scale, or 20
 - (c) with both.
 - (7) A period specified under subsection (6)(a) may not exceed –
 - (a) in relation to England and Wales –
 - (i) 6 months, in relation to offences committed before the date on which section 281(5) of the Criminal Justice Act 2003 comes into force, or 25
 - (ii) 51 weeks, in relation to offences committed on or after that date,
 - (b) in relation to Scotland, 12 months, 30
 - (c) in relation to Northern Ireland, 6 months.
 - (8) In this section “specified” means specified in the regulations.

232 Proceedings for offences

- Proceedings for an offence under this Part (including an offence created by regulations under section 222 or 226) – 35
 - (a) may not be brought in England and Wales except by or with the consent of the Secretary of State or the Director of Public Prosecutions;
 - (b) may not be brought in Northern Ireland except by or with the consent of the Secretary of State or the Director of Public Prosecutions for Northern Ireland. 40

233 Liability of officers of entities

- (1) Where an offence under this Part committed by a body corporate is proved –
- (a) to have been committed with the consent or connivance of an officer of the body corporate, or
 - (b) to be attributable to neglect on the part of an officer of the body corporate,
- that officer (as well as the body corporate) commits the offence and is liable to be proceeded against and dealt with accordingly. 5
- (2) In subsection (1) “officer”, in relation to a body corporate, means –
- (a) any director, manager, secretary or other similar officer of the body corporate, or 10
 - (b) any person purporting to act in any such capacity.
- (3) In subsection (2) “director”, in relation to a body corporate whose affairs are managed by its members, means a member of the body corporate.
- (4) Where an offence under this Part is committed by a Scottish partnership and is proved to have been committed with the consent or connivance of a partner, or to be attributable to any neglect on the part of a partner, that partner (as well as the partnership) commits the offence and is liable to be proceeded against and dealt with accordingly. 15

Enforcement undertakings 20

234 Enforcement undertakings

- (1) Subsection (2) applies if –
- (a) the Secretary of State has reasonable grounds to suspect that a person has committed an offence falling within subsection (5),
 - (b) the person offers to the Secretary of State an enforcement undertaking in respect of the relevant act or omission, and 25
 - (c) the Secretary of State accepts that undertaking.
- (2) Unless the person has failed to comply with the undertaking (or any part of it) the person may not at any time be convicted of that offence in respect of the relevant act or omission. 30
- (3) In this Part “enforcement undertaking” means an undertaking to take, within any period specified in the undertaking, action –
- (a) for any of the purposes in subsection (4), or
 - (b) of a description specified in regulations made by the Secretary of State.
- (4) The purposes mentioned in subsection (3) are – 35
- (a) to secure that the offence does not continue or recur,
 - (b) to secure that the position is, so far as possible, restored to what it would have been if the offence had not been committed, or
 - (c) to benefit any person affected by the offence.

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- (5) The following offences fall within this subsection –
- (a) an offence under –
 - (i) section 221 (failure to comply with a direction),
 - (ii) section 225 (contravention of requirement under section 223 or 224), or 5
 - (iii) section 230 (false statements etc);
 - (b) an offence, other than an offence triable only summarily, that is created by regulations under –
 - (i) section 222 (corresponding powers to make regulations), or
 - (ii) section 226 (provision of information at regular intervals). 10
- (6) The reference in subsection (4)(c) to action to “benefit any person affected by the offence” includes action by way of the payment of a sum of money.
- (7) Where a person from whom the Secretary of State has accepted an enforcement undertaking has failed to comply fully with the undertaking but has complied with part of it, the partial compliance must be taken into account in any decision whether to institute any criminal proceedings in respect of the offence in question. 15
- (8) In this section “relevant act or omission” means an act or omission of the person to which the grounds mentioned in subsection (1)(a) relate.
- (9) Regulations under subsection (3)(b) are subject to the affirmative procedure. 20
- (10) Schedule 18 contains further provision about enforcement undertakings, including provision about –
- (a) procedure;
 - (b) compliance certificates;
 - (c) appeals. 25

Guidance

235 Guidance: criminal and civil sanctions

- (1) The Secretary of State must issue guidance as to –
- (a) the sanctions (including criminal sanctions) to which a person who commits an offence under this Part may be liable, 30
 - (b) the action which the Secretary of State may take to enforce offences under this Part, whether by virtue of section 234 and Schedule 18 or otherwise, and
 - (c) the circumstances in which the Secretary of State is likely to take any such action. 35
- (2) The Secretary of State –
- (a) must issue guidance about how the Secretary of State intends to exercise the Secretary of State’s functions under section 234 and Schedule 18;

- (b) must have regard to the guidance in exercising the Secretary of State’s functions under those provisions.
- (3) Before issuing guidance under this section, the Secretary of State must—
 - (a) prepare a draft of the proposed guidance;
 - (b) consult such persons as the Secretary of State considers appropriate; 5
 - (c) comply with the requirements of section 236.
- (4) The Secretary of State may from time to time revise guidance issued under this section and issue revised guidance.
- (5) Subsection (3) applies to revised guidance as it applies to the original guidance.
- (6) The Secretary of State must arrange for the publication of guidance (or revised guidance) issued under this section. 10

236 Guidance: Parliamentary scrutiny

- (1) Before issuing guidance under section 235, the Secretary of State must lay a draft of the proposed guidance before both Houses of Parliament.
- (2) The Secretary of State must not issue the guidance until after the period of 40 days beginning with— 15
 - (a) the day on which the draft is laid before both Houses of Parliament, or
 - (b) if the draft is laid before the House of Lords on one day and the House of Commons on another, the later of those two days. 20
- (3) If before the end of that period either House resolves that the guidance should not be issued, the Secretary of State may not issue it.
- (4) In reckoning any period of 40 days for the purposes of subsection (2), no account is to be taken of any time during which—
 - (a) Parliament is dissolved or prorogued, or 25
 - (b) both Houses are adjourned for more than four days.

CHAPTER 4

GENERAL

Financial assistance

237 Financial assistance for resilience and continuity purposes 30

- (1) There may be paid out of money provided by Parliament expenditure incurred by the Secretary of State with the consent of the Treasury in giving, or in connection with giving, financial assistance to a core fuel sector participant for the purpose of—
 - (a) maintaining or improving core fuel sector resilience, or 35
 - (b) securing or maintaining continuity of supply of core fuels.

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- (2) Financial assistance under this section may be given in any form.
- (3) Financial assistance under this section may, in particular, be given by way of—
- (a) grants,
 - (b) loans, 5
 - (c) guarantee or indemnity,
 - (d) investment by acquisition (directly or through another body corporate) of shares in or securities of a body corporate,
 - (e) investment by the acquisition of any undertaking or assets, or
 - (f) incurring expenditure for the benefit of the person assisted. 10
- (4) Financial assistance under this section may be given on such terms and conditions as the Secretary of State considers appropriate (including provision for repayment, with or without interest).
- (5) The Secretary of State is not authorised by this section to give financial assistance in the way described in subsection (3)(d) without the consent of the body corporate concerned. 15

Power to amend thresholds

238 Power to amend thresholds

- (1) The Secretary of State may by regulations amend or modify any provision mentioned in subsection (2) for the purpose of varying any amount for the time being specified in that provision. 20
- (2) The provisions are—
- (a) section 219(7) (directions to core fuel sector participants);
 - (b) section 222(5) (corresponding powers to make regulations);
 - (c) section 223(1) (power to require information); 25
 - (d) section 224(2)(a) and (b) (duty to report incidents);
 - (e) section 226(1) (provision of information at specified intervals).
- (3) Regulations under this section are subject to the affirmative procedure.

Interpretation of Part 11

239 Interpretation of Part 11

- (1) In this Part—
- “company” means a company within the meaning of section 1 of the Companies Act 2006;
 - “continuity of supply of core fuels” is to be interpreted in accordance with section 218(7); 35
 - “core fuel sector activity” has the meaning given by section 218;
 - “core fuel sector participant” has the meaning given by section 218(6);

- “core fuel sector resilience” has the meaning given by section 218(5);
- “core fuels” has the meaning given by section 218(4);
- “crude oil” means any liquid hydrocarbon mixture occurring naturally in the earth whether or not treated to render it suitable for transportation, and includes – 5
- (a) crude oils from which distillate fractions have been removed, and
 - (b) crude oils to which distillate fractions have been added;
- “crude oil based fuel” means any fuel comprised wholly or mainly of crude oil or substances derived from crude oil; 10
- “enactment” includes –
- (a) an enactment contained in subordinate legislation (as defined in section 21 of the Interpretation Act 1978);
 - (b) an enactment contained in, or in an instrument made under, a Measure or Act of Senedd Cymru; 15
 - (c) an enactment contained in, or in an instrument made under, an Act of the Scottish Parliament;
 - (d) an enactment contained in, or in an instrument made under, Northern Ireland legislation;
 - (e) any retained direct EU legislation; 20
- “enforcement undertaking” has the meaning given by section 234;
- “oil” means –
- (a) crude oil;
 - (b) crude oil based fuels;
 - (c) components; 25
- “the owned facility”, in relation to a Part 11 facility owner, has the meaning given by section 218(11);
- “Part 11 facility owner” has the meaning given by section 218(11);
- “person carrying on core fuel sector activities” is to be interpreted in accordance with section 218(13); 30
- “relevant activities or assets” is to be interpreted in accordance with section 218(10);
- “relevant wetstock manager” has the meaning given by section 223(3);
- “renewable transport fuel” has the meaning given by section 132 of the Energy Act 2004; 35
- “terminal” means any site for the storage in bulk of oil or renewable transport fuel.
- (2) In this Part references to the “capacity” of a business or of a facility or infrastructure are to be interpreted in accordance with section 219(8).
- (3) References in this Part to a person carrying on business include references to a person carrying on business in partnership with one or more other persons. 40

- (4) For the purposes of the definition of “oil” in subsection (1) “component” means any substance (whether or not derived from crude oil) of a kind which is mixed with other substances to produce a crude oil based fuel.

PART 12

OFFSHORE WIND ELECTRICITY GENERATION, OIL AND GAS

5

CHAPTER 1

OFFSHORE WIND ELECTRICITY GENERATION

240 Meaning of “relevant offshore wind project”

In this Chapter, “relevant offshore wind project” means a project involving the planning, construction, operation or decommissioning of –

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- (a) a generating station in the UK marine area, that generates electricity from wind, or
- (b) infrastructure, in the UK marine area, used or intended for use in connection with a generating station within paragraph (a).

241 Strategic compensation for adverse environmental effects

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- (1) This section applies where a public authority is subject to one or more environmental compensation obligations in relation to one or more relevant offshore wind projects.

- (2) "Environmental compensation obligation" means –

- (a) a statutory duty (however expressed) to secure that measures are taken to compensate for adverse environmental effects of a project, or
- (b) a statutory condition (however expressed) requiring a public authority, before granting consent for the doing of an act by a person ("P") in connection with a project, to be satisfied that P will take or secure the taking of measures to compensate for adverse environmental effects of the act.

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- (3) The public authority may determine that –

- (a) measures taken or secured by the authority in the exercise of any of its functions, or
- (b) measures to be taken or secured by the authority in the exercise of any of its functions,

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are to count towards discharging the environmental compensation obligation or obligations to which the authority is subject.

- (4) In this Chapter, "adverse environmental effect" means –

- (a) anything that adversely affects the integrity of any site comprised in the national site network, or
- (b) anything that hinders the achievement of the conservation objectives stated for a protected marine area.

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- (5) The measures referred to in subsection (3) may be measures taken at the site or sites of the project or projects to which the measures relate or elsewhere.
 - (6) In this section –
 - “act” includes omission;
 - “the national site network” has the same meaning as in the Conservation of Habitats and Species Regulations 2017 (S.I. 2017/1012);
 - “protected marine area” means an area designated under –
 - (a) section 116 of the Marine and Coastal Access Act 2009 or section 13 of the Marine Act (Northern Ireland) 2013 (c. 10 (N.I.)) (marine conservation zones), or
 - (b) section 67(1)(a) of the Marine (Scotland) Act 2010 (asp 5) (marine protected areas);
 - “statutory”, in relation to a duty or condition, means imposed by or under primary legislation.
 - (7) For the purposes of subsection (3), a public authority ("authority A") may, with the consent of another public authority ("authority B"), treat measures taken or secured (or to be taken or secured) by authority B as taken or secured (or to be taken or secured) by authority A in the exercise of any of its functions.
 - (8) In subsection (4)(b), the reference to the conservation objectives stated for a protected marine area is a reference to the conservation objectives stated for the area pursuant to (as the case may be) section 117(2)(b) of the Marine and Coastal Access Act 2009, section 14(2)(b) of the Marine Act (Northern Ireland) 2013 or section 68(3)(b) of the Marine (Scotland) Act 2010.
- 242 Marine recovery fund**
- (1) The Secretary of State may by regulations make provision for the establishment, operation and management of one or more marine recovery funds.
 - (2) A marine recovery fund is a fund –
 - (a) into which payments may be made in respect of relevant offshore wind projects, and
 - (b) out of which payments may be made towards expenditure on measures to compensate for adverse environmental effects of one or more relevant offshore wind projects.
 - (3) The following provisions of this section are without prejudice to the generality of subsection (1).
 - (4) Regulations under this section may make provision –
 - (a) for and in connection with the determination of the extent to which a payment into the fund discharges a compensation condition imposed on a person in connection with the granting of consent in respect of a relevant offshore wind project;

- (b) for a payment into the fund to be treated as discharging a compensation condition to the extent determined by virtue of paragraph (a).
- (5) "Compensation condition", in relation to a person, means a condition requiring the person to take measures to compensate for adverse environmental effects of a relevant offshore wind project. 5
- (6) Regulations under this section may make provision –
- (a) enabling payments to be made out of the fund towards expenditure described in subsection (2)(b);
 - (b) about the persons to whom such a payment may be made; 10
 - (c) enabling conditions to be imposed on a person to whom such a payment is made in connection with the taking of measures described in subsection (2)(b).
- (7) Regulations under this section may make provision –
- (a) about the recovery of costs incurred in connection with the exercise of functions conferred by the regulations; 15
 - (b) conferring functions, including functions involving the exercise of a discretion, on the Secretary of State;
 - (c) for the delegation of functions conferred on the Secretary of State.
- (8) Regulations made by virtue of subsection (7)(c) may provide that a function may be delegated – 20
- (a) to a Scottish public authority only if the function relates to the taking or securing of measures in Scotland;
 - (b) to a Welsh public authority only if the function relates to the taking or securing of measures in Wales; 25
 - (c) to a Northern Ireland public authority only if the function relates to the taking or securing of measures in Northern Ireland.
- (9) Regulations made by virtue of subsection (7)(c) must provide that the delegation of a function –
- (a) may be cancelled by the Secretary of State in accordance with the regulations; 30
 - (b) does not prevent the Secretary of State from carrying out any function delegated.
- (10) Regulations under this section are subject to the negative procedure.
- (11) References in this section to a Scottish public authority, a Welsh public authority or a Northern Ireland public authority are to a public authority whose functions are exercisable only or mainly in or as regards Scotland, Wales or Northern Ireland (as the case may be). 35

243 Assessment of environmental effects etc

- (1) The appropriate authority may by regulations make – 40

- (a) provision for and in connection with the assessment of the environmental effects of relevant offshore wind projects in relation to protected sites;
 - (b) provision about the taking or securing of measures by a public authority in compensation for any adverse environmental effects of a relevant offshore wind project in relation to protected sites ("compensatory measures"). 5
- (2) The appropriate authority is the Secretary of State, subject to paragraphs (a) to (c) –
 - (a) the Scottish Ministers are the appropriate authority in relation to relevant offshore wind projects in the Scottish inshore region, other than in relation to qualifying Secretary of State functions; 10
 - (b) the Welsh Ministers are the appropriate authority in relation to relevant offshore wind projects in the Welsh inshore region, subject to subsection (3) and other than in relation to qualifying Secretary of State functions; 15
 - (c) DAERA is the appropriate authority in relation to relevant offshore wind projects in the Northern Ireland inshore region, other than in relation to qualifying Secretary of State functions.
- (3) In subsection (2)(b), "relevant offshore wind project" does not include a project relating to a generating station that has a capacity such that the construction or extension of the generating station would be a nationally significant infrastructure project (within the meaning given by sections 14 and 15 of the Planning Act 2008). 20
- (4) The provision that may be made by virtue of subsection (1) includes provision –
 - (a) specifying the matters to be dealt with by an assessment;
 - (b) about the procedure to be followed in carrying out an assessment, including when an assessment must be carried out and matters that must be taken into account; 30
 - (c) specifying the person by whom an assessment, or a specified kind of assessment, must be carried out;
 - (d) requiring an assessment to be carried out by a specified person in specified circumstances;
 - (e) authorising or requiring the supply of information (including information the supply of which would not otherwise be permitted) for the purposes of an assessment; 35
 - (f) enabling a person carrying out an assessment (an "assessor") to require a person who has applied for consent to provide the assessor with assistance for the purposes of or in connection with the assessment; 40
 - (g) prohibiting the granting of consent in respect of a project where an assessment has not been carried out in accordance with the regulations;
 - (h) about when or how compensatory measures must or may be provided;
 - (i) disapplying or otherwise modifying, whether generally or in specified circumstances or subject to specified conditions – 45

- (i) any of the provisions listed in subsection (5)(a), (b), (c) or (d) (as the case may be);
 - (ii) any relevant Habitats Directive rights.
- (5) The provisions referred to in subsection (4)(i)(i) are—
- (a) in the case of regulations made by the Secretary of State— 5
 - (i) section 126 of the Marine and Coastal Access Act 2009;
 - (ii) regulations 9 and 10 and Part 6 of the Conservation of Habitats and Species Regulations 2017 (S.I. 2017/1012);
 - (iii) regulations 6, 27, 28 and 30 to 37 of the Conservation of Offshore Marine Habitats and Species Regulations 2017 (S.I. 2017/1013); 10
 - (iv) any other provision that relates to the taking or securing of compensatory measures, where the provision is made by or under an Act;
 - (b) in the case of regulations made by the Scottish Ministers— 15
 - (i) section 83 of the Marine (Scotland) Act 2010 (asp 5);
 - (ii) regulations 3 and 3A and Part 4 of the Conservation (Natural Habitats, &c.) Regulations 1994 (S.I. 1994/2716);
 - (iii) regulations 9 and 10 and Part 6 of the Conservation of Habitats and Species Regulations 2017 (S.I. 2017/1012); 20
 - (iv) any other provision that relates to the taking or securing of compensatory measures in or in relation to the Scottish inshore region, where the provision is made by or under an Act of the Scottish Parliament;
 - (c) in the case of regulations made by the Welsh Ministers— 25
 - (i) section 126 of the Marine and Coastal Access Act 2009;
 - (ii) regulations 9 and 10 and Part 6 of the Conservation of Habitats and Species Regulations 2017 (S.I. 2017/1012);
 - (iii) any other provision that relates to the taking or securing of compensatory measures, where the provision is made by or under an Act or Measure of Senedd Cymru; 30
 - (d) in the case of regulations made by DAERA—
 - (i) section 23 of the Marine Act (Northern Ireland) 2013;
 - (ii) regulations 3 and 3A and Part 4 of the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (S.R. (N.I.) 1995 No. 380); 35
 - (iii) regulations 9 and 10 and Part 6 of the Conservation of Habitats and Species Regulations 2017 (S.I. 2017/1012);
 - (iv) any other provision that relates to the taking or securing of compensatory measures in or in relation to the Northern Ireland inshore region, where the provision is made by or under Northern Ireland legislation. 40
- (6) But regulations under this section may not disapply or otherwise modify, or make provision which could undermine or circumvent—

- (a) section 126(7)(a) or (b) of the Marine and Coastal Access Act 2009, section 83(4)(b)(i) or (ii) of the Marine (Scotland) Act 2010 or section 23(7)(a) or (b) of the Marine Act (Northern Ireland) 2013,
 - (b) regulation 64 of the Conservation of Habitats and Species Regulations 2017, 5
 - (c) regulation 29 of the Conservation of Offshore Marine Habitats and Species Regulations 2017,
 - (d) regulation 49 of the Conservation (Natural Habitats, &c.) Regulations 1994,
 - (e) regulation 44 of the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995, or 10
 - (f) any provision about qualifying Secretary of State functions (unless the regulations are made by the Secretary of State).
- (7) Regulations under this section may make provision—
- (a) enabling the appropriate authority to direct a person to take steps or to refrain from taking steps; 15
 - (b) requiring a person given such a direction to comply with it.
- (8) Regulations under this section may require the appropriate authority or a specified person—
- (a) to give guidance about specified matters; 20
 - (b) to consult specified persons, or persons of a specified description, before giving guidance by virtue of paragraph (a).
- (9) Regulations under this section may confer functions, including functions involving the exercise of a discretion—
- (a) in the case of regulations made by the Secretary State, on any person; 25
 - (b) in any other case, on a person other than a Minister of the Crown.
- (10) The functions that may be conferred on a person by virtue of subsection (9) include a function of giving advice in relation to the application or exercise of any other function, whether exercisable by that or another person, under or by virtue of regulations under this section. 30
- (11) In this section—
- “protected site” has the meaning determined in accordance with regulations under this section; and those regulations—
 - (a) must be framed so that protected sites consist of natural habitats or habitats of species, and 35
 - (b) must in particular include protected marine areas;
 - “qualifying Secretary of State functions” means functions of the Secretary of State in relation to relevant offshore wind projects in (as the case may be) the Scottish inshore region, the Welsh inshore region or the Northern Ireland inshore region; 40
 - “relevant Habitats Directive rights” means rights, powers, liabilities, obligations, restrictions, remedies and procedures that continue to be recognised and available in domestic law by virtue of section 4 of the

European Union (Withdrawal) Act 2018 (including as they are modified by domestic law from time to time), so far as derived from Article 6 of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora;

“specified” means specified in regulations under this section. 5

244 Regulations under section 243: consultation and procedure

- (1) The Secretary of State must, before making regulations under section 243, consult—
 - (a) the Marine Management Organisation,
 - (b) the Joint Nature Conservation Committee, 10
 - (c) Natural England,
 - (d) the Scottish Ministers and Scottish Natural Heritage, so far as the regulations relate to relevant offshore wind projects or protected sites in Scotland,
 - (e) the Welsh Ministers and the Natural Resources Body for Wales, so far as the regulations relate to relevant offshore wind projects or protected sites in Wales, 15
 - (f) DAERA, so far as the regulations relate to protected sites in Northern Ireland, and
 - (g) such other persons as the Secretary of State considers appropriate. 20
- (2) Regulations made by the Secretary of State under section 243 are subject to the affirmative procedure.
- (3) The Scottish Ministers must, before making regulations under section 243, consult—
 - (a) the Secretary of State, 25
 - (b) the Marine Management Organisation, so far as the regulations relate to protected sites in England or the Northern Ireland offshore region,
 - (c) Natural England, so far as the regulations relate to protected sites in England,
 - (d) the Joint Nature Conservation Committee, so far as the regulations relate to protected sites in such part of the UK marine area as is beyond the seaward limits of the territorial sea, 30
 - (e) Scottish Natural Heritage, so far as the regulations relate to protected sites in Scotland,
 - (f) the Welsh Ministers and the Natural Resources Body for Wales, so far as the regulations relate to protected sites in Wales, 35
 - (g) DAERA, so far as the regulations relate to protected sites in Northern Ireland, and
 - (h) such other persons as they consider appropriate.
- (4) Regulations made by the Scottish Ministers under section 243 are subject to the affirmative procedure (see section 29 of the Interpretation and Legislative Reform (Scotland) Act 2010 (asp 10)). 40

- (5) The Welsh Ministers must, before making regulations under section 243, consult—
- (a) the Secretary of State;
 - (b) the Marine Management Organisation, so far as the regulations relate to protected sites in England or the Northern Ireland offshore region, 5
 - (c) Natural England, so far as the regulations relate to protected sites in England,
 - (d) the Joint Nature Conservation Committee, so far as the regulations relate to protected sites in such part of the UK marine area as is beyond the seaward limits of the territorial sea, 10
 - (e) the Scottish Ministers and Scottish Natural Heritage, so far as the regulations relate to protected sites in Scotland,
 - (f) the Natural Resources Body for Wales, so far as the regulations relate to protected sites in Wales,
 - (g) DAERA, so far as the regulations relate to protected sites in Northern Ireland, and 15
 - (h) such other persons as they consider appropriate.
- (6) The power of the Welsh Ministers to make regulations under section 243 is exercisable by statutory instrument.
- (7) A statutory instrument containing regulations made by the Welsh Ministers under section 243 may not be made unless a draft of the instrument has been laid before, and approved by a resolution of, Senedd Cymru. 20
- (8) DAERA must, before making regulations under section 243, consult—
- (a) the Secretary of State,
 - (b) the Marine Management Organisation, so far as the regulations relate to protected sites in England or the Northern Ireland offshore region, 25
 - (c) Natural England, so far as the regulations relate to protected sites in England,
 - (d) the Joint Nature Conservation Committee, so far as the regulations relate to protected sites in such part of the UK marine area as is beyond the seaward limits of the territorial sea, 30
 - (e) the Scottish Ministers and Scottish Natural Heritage, so far as the regulations relate to protected sites in Scotland,
 - (f) the Welsh Ministers and the Natural Resources Body for Wales, so far as the regulations relate to protected sites in Wales, and 35
 - (g) such other persons as DAERA considers appropriate.
- (9) The power of DAERA to make regulations under section 243 is exercisable by statutory rule for the purposes of the Statutory Rules (Northern Ireland) Order 1979 (S.I. 1979/1573 (N.I. 12)).
- (10) Regulations may not be made under section 243 by DAERA unless a draft of the regulations has been laid before and approved by a resolution of the Northern Ireland Assembly. 40
- (11) In this section, "protected site" has the same meaning as in section 243.

245 Interpretation of Chapter 1

- (1) In this Chapter –
- “adverse environmental effect” has the meaning given by section 241(4);
 - “consent” means any consent, approval, permission, authorisation or confirmation (however described or given) that is required, or otherwise provided for, by or under primary legislation; 5
 - “DAERA” means the Department of Agriculture, Environment and Rural Affairs in Northern Ireland;
 - “England” includes the English inshore region and the English offshore region; 10
 - “Minister of the Crown” has the same meaning as in the Ministers of the Crown Act 1975 (see section 8(1) of that Act);
 - “Northern Ireland” includes the Northern Ireland inshore region;
 - “primary legislation” means –
 - (a) an Act of Parliament, 15
 - (b) an Act or Measure of Senedd Cymru,
 - (c) an Act of the Scottish Parliament, or
 - (d) Northern Ireland legislation;
 - “protected marine area” has the meaning given by section 241(6);
 - “public authority” means – 20
 - (a) a Minister of the Crown,
 - (b) the Scottish Ministers,
 - (c) the Welsh Ministers,
 - (d) a Northern Ireland department, or
 - (e) any other person with functions of a public nature; 25
 - “relevant offshore wind project” has the meaning given by section 240;
 - “Scotland” includes the Scottish inshore region and the Scottish offshore region;
 - “UK marine area” has the meaning given by section 42(1) of the Marine and Coastal Access Act 2009; 30
 - “Wales” includes the Welsh inshore region and the Welsh offshore region.
- (2) References in this Chapter to the English, Scottish, Welsh or Northern Ireland inshore and offshore regions are to be construed in accordance with the Marine and Coastal Access Act 2009 (see section 322 of that Act).

CHAPTER 2

OIL AND GAS

Environmental protection

246 Arrangements for responding to marine oil pollution

- (1) The Secretary of State may, by regulations, make provision –

- (a) requiring a person responsible for infrastructure or a place to which subsection (2) applies to have an emergency plan setting out arrangements for responding to incidents which cause, or may cause, marine oil pollution,
 - (b) in connection with that requirement, and 5
 - (c) about the reporting of such incidents.
- (2) This subsection applies to –
 - (a) an offshore installation, or an offshore well, that is used for or in connection with –
 - (i) offshore oil and gas operations, or 10
 - (ii) offshore production or storage of gas;
 - (b) offshore infrastructure, including pipelines, connected to such an installation or well;
 - (c) a harbour;
 - (d) a facility, that is not offshore, for handling or storing oil or gas; 15
 - (e) infrastructure or a place described in any of paragraphs (a) to (d) that is being decommissioned or has been decommissioned or abandoned.
- (3) Regulations under subsection (1) may, in particular, make provision in connection with the implementation, maintenance and review of an emergency plan, including provision requiring – 20
 - (a) a person to refrain from carrying out activities that may cause marine oil pollution unless and until an emergency plan is in place;
 - (b) an emergency plan to be reviewed in accordance with the regulations;
 - (c) the amendment or replacement of an emergency plan in circumstances specified in the regulations; 25
 - (d) a person to ensure readiness to carry out an emergency plan;
 - (e) a person to carry out an emergency plan.
- (4) Regulations under subsection (1) about the reporting of incidents may, in particular –
 - (a) set out – 30
 - (i) circumstances in which a report must be made;
 - (ii) by whom a report must be made;
 - (iii) to whom a report must be made;
 - (b) make provision as to the content and form of a report and the time by which a report must be made. 35
- (5) The Secretary of State may, by regulations, make provision enabling the inspection of infrastructure or a place to which subsection (2) applies.
- (6) Regulations under subsection (1) or (5) may, in particular, make provision –
 - (a) about the meaning which any expression used in subsection (1), (2), (3), (4) or (5) is to have for the purposes of regulations under subsection (1) or (5); 40
 - (b) conferring functions on any person;

-
- (c) providing for the charging of fees (but see subsection (7));
 - (d) authorising or requiring, or restricting or prohibiting, the supply or keeping of information (including provision authorising or requiring the supply or keeping of information that would not otherwise be permitted); 5
 - (e) creating criminal offences or impose civil penalties (but see subsection (8));
 - (f) for the purpose of securing compliance with requirements imposed by or under regulations under subsection (1) or (5).

 - (7) Regulations under subsection (1) or (5) which provide for a fee to be charged in respect of a person performing a function or doing any other thing must secure that, taking one year with another, the income from the fees does not exceed the cost of performing the function or doing the thing. 10

 - (8) Regulations under subsection (1) or (5) may not provide – 15
 - (a) for a criminal offence to be punishable with imprisonment;
 - (b) for a civil penalty to exceed £50,000.

 - (9) Regulations under subsection (1) or (5) containing any of the following (with or without other provision) are subject to the affirmative procedure – 20
 - (a) provision creating a criminal offence or civil penalty (but excluding provision modifying the circumstances in which a person is guilty of an existing offence or liable for an existing civil penalty);
 - (b) provision specifying a civil penalty amount.

 - (10) Any other regulations under subsection (1) or (5) are subject to the negative procedure.

 - (11) In this section – 25
 - “gas” means –
 - (a) “gas” within the meaning of section 2 of the Energy Act 2008,
 - (b) carbon dioxide, and
 - (c) hydrogen;
 - “oil” means petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined products. 30

247 Habitats: reducing effects of offshore oil or gas activities etc

- (1) The Secretary of State may, by regulations, make provision requiring the Secretary of State to take into account the implications for relevant sites when deciding whether, or how, to carry out a function (including a function under other regulations under this section) which relates to – 35
 - (a) offshore oil and gas activities, or
 - (b) offshore production or storage of gas.

- (2) The Secretary of State may, by regulations, make provision – 40
 - (a) prohibiting a specified description of activities from being carried out unless the consent of the Secretary of State has been obtained, and

- (b) requiring a person who has obtained such a consent to carry out any activity to which the consent relates in accordance with the consent (and any conditions to which the consent is subject).

- (3) The Secretary of State may, by regulations, make provision preventing a specified description of licence from being granted unless the Secretary of State has or Scottish Ministers have – 5
 - (a) carried out a specified description of assessment, and
 - (b) confirmed that the outcome of that assessment does not prevent the licence from being granted.

- (4) The Secretary of State may, by regulations, make provision – 10
 - (a) authorising the Secretary of State to give a person directions to take steps, or to refrain from taking steps, and
 - (b) requiring a person given such a direction to comply with it.

- (5) The Secretary of State may make regulations under subsection (2), (3) or (4) only if the Secretary of State considers that the regulations would contribute to the protection of relevant sites from adverse effects of – 15
 - (a) offshore oil and gas activities, or
 - (b) offshore production or storage of gas.

- (6) For the purposes of regulations made under another provision of this section, “relevant site” has the meaning determined in accordance with the regulations; and those regulations – 20
 - (a) must be framed so that relevant sites consist of natural habitats or habitats of species;
 - (b) may, where they are framed by reference to provision made by other legislation, be framed so as to include natural habitats or habitats of species that are likely to fall within that provision of that other legislation. 25

- (7) Regulations under this section may –
 - (a) make provision about the meaning which any expression used in this section is to have for the purposes of regulations under this section; 30
 - (b) confer functions on any person (including a function of giving advice in relation to the application or exercise of any other function, whether exercisable by that or another person, under regulations under this section);
 - (c) provide for the modification or revocation of any consent given under regulations under subsection (2). 35
 - (d) provide for the charging of fees;
 - (e) authorise, or restrict or prohibit, the supply or keeping of information (including authorisation of the supply or keeping of information that would not otherwise be permitted); 40
 - (f) create criminal offences or impose civil penalties (but see subsection (8));

- (g) make other provision for the purpose of securing compliance with requirements imposed by or under regulations under this section.
- (8) Regulations under this section may not provide—
- (a) for a criminal offence to be punishable with imprisonment or, on summary conviction, to a fine exceeding the statutory maximum; 5
 - (b) for a civil penalty of a fixed amount to exceed £2,500 or of a variable amount to exceed £50,000.
- (9) Regulations under this section containing any of the following (with or without other provision) are subject to the affirmative procedure—
- (a) provision creating a criminal offence or civil penalty (but excluding provision modifying the circumstances in which a person is guilty of an existing offence or liable for an existing civil penalty); 10
 - (b) provision specifying a civil penalty amount.
- (10) Any other regulations under this section are subject to the negative procedure.
- (11) In this section— 15
- “licence” means anything (however described) which permits a person to do something;
 - “specified” means specified in regulations under this section.

Decommissioning: charging schemes

248 Offshore oil and gas decommissioning: charging schemes 20

- (1) In the Petroleum Act 1998, after section 38B insert—
- “38C Charging schemes**
- (1) The Secretary of State may make a scheme providing for payment to the Secretary of State of charges for or in connection with the carrying out by the Secretary of State of the Secretary of State’s functions under this Part. 25
 - (2) A scheme under this section may provide that a charge is to be of an amount—
 - (a) specified in the scheme, or
 - (b) determined by the Secretary of State in accordance with the scheme. 30
 - (3) A scheme under this section may specify matters to which the Secretary of State must have regard when determining the amount of a charge.
 - (4) A scheme under this section may specify—
 - (a) how a charge is to be paid; 35
 - (b) when a charge is to be paid;
 - (c) the person by whom a charge is to be paid.

- (5) Provision made by virtue of subsection (4)(c) may confer a discretion on the Secretary of State.
- (6) A scheme under this section may –
- (a) include incidental, supplementary or consequential provision;
 - (b) include transitory or transitional provision or savings; 5
 - (c) make different provision for different purposes.
- (7) Before making a scheme under this section, the Secretary of State must consult organisations in the United Kingdom that appear to the Secretary of State to be representative of persons who are likely to be affected by the scheme. 10
- (8) The Secretary of State must not make a scheme under this section without the consent of the Treasury.
- (9) The Secretary of State may amend or revoke a scheme under this section.
- (10) The Secretary of State must publish – 15
- (a) a scheme under this section,
 - (b) any amendment or revocation of such a scheme, and
 - (c) the date on which any such scheme, amendment or revocation takes effect,
- before the date on which the scheme, amendment or revocation takes effect.” 20
- (2) In section 30 of the Energy Act 2008 (abandonment of installations), in subsection (2) –
- (a) omit the “and” after paragraph (a);
 - (b) after paragraph (a) insert – 25
- “(aa) references in that Part to the Secretary of State are accordingly to be read as references to the Scottish Ministers, and”.
- (3) The Petroleum Act 1998 is amended as follows in consequence of subsection (1). 30
- (4) In section 29 (preparation of programmes), omit subsection (5).
- (5) In section 33(4) (failure to submit programmes), for the words from “any fee” to the end substitute “any charge that would have been payable by those persons in accordance with a scheme under section 38C if they had complied with the notice under section 29(1)”. 35
- (6) In section 34(4) (revision of programmes), omit the words from “and a person” to the end.
- (7) In section 39 (regulations) –
- (a) in subsection (2), omit paragraph (e);
 - (b) in subsection (5), omit the words from “and he” to the end. 40

Change in control of licensee

249 Model clauses of petroleum licences

- (1) Schedule 19 amends the model clauses contained in—
 - (a) the Petroleum Licensing (Production) (Seaward Areas) Regulations 2008 (S.I. 2008/225) (“the 2008 Regulations”), and 5
 - (b) the Petroleum Licensing (Exploration and Production) (Landward Areas) Regulations 2014 (S.I. 2014/1686) (“the 2014 Regulations”).

- (2) Where a licence granted (or having effect as if granted) by the Oil and Gas Authority under the Petroleum (Production) Act 1934 or the Petroleum Act 1998— 10
 - (a) is in force immediately before the commencement of Part 1 of Schedule 19, and
 - (b) incorporates model clauses 41 and 42 in the Schedule to the 2008 Regulations (whether or not any provision of those model clauses is modified or excluded), 15

the licence has effect with the amendments provided for by paragraphs 2 to 4 of Schedule 19.

- (3) Where a licence granted (or having effect as if granted) by the Oil and Gas Authority under the Petroleum (Production) Act 1934 or the Petroleum Act 1998— 20
 - (a) is in force immediately before the commencement of Part 2 of Schedule 19, and
 - (b) incorporates model clauses 41 and 42 in Schedule 2 to the 2014 Regulations (whether or not any provision of those model clauses is modified or excluded), 25

the licence has effect with the amendments provided for by paragraphs 6 to 8 of Schedule 19.

- (4) The power conferred by reason of the amendment made by paragraph 8(2) of Schedule 19 to partially revoke a licence because of the occurrence of an event mentioned in model clause 41(2)(h) in Schedule 2 to the 2014 Regulations may not be exercised as a result of such an event which occurred before the commencement of paragraph 8 of Schedule 19. 30

- (5) A reference in any document to provisions of a licence which are amended by Schedule 19 is to be construed, unless the nature of the document or the context otherwise requires, as a reference to those provisions as amended. 35

- (6) A provision inserted in a licence by virtue of Schedule 19 may be altered or deleted by deed executed by the Secretary of State and the licensee or, as respects Scotland, by an instrument subscribed or authenticated by the Secretary of State and the licensee in accordance with the Requirements of Writing (Scotland) Act 1995. 40

250 Power of OGA to require information about change in control of licensee

After section 5C of the Petroleum Act 1998 insert –

“5D OGA’s power to require information about change in control of licensee

- (1) This section applies in relation to a licence granted (or having effect as if granted) by the OGA under this Part which includes provisions prohibiting a change in control of a licensee which is a company without the OGA’s consent. 5
- (2) The OGA may by notice in writing require a person within subsection (3) to provide the OGA with any information that it requires for the purpose of exercising its functions in relation to a change or potential change in control of a licensee which is a company. 10
- (3) The persons within this subsection are –
- (a) the company;
 - (b) the person who (if consent were granted) would take control of the company; 15
 - (c) if the company and another person or persons are the licensee, that other person or those other persons;
 - (d) any person not within any of paragraphs (a) to (c) who appears to the OGA to have information that it requires as mentioned in subsection (2). 20
- (4) The power conferred by this section does not include power to require the provision of any information that would be protected from disclosure or production in legal proceedings on grounds of legal professional privilege or, in Scotland, confidentiality of communications. 25
- (5) Nothing in this section limits any power of the OGA to require information under –
- (a) regulations under this Part, or
 - (b) the terms of a licence under this Part.” 30

PART 13

CIVIL NUCLEAR SECTOR

CHAPTER 1

CIVIL NUCLEAR SITES

251 Application to the territorial sea of requirement for nuclear site licence 35

- (1) The Nuclear Installations Act 1965 is amended in accordance with subsections (2) and (3).

- (2) In section 1 (restriction of certain nuclear installations to licensed sites), after subsection (11) insert –
- “(12) In this section, “site” includes a site situated wholly or partly in or under the territorial sea adjacent to the United Kingdom.”
- (3) In section 26(1) (interpretation), in the definition of “the appropriate national authority” –
- (a) in paragraph (a), after “Scotland” insert “(including the territorial sea adjacent to them)”;
(b) in paragraph (b), after “Northern Ireland” insert “(including the territorial sea adjacent to it)”. 10
- (4) In section 68 of the Energy Act 2013 (nuclear safety purposes), after subsection (3) insert –
- “(4) In the definition of “relevant nuclear installation” in subsection (3), the reference to a site in England, Wales or Scotland includes a site situated wholly or partly in or under the territorial sea adjacent to them.” 15

252 Decommissioning of nuclear sites etc

- (1) The Nuclear Installations Act 1965 is amended as follows.
- (2) In section 1 (restriction of certain nuclear installations to licensed sites), after subsection (12) (inserted by section 251 of this Act) insert –
- “(13) The reference in subsection (1) to operating a nuclear reactor or an installation of a prescribed kind includes a reference to decommissioning a nuclear reactor or such an installation.” 20
- (3) In section 3 (grant and variation of nuclear site licences) –
- (a) in subsection (12)(b), for the words from “there” to the end substitute “the applicable condition or conditions set out in section 3A are met.”; 25
(b) after subsection (12) insert –
- “(12A) The appropriate national authority must consult the Health and Safety Executive before varying a nuclear site licence under subsection (12).” 30
- (4) After section 3 insert –
- “3A Exclusion of part of site from licence: applicable conditions**
- (1) This section sets out the applicable condition or conditions for excluding any part of a licensed site (“the relevant part”) from a nuclear site licence. 35
- (2) Where a prescribed disposal installation is or has at any time been situated within the relevant part, the applicable condition is that there is no danger from ionising radiations from anything on the relevant part.

- (3) Where any nuclear installation, other than a prescribed disposal installation or a licensed disposal site, is or has at any time been situated within the relevant part, the applicable conditions (subject to subsection (5)) are that—
- (a) the use of any such installation within the relevant part has permanently ceased, 5
 - (b) appropriate measures for the containment and control of any remaining radioactivity are in place,
 - (c) the relevant part meets the radioactivity exclusion criteria and the dose exclusion criteria, and 10
 - (d) it is no longer necessary or desirable in the interests of safety for a nuclear site licence to be in force in respect of the relevant part.
- (4) In any other case, the applicable conditions (subject to subsection (5)) are that— 15
- (a) the relevant part meets the dose exclusion criteria, and
 - (b) it is no longer necessary or desirable in the interests of safety for a nuclear site licence to be in force in respect of the relevant part.
- (5) In a case to which, but for this subsection, subsection (3) or (4) would apply, the licensee may elect that the condition set out in subsection (2) is to apply to the relevant part (instead of the conditions in subsection (3) or (4)). 20
- (6) In this section—
- “2014 Decision” means the Decision and Recommendation of the Steering Committee Concerning the Application of the Paris Convention to Nuclear Installations in the Process of Being Decommissioned, published on 30 October 2014 by the Steering Committee for Nuclear Energy of the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development; 25
 - “dose exclusion criteria” means the criteria described in paragraph 3(b) of the Appendix to the 2014 Decision;
 - “licensed disposal site” means a site that would be a relevant disposal site within the meaning of section 7B were a nuclear site licence not in force in respect of the site (see section 7B(5)(a)); 30
 - “prescribed disposal installation” means an installation—
 - (a) designed or adapted for the disposal of nuclear matter, and 40
 - (b) of a kind prescribed under section 1(1)(b) at any time after section 252 of the Energy Act 2023 comes into force;
 - “radioactivity exclusion criteria” means the criteria described in paragraph 3(a) of the Appendix to the 2014 Decision; 45

“safety”, in relation to the relevant part of a site, is to be construed in accordance with section 4(2).”

- (5) In section 5 (revocation and surrender of licences)—
- (a) in the heading, omit “and surrender”;
 - (b) in subsection (1)— 5
 - (i) omit the “or” after paragraph (a);
 - (ii) omit paragraph (b);
 - (c) in subsection (2), after “consult” insert “the Health and Safety Executive and”;
 - (d) in subsection (3), omit “or surrendered”; 10
 - (e) in subsection (15)(a), for the words from “that in the authority’s opinion” to the end substitute “—
 - (i) as respects the licensee’s period of responsibility for the licensed site, that in the authority’s opinion each part of the site meets the condition or conditions set out in section 5A that apply in relation to that part of the site, or 15
 - (ii) as respects the licensee’s period of responsibility for any part of the site, that in the authority’s opinion the part in question meets the condition or conditions set out in section 5A that apply in relation to that part.”; 20
 - (f) after subsection (15)(b) insert—
 - “(ba) the date when a person (whether the licensee or some other person) becomes the operator of a relevant disposal site comprising the site in question or, as the case may be, that part of it; 25
 - (bb) the date when the site or, as the case may be, the part of it in question becomes an excluded disposal site.”.
- (6) After section 5 insert— 30
- “5A End of period of responsibility: applicable conditions**
- (1) This section sets out the applicable conditions for determining when a licensee’s period of responsibility for a part of a licensed site (“the relevant part”) ends under section 5(15)(a)(i) or (ii).
 - (2) Where a prescribed disposal installation is or has at any time been situated within the relevant part, the applicable condition is that there is no danger from ionising radiations from anything on the relevant part. 35
 - (3) Where any nuclear installation other than a prescribed disposal installation is or has at any time been situated within the relevant part, the applicable conditions (subject to subsection (5)) are that— 40

- (a) the use of any such installation within the relevant part has permanently ceased,
 - (b) appropriate provisions for the containment and control of any remaining radioactivity are in place, and
 - (c) the relevant part meets the radioactivity exclusion criteria and the dose exclusion criteria. 5
- (4) In any other case, the applicable condition (subject to subsection (5)) is that the relevant part meets the dose exclusion criteria.
- (5) In a case to which, but for this subsection, subsection (3) or (4) would apply, the licensee may elect that the condition set out in subsection (2) is to apply to the relevant part (instead of the conditions in subsection (3) or (4)). 10
- (6) In this section—
 - “2014 Decision” means the Decision and Recommendation of the Steering Committee Concerning the Application of the Paris Convention to Nuclear Installations in the Process of Being Decommissioned, published on 30 October 2014 by the Steering Committee for Nuclear Energy of the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development; 15 20
 - “dose exclusion criteria” means the criteria described in paragraph 3(b) of the Appendix to the 2014 Decision;
 - “installation exclusion criteria” means the criteria described in paragraph 3(a) of the Appendix to the 2014 Decision;
 - “prescribed disposal installation” means an installation— 25
 - (a) designed or adapted for the disposal of nuclear matter, and
 - (b) of a kind prescribed under section 1(1)(b) at any time after section 252 of the Energy Act 2023 comes into force.” 30
- (7) In section 7B (duties in respect of relevant disposal sites)—
 - (a) after subsection (2) insert—
 - “(2A) The operator of a site that would be a relevant disposal site but for subsection (5)(a) is to be treated for the purposes of subsection (2)(a)(ii) as becoming the operator of the site on the date when— 35
 - (a) the nuclear site licence in question is varied under section 3(12) to exclude the site from it, or
 - (b) the nuclear site licence in question is revoked under section 5(1).”; 40
 - (b) in subsection (5)(a), after “granted” insert “(subject to subsection (5A))”;

(c) after subsection (5) insert –

“(5A) Subsection (5)(a) does not apply where a licence has ceased to be in force in respect of the site as a result of section 3(12) (exclusion of part of site from licence) or section 5(1) (revocation of licence).”

5

(8) In section 27(1) (application of Act to Northern Ireland), after paragraph (a) insert –

“(aa) a reference to the Health and Safety Executive is to be construed as a reference to the Health and Safety Executive for Northern Ireland.”

10

253 Excluded disposal sites

(1) The Nuclear Installations Act 1965 is amended as follows.

(2) In section 7B (duties in respect of relevant disposal sites) –

(a) after subsection (2A) (inserted by section 252 of this Act) insert –

“(2B) The operator of a site that would be a relevant disposal site but for subsection (7A) is to be treated for the purposes of subsection (2)(a)(ii) as becoming the operator of the site on the date when the site ceases to be an excluded disposal site.”;

15

(b) after subsection (3)(d) insert –

“(e) the date when the Secretary of State gives notice under section 7C(1)(b) that the site is an excluded disposal site.”;

20

(c) after subsection (3) insert –

“(3A) Where a site to which subsection (2B) applies was a relevant disposal site before it became an excluded disposal site, subsection (2) has effect in respect of –

25

(a) the period beginning by virtue of subsection (2)(a), and

(b) any further period beginning by virtue of subsection (2B).”;

(d) in subsection (4), for “and (7)” substitute “, (7) and (7A)”;

30

(e) after subsection (7) insert –

“(7A) A site is not a relevant disposal site if it is an excluded disposal site.”;

(f) in subsection (9), in the definition of “appropriate permit” –

(i) after paragraph (a) insert –

35

“(aa) in relation to a site in Scotland, a permit under regulations made under section 18 of the Regulatory Reform (Scotland) Act 2014 (2014 asp 3) authorising a person to use the site for the disposal of radioactive waste;”;

40

(ii) in paragraph (b), omit “Scotland or”.

(3) After section 7B insert –

“7C Excluded disposal sites

- (1) A site that is used or intended to be used for the operation of an installation for the disposal of nuclear matter is an excluded disposal site if – 5
- (a) the Secretary of State is satisfied, on an application by the operator of the site, that the site meets –
 - (i) the permit condition, 10
 - (ii) the site history condition, and
 - (iii) such other conditions as may be prescribed, and
 - (b) the Secretary of State gives the operator notice in writing to that effect.
- (2) In this section, “disqualifying matter” means nuclear matter that exceeds the radioactivity concentration limits set out in paragraph 3(a) of the Appendix to the 2016 Decision. 15
- (3) The permit condition is that –
- (a) an appropriate permit is in force in respect of the site, and
 - (b) that permit includes a condition preventing the site from receiving disqualifying matter. 20
- (4) The site history condition is that –
- (a) disqualifying matter has not at any time been accepted for disposal at the site, or
 - (b) any disqualifying matter previously accepted for disposal at the site has been removed from the site. 25
- (5) An application under subsection (1)(a) must be accompanied by such documents as may be prescribed.
- (6) Regulations made under subsection (5) may –
- (a) specify requirements relating to the preparation, approval or review of a prescribed document; 30
 - (b) require an operator to provide a copy of a prescribed document to a person other than the Secretary of State;
 - (c) make different provision for different purposes.
- (7) A site ceases to be an excluded disposal site if the site no longer meets the permit condition or any condition prescribed under subsection (1)(a)(iii). 35
- (8) Where the appropriate permit in force in respect of an excluded disposal site is transferred to a new operator, the site ceases to be an excluded disposal site at the end of the period of one month beginning with the date on which the permit is transferred unless, before the end of that period – 40

- (a) the new operator notifies the Secretary of State of the transfer, and
 - (b) the Secretary of State gives the new operator notice in writing that the Secretary of State consents to the site continuing to be an excluded disposal site. 5
- (9) The Secretary of State must notify the Scottish Ministers of any notification given under subsection (1)(b) in relation to a site in Scotland.
- (10) In this section—
- “2016 Decision” means the Decision and Recommendation Concerning the Application of the Paris Convention on Third Party Liability in the Field of Nuclear Energy to Nuclear Installations for the Disposal of Certain Types of Low-level Radioactive Waste published on 16 January 2017 by the Steering Committee for Nuclear Energy of the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development; 10
 - “appropriate permit” has the meaning given in section 7B(9). 15

7D Excluded disposal sites: acceptance of disqualifying matter

- (1) This section applies where disqualifying matter is accepted at an excluded disposal site; and for the purposes of this section the acceptance of such matter is referred to as “the breach”. 20
- (2) The operator of the site must notify the Secretary of State of the breach before the end of the notification period.
- (3) “The notification period” means the period of 21 days beginning with the day on which the operator becomes aware of the breach. 25
- (4) The site ceases to be an excluded disposal site at the end of the notification period unless the operator complies with the duty under subsection (2).
- (5) An operator who has complied with the duty under subsection (2) must remove the disqualifying waste from the site before the end of the removal period. 30
- (6) “The removal period” means—
- (a) the period of 90 days beginning with the day on which the operator notifies the Secretary of State of the breach, or 35
 - (b) such longer period as the Secretary of State may specify before the end of the period mentioned in paragraph (a) if satisfied that the operator is taking all reasonable steps to remove the disqualifying matter from the site.
- (7) The site ceases to be an excluded disposal site at the end of the removal period unless before the end of that period— 40

- (a) the Secretary of State is satisfied that the disqualifying waste has been removed from the site, and
 - (b) the Secretary of State gives the operator notice in writing to that effect.
 - (8) In this section, “disqualifying matter” has the meaning given by section 7C.” 5
 - (4) In section 20 (furnishing of information relating to operator’s cover), after subsection (5) insert –
 - “(5A) Subsection (4) does not apply where the operator of a relevant disposal site makes an application to the Secretary of State under section 7C(1)(a) (application for site to be excluded disposal site).” 10
 - (5) In section 26(1) (interpretation), at the appropriate place insert –
 - ““excluded disposal site” has the meaning given by section 7C;”.
- 254 Accession to Convention on Supplementary Compensation for Nuclear Damage** 15
- Schedule 20 contains amendments to the Nuclear Installations Act 1965 to implement the Convention on Supplementary Compensation for Nuclear Damage.

CHAPTER 2

CIVIL NUCLEAR CONSTABULARY 20

255 Provision of additional police services

- (1) After section 55 of the Energy Act 2004 insert –
 - “*Additional services*

55A Provision of additional police services

- (1) The Constabulary may, with the consent of the Secretary of State, provide additional police services to any person. 25
- (2) In this Chapter, “additional police services” means services relating to the protection of places, persons or materials.
- (3) In subsection (2), “place” includes –
 - (a) premises, facilities or equipment at a place; 30
 - (b) any vehicle, vessel, aircraft or hovercraft.
- (4) The Secretary of State must not give consent for the purposes of subsection (1) unless satisfied, on an application made by the Police Authority, that –

-
- (a) the provision of the additional police services in question is in the interests of national security,
 - (b) the provision by the Constabulary of those services will not prejudice the carrying out of its primary function under section 52(2), and
 - (c) it is reasonable in all the circumstances for the Constabulary to provide those services.

5
 - (5) Before giving consent for the purposes of subsection (1), the Secretary of State must consult the chief constable.
 - (6) The chief constable must ensure that the provision by the Constabulary of additional police services does not prejudice the carrying out of its primary function under section 52(2). 10
 - (7) Consent given for the purposes of subsection (1) –
 - (a) must specify the period of time (not exceeding 5 years) for which it has effect; 15
 - (b) may, subject to subsections (8) and (9), be withdrawn at any time if the Secretary of State is no longer satisfied of the matters mentioned in subsection (4).
 - (8) Where the Secretary of State proposes to withdraw consent given for the purposes of subsection (1), the Secretary of State must consult the Police Authority. 20
 - (9) If, following consultation under subsection (8), the Secretary of State decides to withdraw consent given for the purposes of subsection (1), the Secretary of State must give such notice to the Police Authority as is reasonably practicable of the date on which the consent will cease to have effect. 25
 - (10) The Police Authority may enter into an agreement with any person for the provision of additional police services by the Constabulary under this section.
 - (11) The Police Authority must publish, as soon as is reasonably practicable and in such manner as the Authority considers appropriate –
 - (a) the name of any person or persons to whom additional police services are to be provided under this section, and
 - (b) (subject to subsections (12) and (13)) such information about the place or places at which those services are to be provided as the Police Authority considers may be published without prejudicing the interests of national security. 35
 - (12) The Police Authority must consult the Secretary of State before publishing the information referred to in subsection (11)(b).
 - (13) The Secretary of State may direct the Police Authority not to publish information about the place or places at which additional police services are to be provided where the Secretary of State considers that 40

- publication of the information would prejudice the interests of national security.
- (14) The Police Authority must comply with a direction given by the Secretary of State under subsection (13).”
- (2) In section 56 of that Act (jurisdiction of Constabulary), after subsection (3) insert – 5
- “(3A) A member of the Constabulary has the powers and privileges of a constable at every place where additional police services are being provided under section 55A.”
- (3) In section 71(1) of that Act (interpretation), at the appropriate place insert – 10
- ““additional police services” has the meaning given in section 55A(2);”.
- (4) The Counter-Terrorism Act 2008 is amended as follows –
- (a) in section 85(2) (costs of policing at gas facilities: England and Wales), after paragraph (a) omit “or” and insert –
- “(aa) the services of the Civil Nuclear Constabulary provided under section 55A of the Energy Act 2004, or”; 15
- (b) in section 86(2) (costs of policing at gas facilities: Scotland), after paragraph (a) omit “or” and insert –
- “(aa) the services of the Civil Nuclear Constabulary provided under section 55A of the Energy Act 2004, or”. 20

256 Provision of assistance to other forces

- (1) The Energy Act 2004 is amended as follows.
- (2) After section 55A (inserted by section 255 of this Act) insert –

“55B Provision of assistance to other forces

- (1) The chief constable may, on the application of the chief officer of a relevant force, provide members of the Constabulary or other assistance for the purpose of enabling that force to meet any special demand on its resources. 25
- (2) The policing body maintaining a relevant force for which assistance is provided under this section must pay to the Police Authority such charges – 30
- (a) as may be agreed between the policing body and the Police Authority, or
- (b) in the absence of any such agreement, as may be determined by the Secretary of State. 35
- (3) The chief constable must ensure that the provision of assistance under this section does not prejudice the carrying out of the primary function of the Constabulary under section 52(2).

-
- (4) In this section—
- “chief officer” means—
- (a) a chief officer of police of a police force for a police area in England and Wales;
 - (b) the chief constable of the Police Service of Scotland; 5
 - (c) the chief constable of the British Transport Police Force; or
 - (d) the chief constable of the Ministry of Defence Police;
- “policing body” means—
- (a) in relation to a police force for a police area in England and Wales, the relevant local policing body in the meaning of section 101(1) of the Police Act 1996; 10
 - (b) in relation to the Police Service of Scotland, the Scottish Police Authority;
 - (c) in relation to the British Transport Police Force, the British Transport Police Authority; 15
 - (d) in relation to the Ministry of Defence Police, the Secretary of State;
- “relevant force” means—
- (a) a police force for a police area in England and Wales; 20
 - (b) the Police Service of Scotland;
 - (c) the British Transport Police Force; or
 - (d) the Ministry of Defence Police.”
- (3) In section 59 (members of constabulary serving with other forces), after subsection (3) insert— 25
- “(3A) For the purposes of this section, a member of the Constabulary who is provided for the assistance of a relevant force under section 55B is to be treated as serving with that force under arrangements of the kind mentioned in subsection (1).”
- 257 Cross-border enforcement powers 30**
- (1) Part 10 of the Criminal Justice and Public Order Act 1994 (cross-border enforcement) is amended as follows.
- (2) In section 136 (execution of warrants)—
- (a) in subsection (1), after “2003” insert “or under section 55 of the Energy Act 2004”; 35
 - (b) in subsection (2), after “2003” insert “or under section 55 of the Energy Act 2004”.
- (3) In section 137(2A) (cross-border powers of arrest), after “2003” insert “or under section 55 of the Energy Act 2004”.
- (4) In section 137A(5) (additional cross-border powers of arrest: urgent cases), after “2003” insert “or under section 55 of the Energy Act 2004”. 40

- (5) In section 139 (search powers available on arrest) –
 - (a) in subsection (10A), after “British Transport Police” insert “or a constable appointed as a member of the Civil Nuclear Constabulary”;
 - (b) in subsection (10C), after “British Transport Police” insert “or a constable appointed as a member of the Civil Nuclear Constabulary”.
- (6) In section 140(6A) (reciprocal powers of arrest), after “2003” insert “or under section 55 of the Energy Act 2004”.

258 Publication of three-year strategy plan

- (1) Schedule 12 to the Energy Act 2004 (planning and reports about Constabulary) is amended as follows –
 - (a) in paragraph 3(1) –
 - (i) for “financial year” substitute “three-year period”;
 - (ii) for “the three year period beginning with that year” substitute “that period”;
 - (b) for paragraph 3(5) substitute –
 - “(5) In sub-paragraph (1), “three-year period” means –
 - (a) the period of three successive financial years beginning with 1 April 2024, and
 - (b) each subsequent period of three successive financial years.”
- (2) In consequence of the amendments made by subsection (1) –
 - (a) in section 54(1)(b) of the Energy Act 2004 (functions of senior officers), omit “most recently”;
 - (b) in Schedule 12 to that Act –
 - (i) in paragraph 2(3), omit “most recently”;
 - (ii) in paragraph 7(2)(a), omit “most recently issued”.

CHAPTER 3

RELEVANT NUCLEAR PENSION SCHEMES

259 Civil nuclear industry: amendment of relevant nuclear pension schemes

- (1) The Secretary of State may by regulations make provision requiring a designated person to amend the provisions of a relevant nuclear pension scheme in respect of which the person is designated –
 - (a) for the purpose of making scheme-specific changes;
 - (b) for the purpose of making changes that relate to any scheme-specific changes;
 - (c) for the purpose of making contribution rate adjustments.
- (2) “Scheme-specific changes”, in relation to a relevant nuclear pension scheme, are changes that –

- (a) relate to defined benefits for members of the scheme, and
 - (b) are in connection with one or more of the matters mentioned in subsection (3).
- (3) Those matters are –
- (a) securing that the structure under which the defined benefits in question accrue is a career average revalued earnings structure (in particular where it would otherwise be a final salary structure); 5
 - (b) providing for other changes to the amounts of such of those defined benefits as are payable in respect of members of the scheme;
 - (c) providing for revaluations of pensionable earnings, or of benefits in deferment or pensions in payment, to be by reference to the consumer prices index (and not the retail prices index) but not involving imposing a cap on any revaluation or revaluation rate; 10
 - (d) setting percentage rates, for contributions to the scheme by members of the scheme, that are higher than they would otherwise be; 15
 - (e) setting periods for which contributions to the scheme by members of the scheme are required to be made that are longer than they would otherwise be.
- (4) Amendments made by virtue of subsection (1)(b) may include amendments relating to benefits provided under the scheme other than defined benefits. 20
- (5) “Contribution rate adjustments” means such adjustments –
- (a) to the rates of contributions to the scheme by its members in respect of defined benefits, or
 - (b) to the salary bands to which such contribution rates apply,
- as are considered appropriate by the designated person (acting on actuarial advice) to ensure that the average contribution rate for members of the scheme in respect of defined benefits is as close as reasonably practicable to 8.2%. 25
- (6) Where a person is required by regulations under this section to amend the provisions of a relevant nuclear pension scheme, the amendments may be made – 30
- (a) free from any consent requirements set out in the scheme, and
 - (b) notwithstanding provision made by or under any other Act of Parliament, or any rule of law, that would otherwise prevent or limit, or impose conditions on, the making of the amendments.
- (7) Amendments made by virtue of subsection (1)(a) – 35
- (a) must not relate to service prior to the date on which the amendments are made;
 - (b) may be made in the case of a particular scheme on one occasion only.
- (8) Nothing in this section limits any power that a designated person has to amend a relevant nuclear pension scheme. 40

- (9) A person may not be designated in relation to a relevant nuclear pension scheme unless it appears to the Secretary of State that the person has the power to amend the scheme.
- (10) In this section, “designated” means designated by regulations under this section. 5

260 Meaning of "relevant nuclear pension scheme"

- (1) In this Chapter, "relevant nuclear pension scheme" means –
- (a) a pension scheme maintained by or on behalf of the NDA under or by virtue of section 8(1)(a) or (b) of the Energy Act 2004, or
 - (b) subject to subsections (2) and (3), a scheme that provides for the payment of pensions or other benefits to or in respect of persons who are, or have been, employed to perform duties relating to matters that correspond or are similar to matters in respect of which the NDA has functions. 10
- (2) A scheme of a kind mentioned in subsection (1)(b) is a relevant nuclear pension scheme only to the extent that the pensions or other benefits are provided in connection with employment by a person with public functions. 15
- (3) Subsection (1)(b) does not apply to –
- (a) a UKAEA pension scheme (within the meaning given by paragraph 1(1) of Schedule 8 to the Energy Act 2004); 20
 - (b) a scheme that provides for the payment of pensions or other benefits to or in respect of persons specified in section 1(2) of the Public Service Pensions Act 2013 (schemes for persons in public service).
- (4) In this section, "the NDA" means the Nuclear Decommissioning Authority.

261 Information 25

- (1) This section applies where a person ("P") is required by regulations under section 259 to amend a relevant nuclear pension scheme.
- (2) P may require a person who holds relevant information to provide it to P.
- (3) "Relevant information" means any information or data that P reasonably requires in connection with deciding whether, or how, to amend the scheme. 30
- (4) Except as provided by subsection (5), the disclosure of information under this section does not breach –
- (a) any obligation of confidence owed by the person making the disclosure, or
 - (b) any other restriction on the disclosure of information (however imposed). 35
- (5) This section does not require a disclosure of information if the disclosure would contravene the data protection legislation (but in determining whether

a disclosure would do so, a requirement imposed under subsection (2) is to be taken into account).

262 Further definitions

- (1) This section applies for the purposes of this Chapter.
- (2) References to the amendment of a relevant nuclear pension scheme include references to the amendment of any one or more of the following—
 - (a) the trust deed of the scheme, if there is one;
 - (b) rules of the scheme;
 - (c) any other instrument relating to the constitution, management or operation of the scheme.
- (3) References to a relevant nuclear pension scheme include references to any section into which the scheme is divided.
- (4) A "career average revalued earnings structure" is a structure where—
 - (a) the pension payable to or in respect of a person, so far as it is based on the person's pensionable service, is determined by reference to the person's pensionable earnings in each year of pensionable service, and
 - (b) those earnings, or a proportion of those earnings accrued as a pension, are under the structure revalued each year until the person leaves pensionable service.
- (5) "Consumer prices index" means—
 - (a) the general index of consumer prices (for all items) published by the Statistics Board, or
 - (b) where that index is not published for a month, any substituted index or figures published by the Board.
- (6) "Defined benefits" are benefits—
 - (a) that are not money purchase benefits (within the meaning of the Pension Schemes Act 1993), and
 - (b) that are not provided under an injury or compensation scheme (within the meaning of the Public Service Pensions Act 2013).
- (7) A "final salary structure" is a structure where entitlement to the pension payable to or in respect of a person which is based on the pensionable service of that person is or may be determined to any extent by reference to the person's final salary; and "final salary" here means the person's pensionable earnings, or highest, average or representative pensionable earnings, in a specified period ending at, or defined by reference to, the time when the person's pensionable service in relation to the structure terminates.
- (8) "Retail prices index" means—
 - (a) the general index of retail prices (for all items) published by the Statistics Board, or
 - (b) where that index is not published for a month, any substituted index or figures published by the Board.

263 Application of relevant pensions legislation

- (1) The Secretary of State may by regulations make—
- (a) such provision about the application of relevant pensions legislation in relation to persons of a specified description, or
 - (b) such amendments of relevant pensions legislation,
- as the Secretary of State considers appropriate for the purposes of or in connection with the amendment of a relevant nuclear pension scheme in pursuance of regulations under section 259. 5
- (2) In this section—
- “relevant pensions legislation” means— 10
- (a) Schedule 8 to the Energy Act 2004 (pensions), or
 - (b) regulations made under Schedule 14 or 15 to the Electricity Act 1989 (the Electricity Supply Pension Scheme etc);
- “specified” means specified in regulations under subsection (1).

264 Procedure for regulations

- (1) Regulations under this Chapter are subject to the affirmative procedure. 15
- (2) If, apart from this subsection, a draft of an instrument containing regulations under this Chapter would be treated for the purposes of the standing orders of either House of Parliament as a hybrid instrument, it is to proceed in that House as if it were not such an instrument. 20

PART 14

GENERAL

265 Power to make consequential provision

- (1) The Secretary of State may by regulations make such provision as the Secretary of State considers appropriate in consequence of or in connection with— 25
- (a) this Act, other than sections 158 to 161, or
 - (b) any provision made under this Act.
- (2) The power to make regulations under subsection (1) may (among other things) be exercised by amending, repealing or revoking—
- (a) this Act or any provision made by or under primary legislation passed before, or in the same Session as, this Act; 30
 - (b) retained direct EU legislation.
- (3) In this section, “primary legislation” means—
- (a) an Act,
 - (b) an Act or Measure of Senedd Cymru, 35
 - (c) an Act of the Scottish Parliament, or
 - (d) Northern Ireland legislation.

- (4) Subject to subsection (5), regulations under subsection (1) are subject to the negative procedure.
- (5) Where regulations under subsection (1) amend or repeal provision made by primary legislation, the regulations are subject to the affirmative procedure.

266 Regulations

5

- (1) Regulations under this Act made by the Secretary of State or the GEMA are to be made by statutory instrument.
- (2) Regulations under this Act may make—
 - (a) different provision for different purposes or different areas;
 - (b) supplementary, incidental, consequential, transitional or saving provision. 10
- (3) Where regulations under this Act are subject to the affirmative procedure, they may not be made unless a draft of the statutory instrument containing them has been laid before, and approved by a resolution of, each House of Parliament. 15
- (4) Where regulations under this Act are subject to the negative procedure, the statutory instrument containing them is subject to annulment in pursuance of a resolution of either House of Parliament.
- (5) Any provision that may be included in regulations under this Act subject to the negative procedure may be made by regulations subject to the affirmative procedure. 20
- (6) Subsection (3) does not apply to regulations made by the Scottish Ministers under section 243.

267 Interpretation

- In this Act— 25
- “the affirmative procedure” and “the negative procedure” are to be construed in accordance with section 266(3) and (4) respectively;
- “the GEMA” means the Gas and Electricity Markets Authority.

268 Extent

- (1) The following provisions extend to England and Wales, Scotland and Northern Ireland, subject to subsection (5)— 30
 - (a) Part 1, except Chapter 4;
 - (b) Part 2;
 - (c) Chapters 1 and 3 of Part 3;
 - (d) section 157; 35
 - (e) Chapter 1 of Part 7, except sections 173 and 174;
 - (f) Parts 10, 11 and 12;

- (g) Chapter 1 of Part 13;
 - (h) section 257;
 - (i) Chapter 3 of Part 13;
 - (j) this Part.
- (2) The following provisions extend to England and Wales and Scotland only, subject to subsection (5) – 5
- (a) Chapter 4 of Part 1;
 - (b) Chapter 2 of Part 3;
 - (c) Parts 4 and 5;
 - (d) Part 6, except section 157; 10
 - (e) section 173;
 - (f) Part 8;
 - (g) Chapter 2 of Part 13, except section 257.
- (3) The following provisions extend to England and Wales only, subject to subsection (5) – 15
- (a) Chapter 2 of Part 7;
 - (b) Part 9.
- (4) Section 174 extends to Scotland only.
- (5) Any amendment, repeal or revocation has the same extent as the provision amended, repealed or revoked, subject to subsection (6). 20
- (6) Paragraph 4 of Schedule 5 extends to England and Wales, Scotland and Northern Ireland.

269 Commencement

- (1) The provisions of this Act come into force on such day or days as the Secretary of State may by regulations appoint, subject to subsections (2) to (4). 25
- (2) The following provisions come into force on the day on which this Act is passed –
- (a) section 157 (including Schedule 14);
 - (b) Part 7;
 - (c) Part 10, except sections 214 and 215; 30
 - (d) sections 256 and 257;
 - (e) Chapter 3 of Part 13;
 - (f) this Part.
- (3) The following provisions come into force at the end of the period of 2 months beginning with the day on which this Act is passed – 35
- (a) Part 1;
 - (b) Part 2, except Chapter 4;
 - (c) Chapter 2 of Part 3;
 - (d) section 114;

-
- (e) section 156 (including Schedule 13);
 - (f) sections 164 to 166;
 - (g) Part 9;
 - (h) sections 214 and 215;
 - (i) Chapter 1 of Part 12; 5
 - (j) section 248.
- (4) Section 254 (including Schedule 20) comes into force on the day on which the Convention on Supplementary Compensation for Nuclear Damage comes into force in respect of the United Kingdom.
- (5) The Secretary of State must publish a notice of the date of that day as soon as possible afterwards. 10
- (6) Regulations under subsection (1) may appoint different days for different purposes or areas.
- (7) The Secretary of State may by regulations make transitional, transitory or saving provision in connection with the coming into force of any provision of this Act. 15

270 Short title

This Act may be cited as the Energy Act 2023.

SCHEDULES

SCHEDULE 1

Section 16

INTERIM POWER OF SECRETARY OF STATE TO GRANT LICENCES

- 1 (1) Sections 7 to 12 are to have effect with the following modifications until the end of the interim period. 5
- (2) In this Schedule “the interim period” means the period beginning when this Schedule comes into force and ending with whatever day the Secretary of State specifies by regulations.
- (3) Regulations under this paragraph are subject to the negative procedure.
- 2 In section 7 (power to grant licences)– 10
- (a) in subsection (1) for “economic regulator” substitute “Secretary of State”;
- (b) after subsection (2) insert–
- “(3) As soon as practicable after granting a licence, the Secretary of State must send a copy of the licence to the economic regulator.” 15
- 3 In section 9 (procedure for licence applications)–
- (a) in subsection (1), in the words before paragraph (a), for “Secretary of State, or the economic regulator with the approval of the Secretary of State,” substitute “Secretary of State”; 20
- (b) in subsection (4), for “economic regulator”, in each place it occurs, substitute “Secretary of State”;
- (c) for subsection (5) substitute–
- “(5) A notice under subsection (4) must be given by–
- (a) sending a copy of the notice to the economic regulator and any appropriate devolved authority, and 25
- (b) publishing the notice in such manner as the Secretary of State considers appropriate for bringing it to the attention of persons likely to be affected by the grant of the licence.” 30
- (d) after subsection (8) insert–
- “(8A) For the purposes of this section the “appropriate devolved authorities” are–
- (a) the Scottish Ministers, if provision granting the licence in question would be within the legislative competence of the Scottish Parliament if it were contained in an Act of that Parliament; 35
- (b) the Welsh Ministers, if provision granting the licence in question would be within the legislative

- competence of Senedd Cymru if it were contained in an Act of the Senedd (ignoring any requirement for the consent of a Minister of the Crown imposed under Schedule 7B to the Government of Wales Act 2006); 5
- (c) the Department for the Economy in Northern Ireland, if provision granting the licence in question –
- (i) would be within the legislative competence of the Northern Ireland Assembly if it were contained in an Act of that Assembly, and 10
- (ii) would not, if it were contained in a Bill in the Northern Ireland Assembly, result in the Bill requiring the consent of the Secretary of State under section 8 of the Northern Ireland Act 1998.” 15
- 4 In section 12 (standard conditions of licences) –
- (a) in subsection (7)(b) omit “and the Secretary of State”;
- (b) omit subsection (9).

SCHEDULE 2

Section 21

PROCEDURE FOR APPEALS UNDER SECTION 20 20

Application for permission to bring appeal

- 1 (1) An application for permission to bring an appeal may be made –
- (a) only by sending a notice to the CMA requesting the permission, and
- (b) only by a person entitled under section 20 to bring the appeal if permission is granted. 25
- (2) Where the economic regulator publishes a decision to modify the conditions of any licence under section 13(8), any application for permission to appeal is not to be made after the end of 20 working days beginning with the first working day after the day on which the decision is published. 30
- (3) An application for permission to appeal must be accompanied by all such information as may be required by appeal rules.
- (4) Appeal rules may require information contained in an application for permission to appeal to be verified by a statement of truth.
- (5) A person who applies for permission to bring an appeal in accordance with this paragraph is referred to in this Schedule as the appellant. 35
- (6) The appellant must send the economic regulator –
- (a) a copy of the application for permission to appeal at the same time as it is sent to the CMA, and

- (b) such other information as may be required by appeal rules.
- (7) The CMA’s decision whether to grant permission to appeal is to be taken by an authorised member of the CMA.
- (8) Before the authorised member decides whether to grant permission under this paragraph, the economic regulator must be given an opportunity to make representations or observations, in accordance with paragraph 3(2). 5
- (9) The CMA’s decision on an application for permission must be made –
- (a) where the economic regulator makes representations or observations in accordance with paragraph 3(2), before the end of 10 working days beginning with the first working day after the day on which those representations or observations are received; 10
 - (b) in any other case, before the end of 14 working days beginning with the first working day after the day on which the application for permission is received.
- (10) The grant of permission may be made subject to conditions, which may include – 15
- (a) conditions which limit the matters that are to be considered on the appeal in question,
 - (b) conditions for the purpose of expediting the determination of the appeal, and 20
 - (c) conditions requiring that appeal to be considered together with other appeals (including appeals relating to different matters or decisions and appeals brought by different persons).
- (11) Where a decision is made to grant or to refuse an application for permission, an authorised member of the CMA must notify the decision, giving reasons – 25
- (a) to the appellant, and
 - (b) to the economic regulator.
- (12) A decision of the CMA under this paragraph must be published, in such manner as an authorised member of the CMA considers appropriate, as soon as reasonably practicable after it is made. 30
- (13) Section 25(2) applies to the publication of a decision under sub-paragraph (12) as it does to the publication of a decision under section 25.

Suspension of decision

- 2 (1) The CMA may direct that, pending the determination of an appeal against a decision of the economic regulator – 35
- (a) the decision is not to have effect, or
 - (b) the decision is not to have effect to such extent as may be specified in the direction.
- (2) The power to give a direction under this paragraph is exercisable only where – 40

- (a) an application for its exercise has been made by the appellant at the same time that the appellant made an application (in accordance with paragraph 1) for permission to bring an appeal against a decision of the economic regulator;
 - (b) the economic regulator has been given an opportunity of making representations or observations, in accordance with paragraph 3(2); 5
 - (c) a person bringing the appeal who falls within section 20(2)(a) or (b) would incur significant costs if the decision were to have effect before the determination of the appeal, and
 - (d) the balance of convenience does not otherwise require effect to be given to the decision pending that determination. 10
- (3) The CMA’s decision on an application for a direction under this paragraph must be made –
- (a) where the economic regulator makes representations or observations in accordance with paragraph 3(2) before the end of 10 working days beginning with the first working day after the day on which those representations or observations are received; 15
 - (b) in any other case, before the end of 14 working days beginning with the first working day following the day on which the application under sub-paragraph (2)(a) is received. 20
- (4) The appellant must send the economic regulator a copy of the application for a direction under this paragraph at the same time as it is sent to the CMA.
- (5) The CMA’s decision whether to give a direction is to be taken by an authorised member of the CMA. 25
- (6) A direction under this paragraph must be –
- (a) given by an authorised member of the CMA, and
 - (b) published, in such manner as an authorised member of the CMA considers appropriate, as soon as reasonably practicable after it is given. 30
- (7) Section 25(2) applies to the publication of a direction under sub-paragraph (6) as it does to the publication of a decision under section 25.

Time limit for representations and observations by the economic regulator

- 3 (1) Sub-paragraph (2) applies where the economic regulator wishes to make representations or observations to the CMA in relation to – 35
- (a) an application for permission to bring an appeal under paragraph 1;
 - (b) an application for a direction under paragraph 2.
- (2) The economic regulator must make the representations or observations in writing before the end of 10 working days beginning with the first working day after the day on which it received a copy of the application under paragraph 1(6) or 2(4) as the case may be. 40

- (3) Sub-paragraph (4) applies where an application for permission to bring an appeal has been granted and the economic regulator wishes to make representations or observations to the CMA in relation to—
- (a) the economic regulator’s reasons for the decision in relation to which the appeal is being brought, or 5
 - (b) any grounds on which that appeal is being brought against that decision.
- (4) The economic regulator must make the representations or observations in writing before the end of 15 working days beginning with the first working day after the day on which permission to bring the appeal was granted. 10
- (5) The economic regulator must send a copy of the representations and observations it makes under this paragraph to the appellant.

Determination of matter on appeal

- 4 (1) A group constituted by the chair of the CMA under Schedule 4 to the Enterprise and Regulatory Reform Act 2013 for the purpose of carrying out functions of the CMA with respect to an appeal under section 20 must consist of three members of the CMA panel. 15
- (2) A decision of the group is effective if, and only if—
- (a) all the members of the group are present when it is made, and
 - (b) at least two members of the group are in favour of the decision. 20

Matters to be considered on appeal

- 5 (1) The CMA, if it thinks it necessary to do so for the purpose of securing the determination of an appeal within the period provided for by section 24, may disregard—
- (a) any or all matters raised by an appellant that were not raised by that appellant at the time of the relevant application, and 25
 - (b) any or all matters raised by the economic regulator that were not contained in representations or observations made for the purposes of the appeal in accordance with paragraph 3.
- (2) In this paragraph “relevant application” means an application under paragraph 1 or 2. 30

Production of documents

- 6 (1) For the purposes of this Schedule, the CMA may by notice require—
- (a) a person to produce to the CMA the documents specified or otherwise identified in the notice; 35
 - (b) any person who carries on a business to supply to the CMA such estimates, forecasts, returns or other information as may be specified or described in the notice in relation to that business.

- (2) The power to require the production of a document, or the supply of any estimate, forecast, return or other information, is a power to require its production or, as the case may be, supply –
- (a) at the time and place specified in the notice, and
 - (b) in a legible form. 5
- (3) No person is to be compelled under this paragraph to produce a document or supply an estimate, forecast, return or other information that the person could not be compelled to produce in civil proceedings in the High Court or Court of Session.
- (4) An authorised member of the CMA may, for the purpose of the exercise of the functions of the CMA, make arrangements for copies to be taken of a document produced or an estimate, forecast, return or other information supplied under this paragraph. 10
- (5) A notice for the purposes of this paragraph –
- (a) may be issued on the CMA’s behalf by an authorised member of the CMA; 15
 - (b) must include information about the possible consequences of not complying with the notice (as set out in paragraph 10).

Oral hearings

- 7 (1) For the purposes of this Schedule an oral hearing may be held, and evidence may be taken on oath –
- (a) by a person considering an application for permission to bring an appeal under paragraph 1,
 - (b) by a person considering an application for a direction under paragraph 2, or 25
 - (c) by a group with the function of determining an appeal;
- and, for that purpose, such a person or group may administer oaths.
- (2) The CMA may by notice require a person –
- (a) to attend at a time and place specified in the notice, and
 - (b) at that time and place, to give evidence to a person or group mentioned in sub-paragraph (1). 30
- (3) At any oral hearing the person or group conducting the hearing may require –
- (a) the appellant, or the economic regulator, if present at the hearing to give evidence or to make representations or observations, or 35
 - (b) a person attending the hearing as a representative of the appellant or of the economic regulator to make representations or observations.
- (4) A person who gives oral evidence at the hearing may be cross-examined by or on behalf of any party to the appeal.
- (5) If the appellant, the economic regulator, or the economic regulator’s representative is not present at a hearing – 40

- (a) there is no requirement to give notice to that person under sub-paragraph (2), and
 - (b) the person or group conducting the hearing may determine the application or appeal without hearing that person’s evidence, representations or observations. 5
- (6) No person is to be compelled under this paragraph to give evidence which that person could not be compelled to give in civil proceedings in the High Court or Court of Session.
- (7) Where a person is required under this paragraph to attend at a place more than 10 miles from that person’s place of residence, an authorised member of the CMA must arrange for that person to be paid the necessary expenses of attendance. 10
- (8) A notice for the purposes of this paragraph may be issued on the CMA’s behalf by an authorised member of the CMA.

Written statements 15

- 8 (1) The CMA may by notice require a person to produce a written statement with respect to a matter specified in the notice to—
- (a) a person who is considering, or is to consider, an application for a direction under paragraph 2, or
 - (b) a group with the function of determining an appeal. 20
- (2) The power to require the production of a written statement includes power—
- (a) to specify the time and place at which it is to be produced, and
 - (b) to require it to be verified by a statement of truth, and a statement required to be so verified must be disregarded unless it is so verified. 25
- (3) No person is to be compelled under this paragraph to produce a written statement with respect to any matter about which that person could not be compelled to give evidence in civil proceedings in the High Court or Court of Session. 30
- (4) A notice for the purposes of this paragraph may be issued on the CMA’s behalf by an authorised member of the CMA.

Expert advice

- 9 Where permission to bring an appeal is granted under paragraph 1 the CMA may commission expert advice with respect to any matter raised by a party to that appeal. 35

Defaults in relation to evidence

- 10 (1) If a person (“the defaulter”)—
- (a) fails to comply with a notice issued or other requirement imposed under paragraph 6, 7 or 8, 40

- (b) in complying with a notice under paragraph 8, makes a statement that is false in any material particular, or
- (c) in providing information verified in accordance with a statement of truth required by appeal rules, provides information that is false in a material particular, 5
- an authorised member of the CMA may certify the failure, or the fact that such a false statement has been made or such false information has been given, to the High Court or the Court of Session.
- (2) The High Court or Court of Session may inquire into a matter certified to it under this paragraph, and if, after having heard – 10
- (a) any witness against or on behalf of the defaulter, and
- (b) any statement in that defaulter’s defence,
- it is satisfied that the defaulter did, without reasonable excuse, fail to comply with the notice or other requirement, or made the false statement, or gave the false information, that court may punish that defaulter as if the person had been guilty of contempt of court. 15
- (3) Where the High Court or Court of Session has power under this paragraph to punish a body corporate for contempt of court, it may so punish any director or other officer of that body (either instead of or as well as punishing the body). 20
- (4) A person who wilfully alters, suppresses or destroys a document which that person has been required to produce under paragraph 6 is guilty of an offence and is to be liable –
- (a) on summary conviction in England and Wales, to imprisonment for a term not exceeding the general limit in a magistrates’ court or a fine (or both); 25
- (b) on summary conviction in Scotland, to imprisonment for a term not exceeding 12 months or a fine not exceeding the statutory maximum (or both);
- (c) on summary conviction in Northern Ireland, to imprisonment for a term not exceeding 6 months or a fine not exceeding the statutory maximum (or both); 30
- (d) on conviction on indictment, to imprisonment for a term not exceeding 2 years or a fine (or both).

Costs or expenses 35

- 11 (1) A group that determines an appeal must make an order requiring the payment to the CMA of the costs or expenses incurred by the CMA in connection with the appeal.
- (2) An order under sub-paragraph (1) must require those costs or expenses to be paid – 40
- (a) where the appeal is allowed in full, by the economic regulator;
- (b) where the appeal is dismissed in full, by the appellant;

- (c) where the appeal is partially allowed, by one or more parties in such proportions as the CMA considers appropriate in all the circumstances.
- (3) The group that determines an appeal may also make such order as it thinks fit for requiring a party to the appeal to make payments to another party in respect of costs or expenses reasonably incurred by that other party in connection with the appeal. 5
- (4) A person who is required by an order under this paragraph to pay a sum to another person must comply with the order before the end of 28 days beginning with the day after the making of the order. 10
- (5) Sums required to be paid by an order under this paragraph but not paid within the period mentioned in sub-paragraph (4) are to bear interest at such rate as may be determined in accordance with provision contained in the order.
- (6) Any costs or expenses payable by virtue of an order under this paragraph and any interest that has not been paid may be recovered as a civil debt by the person in whose favour that order is made. 15

Appeal rules

- 12 (1) The CMA Board may make rules of procedure regulating the conduct and disposal of appeals under section 20. 20
- (2) Those rules may include provision supplementing the provisions of this Schedule in relation to any application, notice, hearing, power or requirement for which this Schedule provides, and that provision may, in particular, impose time limits or other restrictions on—
- (a) the taking of evidence at an oral hearing, or 25
- (b) the making of representations or observations at such a hearing.
- (3) The CMA Board must publish rules made under this paragraph in such manner as it considers appropriate for the purpose of bringing them to the attention of those likely to be affected by them.
- (4) Before making rules under this paragraph, the CMA Board must consult such persons as it considers appropriate. 30
- (5) Rules under this paragraph may make different provision for different cases.

Interpretation of Schedule

- 13 (1) In this Schedule— 35
- “appeal” means an appeal under section 20;
- “appeal rules” means rules of procedure under paragraph 12;
- “authorised member of the CMA”—
- (a) in relation to a power exercisable in connection with an appeal in respect of which a group has been constituted by the chair of the CMA under Schedule 4 to the Enterprise 40

- and Regulatory Reform Act 2013, means a member of that group who has been authorised by the chair of the CMA to exercise that power;
- (b) in relation to a power exercisable in connection with an application for permission to bring an appeal, or otherwise in connection with an appeal in respect of which a group has not been so constituted by the chair of the CMA, means –
- (i) any member of the CMA Board who is also a member of the CMA panel, or
- (ii) any member of the CMA panel authorised by the Secretary of State (whether generally or specifically) to exercise the power in question;
- “CMA Board” and “CMA panel” have the same meaning as in Schedule 4 to the Enterprise and Regulatory Reform Act 2013;
- “statement of truth”, in relation to the production of a statement or provision of information by a person, means a statement that the person believes the facts stated in the statement or information to be true;
- “working day” means any day other than –
- (a) Saturday or Sunday;
- (b) Christmas Day or Good Friday;
- (c) a day which is a bank holiday in England and Wales or Scotland under the Banking and Financial Dealings Act 1971.
- (2) References in this Schedule to a party to an appeal are references to –
- (a) the appellant, or
- (b) the economic regulator.

SCHEDULE 3

Section 32

ENFORCEMENT OF OBLIGATIONS OF LICENCE HOLDERS

Orders for securing compliance with certain provisions 30

- 1 (1) Where the economic regulator is satisfied that a licence holder is contravening, or is likely to contravene, any relevant condition or requirement, the economic regulator must make an order (a “final order”) containing such provision as appears to the economic regulator to be necessary for the purpose of securing compliance with that condition or requirement (but this sub-paragraph does not apply if the economic regulator is required by sub-paragraph (2) to make a provisional order in respect of the contravention or likely contravention).
- (2) Where it appears to the economic regulator –

- (a) that a licence holder is contravening, or is likely to contravene, any relevant condition or requirement, and
 - (b) that it is appropriate to make an order under this sub-paragraph, the economic regulator must (instead of taking steps towards the making of a final order) make an order (a “provisional order”) containing such provision as appears to the economic regulator to be necessary for the purpose of securing compliance with that condition or requirement. 5
- (3) In determining for the purposes of sub-paragraph (2)(b) whether it is appropriate to make a provisional order, the economic regulator must have regard, in particular, to the extent to which any person is likely to sustain loss or damage in consequence of anything that is likely to be done (or omitted to be done) in contravention of the relevant condition or requirement before a final order may be made. 10
- (4) The economic regulator must confirm a provisional order, with or without modifications, if – 15
 - (a) the economic regulator is satisfied that the licence holder is contravening, or is likely to contravene, any relevant condition or requirement, and
 - (b) the provision made by the order (with any modifications) is necessary for the purpose of securing compliance with that condition or requirement. 20
- (5) If a provisional order is not previously confirmed under sub-paragraph (4), it is to cease to have effect at the end of such period (not exceeding three months) as is determined by or under the order.
- (6) Sub-paragraphs (1) to (4) are subject to sub-paragraphs (7) to (9) and paragraph 2. 25
- (7) The economic regulator –
 - (a) must, before making a final order or making or confirming a provisional order, consider whether it would be more appropriate to proceed under the Competition Act 1998 (see section 37); 30
 - (b) must not make a final order, or make or confirm a provisional order, if the economic regulator considers that it would be more appropriate to proceed under that Act.
- (8) The economic regulator may not make a final order or make or confirm a provisional order if the economic regulator is satisfied that the duties imposed on the economic regulator by section 1 preclude the making or, as the case may be, the confirmation of the order. 35
- (9) The economic regulator is not required to make a final order or make or confirm a provisional order if it is satisfied –
 - (a) that the licence holder has agreed to take and is taking all such steps as appear to the economic regulator to be for the time being appropriate for the purpose of securing or facilitating compliance with the condition or requirement in question, or 40

- (b) that the contraventions were, or the apprehended contraventions are, of a trivial nature.
- (10) Where the economic regulator decides that it would be more appropriate to proceed under the Competition Act 1998 or is satisfied as mentioned in sub-paragraphs (8) and (9), the economic regulator must – 5
- (a) give notice to the licence holder that the economic regulator has so decided or is so satisfied, and
- (b) publish a copy of the notice in such manner as the economic regulator considers appropriate for the purpose of bringing the matters to which the notice relates to the attention of persons likely to be affected by them. 10
- (11) A final or provisional order –
- (a) must require the licence holder (according to the circumstances of the case) to do, or not to do, such things as are specified in the order or are of a description so specified, 15
- (b) must take effect at such time as is determined by or under the order, which must be the earliest practicable time, and
- (c) may be revoked at any time by the economic regulator.
- (12) In this Schedule –
- “final order” means an order under sub-paragraph (1); 20
- “provisional order” means an order under sub-paragraph (2);
- “relevant condition”, in relation to a licence holder, means any condition of any licence (as defined in section 7) held by that person;
- “relevant requirement”, in relation to a licence holder, means any requirement imposed on the licence holder by or under this Part. 25

Procedural requirements

- 2 (1) Before making a final order or confirming a provisional order, the economic regulator must give notice –
- (a) stating that the economic regulator proposes to make or confirm the order and setting out its effect, 30
- (b) stating –
- (i) the relevant condition or requirement,
- (ii) the acts or omissions which, in the economic regulator’s opinion, constitute or would constitute contraventions of it, and 35
- (iii) the other facts which, in the economic regulator’s opinion, justify the making or confirmation of the order, and
- (c) specifying the time (which must not be less than 21 days from the date of publication of the notice) within which representations or objections to the proposed order or confirmation of the order may be made, 40
- and must consider any representations or objections which are duly made and not withdrawn.

- (2) A notice under sub-paragraph (1) is given—
- (a) by publishing the notice in such manner as the economic regulator considers appropriate for the purpose of bringing the matters to which the notice relates to the attention of persons likely to be affected by them, and 5
 - (b) by sending a copy of the notice, and a copy of the proposed order or of the order proposed to be confirmed, to the licence holder.
- (3) The economic regulator must not make a final order with modifications, or confirm a provisional order with modifications, except with the consent of the licence holder or after complying with the requirements of sub-paragraph (4). 10
- (4) The requirements are that the economic regulator must—
- (a) give to the licence holder such notice as the economic regulator considers necessary of the economic regulator’s proposal to make or confirm the order with modifications, 15
 - (b) specify the time (which must not be less than 21 days from the date of the service of the notice) within which representations or objections to the proposed modifications may be made, and
 - (c) consider any representations or objections which are duly made and not withdrawn. 20
- (5) Where the economic regulator decides to proceed under the Competition Act 1998 in a case falling within paragraph 1(7)(b), the economic regulator must—
- (a) inform the licence holder concerned of that decision, and
 - (b) publish the notice in a manner that the economic regulator thinks appropriate for bringing the notice to the attention of persons likely to be affected by the decision. 25
- (6) Before revoking a final order or a provisional order which has been confirmed, the economic regulator must give notice—
- (a) stating that the economic regulator proposes to revoke the order and setting out its effect, and 30
 - (b) specifying the time (which must not be less than 28 days) from the date of publication of the notice within which representations or objections to the proposed revocation may be made,
- and must consider any representations or objections which are duly made and not withdrawn. 35
- (7) A notice under sub-paragraph (6) is given—
- (a) by publishing the notice in such manner as the economic regulator considers appropriate for the purpose of bringing the matters to which the notice relates to the attention of persons likely to be affected by them, and 40
 - (b) by sending a copy of the notice to the licence holder.
- (8) As soon as practicable after a final order is made or a provisional order is made or confirmed, the economic regulator must—

- (a) serve a copy of the order on the licence holder, and
- (b) publish such a copy in such manner as the economic regulator considers appropriate for the purpose of bringing the order to the attention of persons likely to be affected by it.

Validity and effect of orders

5

- 3 (1) If the licence holder is aggrieved by a final or provisional order and wishes to question its validity on the ground that the making or confirmation of it was not within the powers of paragraph 1, or that any of the requirements of paragraph 2 have not been complied with in relation to it, the licence holder may within 42 days from the date of service on the licence holder of a copy of the order make an application to the court under this paragraph. 10
- (2) On any such application the court, if satisfied that the making or confirmation of the order was not within those powers or that the interests of the licence holder have been substantially prejudiced by a failure to comply with those requirements, may quash the order or any provision of the order. 15
- (3) Except as provided by this paragraph, the validity of a final or provisional order may not be questioned by any legal proceedings whatever.
- (4) The obligation to comply with a final or provisional order is a duty owed to any person who may be affected by a contravention of it. 20
- (5) Where a duty is owed by virtue of sub-paragraph (4) to any person any breach of the duty which causes that person to sustain loss or damage is to be actionable at the suit or instance of that person.
- (6) In any proceedings brought against any person in pursuance of sub-paragraph (5), it is a defence for the person to prove that they took all reasonable steps and exercised all due diligence to avoid contravening the order. 25
- (7) Without prejudice to any right which any person may have by virtue of sub-paragraph (5) to bring civil proceedings in respect of any contravention or apprehended contravention of a final or provisional order, compliance with any such order is to be enforceable by civil proceedings by the economic regulator for an injunction or interdict or for any other appropriate relief. 30
- (8) In this paragraph “the court” means – 35
- (a) in relation to England and Wales and Northern Ireland, the High Court;
 - (b) in relation to Scotland, the Court of Session.

Penalties

- 4 (1) Where the economic regulator is satisfied that a licence holder has contravened or is contravening any relevant condition or requirement, the 40

economic regulator may, subject to paragraph 6, impose on the licence holder a penalty of such amount as is reasonable in all the circumstances of the case.

- (2) Before imposing a penalty on a licence holder under sub-paragraph (1), the economic regulator must consider whether it would be more appropriate to proceed under the Competition Act 1998. 5
- (3) The economic regulator must not impose a penalty on a licence holder under sub-paragraph (1) if it considers that it would be more appropriate to proceed under the Competition Act 1998.
- (4) Before imposing a penalty on a licence holder under sub-paragraph (1) the economic regulator must give notice— 10
 - (a) stating that it proposes to impose a penalty and the amount of the penalty proposed to be imposed,
 - (b) setting out the relevant condition or requirement,
 - (c) specifying the acts or omissions which, in the opinion of the economic regulator, constitute the contravention in question and the other facts which, in the opinion of the economic regulator, justify the imposition of a penalty and the amount of the penalty proposed, and 15
 - (d) specifying the period (which must not be less than 21 days from the date of publication of the notice) within which representations or objections with respect to the proposed penalty may be made, 20
and must consider any representations or objections which are duly made and not withdrawn.
- (5) Before varying any proposal stated in a notice under sub-paragraph (4)(a) the economic regulator must give notice— 25
 - (a) setting out the proposed variation and the reasons for it, and
 - (b) specifying the period (which must be at least 21 days from the date of publication of the notice) within which representations or objections with respect to the proposed variation may be made, 30
and must consider any representations or objections which are duly made and not withdrawn.
- (6) As soon as practicable after imposing a penalty, the economic regulator must give notice—
 - (a) stating that it has imposed a penalty on the licence holder and its amount, 35
 - (b) setting out the relevant condition or requirement in question,
 - (c) specifying the acts or omissions which, in the opinion of the economic regulator, constitute the contravention in question and the other facts which, in the opinion of the economic regulator, justify the imposition of the penalty and its amount, and 40
 - (d) specifying a date, no earlier than the end of the period of 42 days from the date of service of the notice on the licence holder, by which the penalty is required to be paid.

- (7) The licence holder may, within 21 days of the date of service on the licence holder of a notice under sub-paragraph (6), make an application to the economic regulator for it to specify different dates by which different portions of the penalty are to be paid.
- (8) Any notice required to be given under this paragraph must be given – 5
- (a) by publishing the notice in such manner as the economic regulator considers appropriate for the purpose of bringing the matters to which the notice relates to the attention of persons likely to be affected by them, and
- (b) by serving a copy of the notice on the licence holder. 10
- (9) This paragraph is subject to paragraph 10 (maximum amount of penalty that may be imposed).
- (10) Any sums received by the economic regulator by way of penalty under this paragraph must be paid into the Consolidated Fund.

Statement of policy with respect to penalties 15

- 5 (1) The economic regulator must prepare and publish a statement of policy with respect to the imposition of penalties and the determination of their amount.
- (2) In deciding whether to impose a penalty, and in determining the amount of any penalty, in respect of a contravention the economic regulator must have regard to its statement of policy most recently published at the time when the contravention occurred. 20
- (3) The economic regulator may revise its statement of policy and where it does so must publish the revised statement.
- (4) Publication under this paragraph must be in such manner as the economic regulator considers appropriate for the purpose of bringing the matters contained in the statement of policy to the attention of persons likely to be affected by them. 25
- (5) The economic regulator must undertake such consultation as it considers appropriate when preparing or revising its statement of policy. 30

Time limits on the imposition of penalties

- 6 (1) Where no final or provisional order has been made in relation to a contravention, the economic regulator may not impose a penalty in respect of the contravention later than the end of the period of five years from the time of the contravention, unless before the end of that period – 35
- (a) the notice under paragraph 4(4) relating to the penalty is served on the licence holder under paragraph 4(8), or
- (b) a notice under section 29(2)(b) is served on the licence holder which specifies that the notice is served in connection with a concern on the part of the economic regulator that the licence holder may be 40

contravening, or may have contravened, a relevant condition or requirement.

- (2) Where a final or provisional order has been made in relation to a contravention, the economic regulator may not impose a penalty in respect of the contravention unless the notice relating to the penalty under paragraph 4(4) was served on the licence holder under paragraph 4(8) – 5
- (a) within three months from the confirmation of the provisional order or the making of the final order, or
 - (b) where the provisional order is not confirmed, within six months from the making of the provisional order. 10

Interest and payment of instalments

- 7 (1) If the whole or any part of a penalty is not paid by the date by which it is required to be paid, the unpaid balance from time to time is to carry interest at the rate for the time being specified in section 17 of the Judgments Act 1838. 15
- (2) If an application is made under paragraph 4(7) in relation to a penalty, the penalty is not required to be paid until the application has been determined.
- (3) If the economic regulator grants an application under that sub-paragraph in relation to a penalty but any portion of the penalty is not paid by the date specified in relation to it by the economic regulator under that sub-paragraph, the economic regulator may where it considers it appropriate require so much of the penalty as has not already been paid to be paid immediately. 20

Appeals against penalties

- 8 (1) If the licence holder on whom a penalty is imposed is aggrieved by – 25
- (a) the imposition of the penalty,
 - (b) the amount of the penalty, or
 - (c) the date by which the penalty is required to be paid, or the different dates by which different portions of the penalty are required to be paid, 30
- the licence holder may make an application to the court under this paragraph.
- (2) An application under sub-paragraph (1) must be made –
- (a) within 42 days from the date of service on the licence holder of a notice under paragraph 4(6), or 35
 - (b) where the application relates to a decision of the economic regulator on an application by the licence holder under paragraph 4(7), within 42 days from the date the licence holder is notified of the decision.
- (3) On any such application, where the court considers it appropriate to do so in all the circumstances of the case and is satisfied of one or more of the grounds falling within sub-paragraph (4), the court – 40

- (a) may quash the penalty,
 - (b) may substitute a penalty of such lesser amount as the court considers appropriate in all the circumstances of the case, or
 - (c) in the case of an application under sub-paragraph (1)(c), may substitute for the date or dates imposed by the economic regulator an alternative date or dates. 5
- (4) The grounds falling within this sub-paragraph are—
- (a) that the imposition of the penalty was not within the power of the economic regulator under paragraph 4,
 - (b) that any of the requirements of sub-paragraphs (4) to (6) or (8) of paragraph 4 have not been complied with in relation to the imposition of the penalty and the interests of the licence holder have been substantially prejudiced by the non-compliance, or 10
 - (c) that it was unreasonable of the economic regulator to require the penalty imposed, or any portion of it, to be paid by the date or dates by which it was required to be paid. 15
- (5) If an application is made under this paragraph in relation to a penalty, the penalty is not required to be paid until the application has been determined.
- (6) Where the court substitutes a penalty of a lesser amount it may require the payment of interest on the substituted penalty at such rate, and from such date, as it considers just and equitable. 20
- (7) Where the court specifies, as a date by which the penalty or a portion of the penalty is to be paid, a date before the determination of the application under this paragraph it may require the payment of interest on the penalty, or portion, from that date at such rate as it considers just and equitable. 25
- (8) Except as provided by this paragraph, the validity of a penalty is not to be questioned by any legal proceedings whatever.
- (9) In this paragraph “the court” means—
- (a) in relation to England and Wales or Northern Ireland, the High Court, and 30
 - (b) in relation to Scotland, the Court of Session.

Recovery of penalties

- 9 Where a penalty imposed under paragraph 4(1), or any portion of it, has not been paid by the date on which it is required to be paid and—
- (a) no application relating to the penalty has been made under paragraph 8 during the period within which such an application can be made, or 35
 - (b) an application has been made under that paragraph and determined, the economic regulator may recover from the licence holder, as a civil debt due to it, any of the penalty and any interest which has not been paid. 40

Maximum amount of penalty

- 10 (1) The maximum amount of penalty that may be imposed on a licence holder in respect of a contravention may not exceed 10 per cent of the licence holder’s turnover.
- (2) The Secretary of State may by regulations provide for how a person’s turnover is to be determined for the purposes of this paragraph. 5
- (3) Regulations under sub-paragraph (2) are subject to the affirmative procedure.
- (4) In this paragraph “penalty” means a penalty imposed on a licence holder under paragraph 4. 10

SCHEDULE 4

Section 52

TRANSFER SCHEMES

Application and commencement of scheme

- 1 (1) A scheme may set out the property, rights and liabilities to be transferred in one or more of the following ways – 15
- (a) by specifying or describing them in particular;
- (b) by identifying them generally by reference to, or to a specified part of, an undertaking from which they are to be transferred; or
- (c) by specifying the manner in which they are to be determined.
- (2) A scheme comes into force on the date appointed by the scheme. 20

Property, rights and liabilities that may be transferred

- 2 (1) The property, rights and liabilities that may be transferred by a scheme include –
- (a) property, rights and liabilities that would not otherwise be capable of being transferred or assigned by the transferor; 25
- (b) property acquired in the period after the making of the scheme and before it comes into force and rights and liabilities arising in that period;
- (c) rights and liabilities arising after the scheme comes into force in respect of matters occurring before it comes into force; 30
- (d) property situated in the United Kingdom, otherwise in a controlled place, or elsewhere;
- (e) rights and liabilities under the law of a part of the United Kingdom or of a place outside the United Kingdom;
- (f) rights and liabilities under an enactment or subordinate legislation. 35
- (2) The transfers to which effect may be given by a scheme include transfers that are to take effect in accordance with the scheme as if there were –

- (a) no such requirement to obtain a person's consent or concurrence,
 - (b) no such liability in respect of a contravention of any other requirement, and
 - (c) no such interference with any interest or right,
- as there would be, in the case of a transaction apart from this Act, by reason of a provision falling within sub-paragraph (3). 5
- (3) A provision falls within this sub-paragraph to the extent that it has effect (whether under an enactment or agreement or otherwise) in relation to the terms on which the transferor is entitled or subject to anything to which the transfer relates. 10
- (4) Sub-paragraph (5) applies where (apart from that sub-paragraph) a person would be entitled, in consequence of anything done or likely to be done by or under this Act in connection with a scheme –
- (a) to terminate, modify, acquire or claim an interest or right to which the transferor is entitled or subject, or 15
 - (b) to treat such an interest or right as modified or terminated.
- (5) That entitlement is to be enforceable in relation to the interest or right –
- (a) in consequence of what is done or likely to be done by or under this Act, and
 - (b) in corresponding circumstances arising after the transfer, 20
- to the extent only that the scheme provides for it to be so enforceable.
- (6) Sub-paragraphs (2) to (5) have effect where shares in a subsidiary of the transferor are or are to be transferred –
- (a) as if the reference in sub-paragraph (3) to the terms on which the transferor is entitled or subject to anything to which the transfer relates included a reference to the terms on which the subsidiary is entitled or subject to anything immediately before the transfer takes effect, and 25
 - (b) as if the reference in sub-paragraph (4) to the transferor included a reference to the subsidiary. 30

Dividing and modifying transferor's property, rights and liabilities

- 3 (1) A scheme may contain provision –
- (a) for the creation, in favour of a transferor or transferee, of an interest or right in or in relation to property to be transferred in accordance with the scheme; 35
 - (b) for giving effect to a transfer to a person by the creation, in favour of that person, of an interest or right in or in relation to property to be retained by a transferor;
 - (c) for the creation of new rights and liabilities (including rights of indemnity and duties to indemnify) as between different transferees and as between a transferee and a transferor. 40
- (2) A scheme may contain provision for the creation of rights and liabilities for the purpose of converting arrangements between different parts of a

transferor's undertaking which exist immediately before the coming into force of the scheme into a contract between different transferees, or between a transferee and a transferor.

- (3) A scheme may contain provision –
- (a) for rights and liabilities to be transferred so as to be enforceable by or against more than one transferee, or by or against both the transferee and the transferor, and 5
 - (b) for rights and liabilities enforceable against more than one person in accordance with provision falling within paragraph (a) to be enforceable in different or modified respects by or against each or any of them. 10
- (4) A scheme may contain provision for interests, rights or liabilities of third parties in relation to anything to which the scheme relates to be modified in the manner set out in the scheme.
- (5) In sub-paragraph (4) “third party”, in relation to a scheme, means a person other than the transferor and the transferee. 15
- (6) Paragraph 2(2) and (3) applies to the creation of interests and rights in accordance with a scheme as it applies to the transfer of interests and rights.

Obligation to effect transfers etc. under a scheme

- 4 (1) A scheme may contain provision for imposing on a transferee or a transferor an obligation – 20
- (a) to enter into such agreements with another person on whom a corresponding obligation is, or could be or has been, imposed by virtue of this paragraph (whether in the same or a different scheme), or 25
 - (b) to execute such instruments in favour of any such person, as may be specified or described in the scheme.
- (2) An obligation imposed on a person by virtue of sub-paragraph (1) is enforceable by the relevant person in civil proceedings – 30
- (a) for an injunction,
 - (b) for specific performance of a statutory duty under section 45 of the Court of Session Act 1988, or
 - (c) for any other appropriate remedy or relief.
- (3) The relevant person for the purposes of sub-paragraph (2) is the person with, or in favour of whom, the agreement or instrument is to be entered into or executed. 35

Transfer of licences and permits

- 5 (1) A scheme may include provision to transfer any licence or permit held by the transferor from the transferor to the transferee.
- (2) Such a transfer may relate to the whole or any part of the licence or permit. 40

- (3) Where such a transfer relates to a part of the licence or permit, the provision made under sub-paragraph (1) may include—
- (a) provision apportioning responsibility between the transferor and the transferee in relation to—
 - (i) the making of payments required by conditions included in the licence or (as the case may be) permit, 5
 - (ii) ensuring compliance with any other requirements of the conditions included in the licence or (as the case may be) permit, and
 - (b) provision making incidental modifications to the terms and conditions of the licence or permit. 10
- (4) References in this paragraph to a part of a licence or permit are references to one or both of—
- (a) a part of the activities authorised by the licence or (as the case may be) permit; 15
 - (b) a part of the area in relation to which the holder of the licence or (as the case may be) permit is authorised to carry on those activities.

Powers and duties under statutory provisions

- 6 (1) A scheme may contain provision for some or all of the powers and duties to which this paragraph applies— 20
- (a) to be transferred to the transferee,
 - (b) to become powers and duties that are exercisable, or must be performed, concurrently by two or more transferees, or
 - (c) to become powers and duties that are exercisable, or must be performed, concurrently by a transferor and a transferee. 25
- (2) Provision falling within sub-paragraph (1) may apply to powers and duties only in so far as they are exercisable or required to be performed in the area specified or described in the provision.
- (3) The powers and duties to which this paragraph applies are the powers and duties conferred or imposed upon the transferor by or under an enactment, so far as those powers and duties are connected with— 30
- (a) the undertaking of the transferor to the extent the scheme relates to that undertaking, or
 - (b) any property, rights or liabilities to be transferred in accordance with the scheme. 35
- (4) The powers and duties mentioned in sub-paragraph (3) include, in particular, powers and duties relating to the carrying out of works or the acquisition of land.

Effect of scheme

- 7 (1) Where a scheme provides for the transfer of property, rights or liabilities, or for the creation of interests, rights or liabilities— 40

- (a) this Act has the effect that, at the time when the scheme comes into force, the property or interests, rights or liabilities vest, without further assurance, in the transferee, and
 - (b) the provisions of that scheme in relation to that property or those interests, rights or liabilities have effect from that time. 5
- (2) Sub-paragraph (1) is subject to so much of a scheme as provides for—
- (a) the transfer of property, rights or liabilities which are to be transferred in accordance with the scheme, or
 - (b) the creation of interests, rights and liabilities which are to be created in accordance with the scheme, 10
- to be effected by or under an agreement or instrument entered into or executed in pursuance of an obligation imposed by virtue of paragraph 4(1).
- (3) In its application to Scotland, sub-paragraph (1) has effect with the omission of the words “without further assurance”. 15

Supplementary provisions of schemes

- 8 (1) A scheme may—
- (a) make incidental, supplemental, consequential and transitional provision in connection with the other provisions of the scheme;
 - (b) make different provision for different purposes. 20
- (2) In particular, a scheme may make provision, in relation to transfers in accordance with the scheme—
- (a) for the transferee to be treated as the same person in law as the transferor;
 - (b) for agreements made, transactions effected or other things done by or in relation to the transferor to be treated, so far as may be necessary for the purposes of or in connection with the transfers, as made, effected or done by or in relation to the transferee; 25
 - (c) for references in an agreement, instrument or other document to the transferor, or to an employee or office holder of the transferor, to have effect, so far as may be necessary for the purposes of or in connection with a transfer, with such modifications as are specified in the scheme; 30
 - (d) that the effect of any transfer in accordance with the scheme in relation to contracts of employment with the transferor is not to terminate any of those contracts but is to be that periods of employment with the transferor are to count for all purposes as periods of employment with the transferee; 35
 - (e) for proceedings commenced by or against the transferor to be continued by or against the transferee. 40
- (3) Sub-paragraph (2)(c) does not apply to references in an enactment or in subordinate legislation.

- (4) A scheme may make provision for disputes as to the effect of the scheme between the transferor and the transferee to be referred to such arbitration as may be specified in or determined under the scheme.
- (5) Where a person is entitled, in consequence of a scheme, to possession of a document relating in part to the title to land or other property in England and Wales, or to the management of such land or other property – 5
- (a) the scheme may provide for that person to be treated as having given another person an acknowledgement in writing of the right of that other person to production of the document and to delivery of copies of it, and 10
- (b) section 64 of the Law of Property Act 1925 (production and safe custody of documents) is to have effect accordingly, and on the basis that the acknowledgement did not contain an expression of contrary intention.
- (6) Where a person is entitled, in consequence of a scheme, to possession of a document relating in part to the title to land or other property in Scotland or to the management of such land or other property, subsection (1) of section 16 of the Land Registration (Scotland) Act 1979 (omission of certain clauses in deeds) is to have effect in relation to the transfer – 15
- (a) as if the transfer had been effected by deed, and 20
- (b) as if the words “unless specially qualified” were omitted from that subsection.
- (7) In this paragraph references to a transfer in accordance with a scheme include references to the creation in accordance with such a scheme of an interest, right or liability. 25

Modification of scheme

- 9 (1) The Secretary of State may modify a scheme.
- (2) A modification may be made only for the purpose of achieving the objective with which the scheme was made (see section 50(2)).
- (3) If a transfer under the scheme has taken effect, a modification under sub-paragraph (1) may be made only with the agreement of – 30
- (a) the transferor or transferee affected by the modification (or, where both the transferor and transferee are affected, with the agreement of both of them);
- (b) any employee who is a party to a contract of employment containing rights and liabilities to which the modification relates; 35
- (c) any other person whose property or rights have been adversely affected by the modification.
- (4) A modification takes effect from such date as the Secretary of State may specify (which may be the date when the original scheme came into effect). 40

Compensation for third parties

- 10 (1) Where—
- (a) an entitlement of a third party to an interest or right would, apart from a provision of a scheme under paragraph 2(4) and (5), become enforceable in respect of the transfer or creation in accordance with such a scheme of any property, rights or liabilities, 5
 - (b) the provisions of that scheme or of paragraph 2(4) and (5) have the effect of preventing the third party’s entitlement to that interest or right from being enforced in respect of anything for which the scheme provides, and 10
 - (c) provision is not made by the scheme for securing that an entitlement to that interest or right, or to an equivalent interest or right, is preserved or created so as to arise and be enforceable in respect of the first occasion when corresponding circumstances next occur after the coming into force of the transfers for which the scheme provides, 15
- the third party is entitled to compensation in respect of the extinguishment of the third party’s entitlement.
- (2) The amount of compensation to which a third party is entitled under this paragraph is the amount necessary for securing, to the extent that it is just to do so, that the third party does not suffer financial loss from the extinguishment of the entitlement. 20
- (3) A liability to pay compensation under this paragraph falls on the Secretary of State.
- (4) In the preceding provisions of this paragraph “third party”, in relation to a scheme, means a person other than the transferor and the transferee. 25
- (5) This paragraph has effect in relation to the provisions of an agreement or instrument entered into or executed in pursuance of an obligation imposed by a scheme as it has effect in relation to the scheme.

Provision relating to foreign property etc 30

- 11 (1) Where there is a transfer in accordance with a scheme of—
- (a) any foreign property, or
 - (b) a foreign right or liability,
- the transferor and the transferee must each take all requisite steps to secure that the vesting of the foreign property, right or liability in the transferee is effective under the relevant foreign law. 35
- (2) Until the vesting of the foreign property, right or liability in the transferee in accordance with the scheme is effective under the relevant foreign law, the transferor must—
- (a) hold the property or right for the benefit of the transferee, or 40
 - (b) discharge the liability on behalf of the transferor.

- (3) The transferor must comply with any directions given to it by the transferee in relation to the performance of the obligations under sub-paragraphs (1) and (2) of the transferor.
- (4) Nothing in sub-paragraphs (1) to (3) prejudices the effect under the law of a part of the United Kingdom of the vesting of any foreign property, right or liability in the transferee in accordance with a scheme. 5
- (5) Where—
- (a) any foreign property, right or liability is acquired or incurred in respect of any other property, right or liability by a person, and
- (b) by virtue of this paragraph, the person holds the other property or right for the benefit of the transferee or is required to discharge the liability on behalf of the transferee, 10
- the property, right or liability acquired or incurred immediately becomes the property, right or liability of the transferee.
- (6) The provisions of sub-paragraphs (1) to (5) have effect in relation to foreign property, rights or liabilities transferred to the transferee under sub-paragraph (5) as they have effect in the case of property, rights and liabilities transferred in accordance with a scheme. 15
- (7) References in this paragraph to foreign property, or to a foreign right or liability, are references to any property, right or liability as respects which an issue arising in any proceedings would be determined (in accordance with the rules of private international law) by reference to the law of a country or territory outside the United Kingdom. 20
- (8) Expenses incurred under this paragraph by a person as the person from which anything is transferred are to be met by the transferee. 25
- (9) An obligation imposed under this paragraph in relation to property, rights or liabilities is to be enforceable as if contained in a contract between the transferor and the transferee.

Provision of information to Secretary of State

- 12 (1) If the Secretary of State proposes to make a scheme, the Secretary of State may direct— 30
- (a) a proposed transferor, or
- (b) a proposed transferee,
- to provide the Secretary of State with such information as the Secretary of State considers necessary to enable the Secretary of State to make the scheme. 35
- (2) If the Secretary of State proposes to modify a scheme, the Secretary of State may direct—
- (a) a transferor, or
- (b) a transferee, 40

- to provide the Secretary of State with such information as the Secretary of State considers necessary to enable the Secretary of State to modify the scheme.
- (3) A direction under sub-paragraph (1) or (2) must specify the period within which the information is to be provided. 5
- (4) The period specified in the direction must be not less than 28 days beginning with the day of the giving of the direction.
- (5) If a person fails to comply with such a direction, the Secretary of State may serve a notice on the person requiring the person—
- (a) to produce to the Secretary of State any documents which are specified or described in the notice and are in the person’s custody or under the person’s control, or 10
- (b) to provide to the Secretary of State such information as may be specified or described in the notice.
- (6) Documents or information to be produced or provided in accordance with such a notice must be produced or provided at the time and place, and in the form and manner, specified in the notice. 15
- (7) No person may be required under this paragraph—
- (a) to produce a document which the person could not be compelled to produce in civil proceedings in the court, or 20
- (b) to provide information which the person could not be compelled to give in evidence in such proceedings.
- (8) A person who intentionally alters, suppresses or destroys a document which the person has been required to produce by a notice under sub-paragraph (5) is guilty of an offence and liable— 25
- (a) on summary conviction, to a fine not exceeding the statutory maximum, and
- (b) on conviction on indictment, to a fine.
- (9) If a person fails to comply with a notice under sub-paragraph (5), the court may, on the application of the Secretary of State, make such order as the court thinks fit for requiring the failure to be made good. 30
- (10) Any order under sub-paragraph (9) may include provision requiring all the costs or expenses of and incidental to the application to be borne by one or more of the following—
- (a) the person in default; 35
- (b) any officers of a company or other association who are responsible for its default.
- (11) In this paragraph—
- (a) a reference to the production of a document includes a reference to the production of a legible and intelligible copy of information recorded otherwise than in legible form, and 40

- (b) the reference to suppressing a document includes a reference to destroying the means of reproducing information recorded otherwise than in legible form.

(12) In this paragraph “the court” means –

- (a) in England and Wales, the High Court;
- (b) in Scotland, the Court of Session;
- (c) in Northern Ireland, the High Court.

5

Interpretation

13 (1) In this Schedule –

“controlled place” has the meaning given by section 17(3) to (4) of the Energy Act 2008;

10

“scheme” means a scheme under section 50;

“subsidiary” has the meaning given to it by section 1159 of the Companies Act 2006;

“transferee” –

15

(a) in relation to a scheme, means a person to whom property, rights or liabilities are transferred in accordance with the scheme; and

(b) in relation to particular property, rights or liabilities transferred or created in accordance with a scheme, means the person to whom that property or those rights or liabilities are transferred or in whose favour, or in relation to whom, they are created;

20

“transferor” –

(a) in relation to a scheme, means the person from whom property, rights or liabilities are transferred in accordance with the scheme; and

25

(b) in relation to particular property, rights or liabilities transferred or created in accordance with a scheme, means the person from whom that property or those rights or liabilities are transferred or the person who or whose property is subject to the interest or right created by the scheme or for whose benefit the liability is created.

30

(2) References in this Schedule to a right or to an entitlement to a right include references to an entitlement to exercise a right; and, accordingly, references to a right’s arising include references to its becoming exercisable.

35

SCHEDULE 5

Section 54

AMENDMENTS RELATED TO PART 1

Utilities Act 2000

- 1 The Utilities Act 2000 is amended as follows.
- 2 In section 4 (forward work programmes), at the end insert— 5
“(7) In this section—
 - (a) references to functions do not include functions under Part 1 of the Energy Act 2023, and
 - (b) references to projects do not include projects with regard to the exercise of such functions.” 10
- 3 In section 5 (annual and other reports of Authority), after subsection (10) insert—
“(11) In this section—
 - (a) references to functions of the Authority do not include functions under Part 1 of the Energy Act 2023; 15
 - (b) references to activities of the Authority do not include activities in the exercise of such functions;
 - (c) the reference in subsection (1) to “references made by the Authority” does not include references made by virtue of section 36(1) of the Energy Act 2023.” 20
- 4 In section 5XA (laying of accounts before Scottish Parliament and Welsh Assembly)—
 - (a) in the heading, for “and Welsh Assembly” substitute “, Senedd Cymru or the Northern Ireland Assembly”;
 - (b) after subsection (2) insert— 25
“(2A) The Authority must send to the Department for the Economy in Northern Ireland, in respect of each of its accounting years, a copy of the certified accounts and report of the Authority no later than 31 January of the financial year following that to which the accounts relate.”; 30
 - (c) after subsection (3A) insert—
“(3B) The Department for the Economy in Northern Ireland must lay a copy of whatever is sent to it under subsection (2A) before the Northern Ireland Assembly.”;
 - (d) for subsection (4) substitute— 35
“(4) In subsections (1) to (3) “certified accounts and report” means those accounts certified under sections 5 and 7 of the Government Resources and Accounts Act 2000, and the report issued by the Comptroller and Auditor General under section 6(3)(a) of that Act.” 40

- 5 In section 105 (general restrictions on disclosure of information) –
- (a) in subsection (1)(a), after “Nuclear Energy (Financing) Act 2022” insert “or Part 1 of the Energy Act 2023”;
 - (b) in subsection (3), after paragraph (azc) insert –
 - “(azd) it is made for the purpose of facilitating the performance of any functions of the Authority under or by virtue of Part 1 of the Energy Act 2023;”;
 - (c) in subsection (6), at the end insert –
 - “(z1) Part 1 of the Energy Act 2023.”

Enterprise Act 2002 10

- 6 The Enterprise Act 2002 is amended as follows.
- 7 In section 136 (investigations and reports on market investigation references), in subsection (7)(b), for the words from “or” to the end substitute “, section 43 of the Electricity Act 1989 or (as the case may be) section 36 of the Energy Act 2023;”. 15
- 8 (1) Section 168 (regulated markets) is amended as follows.
- (2) In subsection (3) (meaning of “relevant action”) –
 - (a) omit “or” at the end of paragraph (p);
 - (b) after paragraph (q) insert “; or
 - (r) modifying the conditions of a licence granted under section 7 of the Energy Act 2023.” 20
 - (3) In subsection (4) (meaning of “relevant statutory functions”) –
 - (a) omit “and” at the end of paragraph (r);
 - (b) after paragraph (s) insert “, and
 - (t) in relation to a licence granted under section 7 of the Energy Act 2023, the objectives and duties of the Gas and Electricity Markets Authority under section 1 of that Act.” 25
 - (4) In subsection (6) –
 - (a) for “or section 6” substitute “, section 6”; 30
 - (b) before “would” insert “or section 7 of the Energy Act 2023”.

SCHEDULE 6

Section 95

CARBON DIOXIDE STORAGE LICENCES: LICENCE PROVISIONS

In the Storage of Carbon Dioxide (Licensing etc.) Regulations 2010 (S.I. 2010/2221), in Schedule 1 (provisions to be included in a licence), after paragraph 5 insert—

- “6 Change in control of licence holder** 5
- (1) This paragraph applies if—
- (a) the licence holder is a company, or
 - (b) where two or more persons are joint licence holders, any of those persons is a company,
- and references in this paragraph to a company are to such a company. 10
- (2) A change in control of a company is not permitted without the consent of the authority.
- (3) There is a “change in control” of a company if a person takes control of the company, not having previously been a person who controlled the company.
- (4) If a change in control of a company is contemplated, the company must apply 15
in writing to the authority for consent at least three months before the date on which it is proposed that the change would occur (if consent were given).
- (5) The authority may—
- (a) consent to the change in control unconditionally,
 - (b) consent to the change in control subject to conditions, or 20
 - (c) refuse consent to the change in control.
- (6) If the authority proposes to grant consent subject to any condition or to refuse consent, the authority must, before making a final decision—
- (a) give the company an opportunity to make representations, and
 - (b) consider any representations that are made. 25
- (7) The general rule is that the authority must decide an application within three months of receiving it, but the authority may delay its decision by notifying the interested parties in writing.
- (8) Conditions as mentioned in sub-paragraph (5)(b) may be imposed on the person taking control of the company (as well as on the company), and may include— 30
- (a) conditions relating to the arrangements for the change in control, including the date by which it must occur,
 - (b) conditions relating to the performance of activities permitted by the licence, and
 - (c) financial conditions. 35
- (9) The authority’s decision on the application, and any conditions as mentioned in sub-paragraph (5)(b), must be notified in writing to the interested parties.

- (10) In this paragraph “the interested parties” means –
- (a) the company,
 - (b) the person who (if consent were granted) would take control of the company, and
 - (c) if the company is a joint licence holder with another person or other persons, that other person or those other persons. 5
- (11) For the purposes of this paragraph, “control” of a company is to be construed in accordance with sections 450(2) to (4) and 451(1) to (5) of the Corporation Tax Act 2010, but read as if –
- (a) for the words “the greater part” wherever they occur in section 450(3), there were substituted “one-third or more”, 10
 - (b) in section 451(4) and (5), for “may” there were substituted “must”, and
 - (c) in section 451(4) and (5), any reference to an associate of a person included only – 15
 - (i) a relative (as defined in section 448(2) of that Act) of the person,
 - (ii) a partner of the person, and
 - (iii) a trustee of a settlement (as defined in section 620 of the Income Tax (Trading and Other Income) Act 2005) of which the person is a beneficiary. 20

7 Revocation of licence re change in control

- (1) This paragraph applies in connection with a change in control of a licence holder which is a company (see paragraph 6).
- (2) In the event of –
- (a) any breach or non-observance by the company of any of the terms of paragraph 6, 25
 - (b) any breach of a condition (imposed in accordance with paragraph 6) subject to which the authority gave its consent to a change in control of the company, or
 - (c) any failure to provide full and accurate information in response to a notice given by the authority to the company under section 29A, 30
- the authority may, by giving the company and any joint licence holders notice in writing, revoke the licence with effect from the date specified in the notice.

8 Partial revocation of licence re change in control

- (1) This paragraph applies if two or more persons are joint licence holders and any of them is a company. 35
- (2) If an event mentioned in paragraph 7(2)(a), (b) or (c) occurs in connection with a change in control of the company, the authority may exercise the power in paragraph 7 to revoke the licence in so far as it applies to that company (without revoking it in so far as it applies to the other person or persons who are joint licence holders).” 40

SCHEDULE 7

Section 128

INDEPENDENT SYSTEM OPERATOR AND PLANNER: TRANSFERS

PART 1

TRANSFER SCHEMES

- Power to make a transfer scheme* 5
- 1 (1) The Secretary of State may make one or more schemes for the transfer of designated property, rights or liabilities from one person to another person—
- (a) in preparation for or in connection with the designation of a person under section 116(1), or
 - (b) for the purpose of enabling the ISOP to carry out any of its functions. 10
- (2) The Secretary of State may, during the period of 7 years beginning with the day on which this Act is passed, make one or more schemes for the transfer of designated property, rights or liabilities from one person to another person in connection with the operation or management of— 15
- (a) a document maintained in accordance with the conditions of a relevant licence, or
 - (b) an agreement that gives effect to a document so maintained.
- (3) In this Schedule
- (a) “transfer scheme” means a scheme under either or both of sub-paragraphs (1) and (2); 20
 - (b) “transferor”, in relation to a transfer scheme, means a person from whom property, rights or liabilities are or are to be transferred under the scheme;
 - (c) “transferee”, in relation to a transfer scheme, means a person to whom property, rights or liabilities are or are to be transferred under the scheme. 25
- (4) In this Part of this Schedule—
- (a) “designated”, in relation to a transfer scheme, means specified in or determined in accordance with the scheme; 30
 - (b) “the TUPE regulations” means the Transfer of Undertakings (Protection of Employment) Regulations 2006 (S.I. 2006/246);
 - (c) references to property are to property situated in the United Kingdom or elsewhere;
 - (d) references to the transfer of property include the grant of a lease; 35
 - (e) references to rights and liabilities—
 - (i) are references to rights and liabilities of any kind, arising (in any way or at any time) under the law of a part of Great Britain or of a place outside Great Britain;
 - (ii) include rights and liabilities arising under or by virtue of an enactment. 40

Consultation

- 2 (1) Before making a transfer scheme, the Secretary of State must consult –
- (a) the transferor (or, if there is more than one transferor, the transferors), and
 - (b) such other persons as the Secretary of State considers appropriate. 5
- (2) Sub-paragraph (1) may be satisfied by consultation before the passing of this Act (as well as by consultation after that time).

Transfer of property, rights and liabilities

- 3 (1) The transfer of designated property, rights and liabilities under a transfer scheme takes effect on the date (or dates) specified in or determined in accordance with the scheme. 10
- (2) Sub-paragraph (1) has effect notwithstanding any provision (whether under an enactment or agreement or otherwise) that would otherwise prevent or restrict the transfer.
- (3) The things that may be transferred under a transfer scheme include – 15
- (a) rights, powers, duties and liabilities under or in connection with a contract of employment (see paragraph 4);
 - (b) property, rights and liabilities that could not otherwise be transferred;
 - (c) property acquired, and rights and liabilities arising, after the making of the scheme; 20
 - (d) criminal liabilities.
- 4 (1) This paragraph applies where, under a transfer scheme, an employee to whom the scheme applies becomes an employee of a transferee.
- (2) The transfer scheme may apply to – 25
- (a) all persons who are employees of a transferor,
 - (b) such descriptions of a transferor’s employees as the scheme may specify, or
 - (c) such employees of a transferor as the scheme may specify.
- (3) The transfer scheme may include provision – 30
- (a) that has the same or similar effect as the TUPE regulations (so far as those regulations do not apply to any extent in relation to the transfer);
 - (b) about the pension entitlements of the employee enjoyed immediately before the transfer. 35
- (4) The transfer scheme must contain provision enabling an employee to whom the scheme applies to object to the transfer before the relevant time, including provision as to how such an objection is to be made and as to the consequences of it.
- (5) The transfer scheme may provide that a person who is assigned to work for a transferor (whether on secondment or otherwise and whether or not 40

- on a full-time basis), but who does not have a contract of employment with the transferor, is to be treated for the purposes of any provision of the scheme as an employee of the transferor.
- (6) The transfer scheme may provide that a collective agreement that, immediately before the relevant time, had effect in relation to an employee's employment with a transferor is to have effect on and after the relevant time in relation to the employee's employment with a transferee. 5
- (7) In this paragraph—
- “collective agreement” has the same meaning as in the Trade Union and Labour Relations (Consolidation) Act 1992 (see section 178(1) of that Act); 10
 - “employee” has the same meaning as in the TUPE regulations (see regulation 2(1) of the regulations);
 - “the relevant time” means the time at which the transfer of the person's employment takes effect in accordance with the transfer scheme. 15
- 5 (1) A transfer scheme may make provision requiring a transferor to provide such co-operation to a transferee as the transferee may reasonably require in connection with the implementation of the scheme.
- (2) The co-operation that may be required by virtue of sub-paragraph (1) includes, in particular, co-operation in relation to— 20
- (a) the provision of information;
 - (b) consultation with representatives of employees transferred by the scheme.
- 6 (1) A transfer scheme may make supplementary, incidental, transitional or consequential provision and may in particular— 25
- (a) create rights, or impose liabilities, in relation to property or rights transferred;
 - (b) make provision about the continuing effect of things done by a transferor in respect of anything transferred;
 - (c) make provision about the continuation of things (including legal proceedings) in the process of being done by, on behalf of, or in relation to, a transferor in respect of anything transferred; 30
 - (d) make provision for references to a transferor in any instrument or other document in respect of anything transferred to be treated as references to the transferee; 35
 - (e) prevent a right of pre-emption, right of reverter, right of forfeiture, right to compensation or other similar right from arising or becoming exercisable as a result of the transfer;
 - (f) dispense with any formality in relation to the transfer of anything by the scheme; 40
 - (g) make provision for the shared ownership or use of property;
 - (h) require a transferor, an associate of a transferor, or a transferee, to enter into any agreement of any kind, or for a purpose, specified in or determined in accordance with the scheme.

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- (2) Sub-paragraph (1)(d) does not apply to references in –
- (a) primary legislation,
 - (b) subordinate legislation within the meaning of the Interpretation Act 1978 (see section 21(1) of that Act), or
 - (c) an instrument made under an Act of the Scottish Parliament, an Act or Measure of Senedd Cymru, or Northern Ireland legislation. 5
- (3) A certificate issued by the Secretary of State to the effect that any property, interest, right or liability transferred in accordance with a transfer scheme to a person specified in the certificate at a time so specified is conclusive evidence of the matters so specified. 10
- (4) In this paragraph –
- “associate” has the meaning given by section 1152 of the Companies Act 2006;
 - “primary legislation” means –
 - (a) an Act, 15
 - (b) an Act of the Scottish Parliament,
 - (c) an Act or Measure of Senedd Cymru, or
 - (d) Northern Ireland legislation.
- 7 A transfer scheme may –
- (a) make different provision for different purposes; 20
 - (b) make provision subject to exceptions.

Compensation

- 8 (1) A transfer scheme may provide for a transferor to be entitled to compensation from the Secretary of State, in accordance with provision made by or under the scheme, to the extent that the scheme makes provision –
- (a) in preparation for or in connection with the first designation of a person under section 116(1), or
 - (b) for the purpose of facilitating the carrying on by the ISOP of any of its functions. 30
- (2) Where a transferor is entitled to compensation by virtue of sub-paragraph (1), the amount of compensation is to be the amount –
- (a) agreed by the Secretary of State and the transferor, or
 - (b) in the absence of such agreement, determined by an independent valuer appointed by the Secretary of State and the transferor. 35
- (3) For the purposes of sub-paragraph (2) an independent valuer must be appointed –
- (a) by the Secretary of State and the transferor, or
 - (b) in the absence of such agreement, by the Secretary of State on behalf of both the Secretary of State and the transferor. 40

- (4) References in sub-paragraph (2) to the Secretary of State include references to a person nominated by the Secretary of State.
- (5) The Secretary of State may by regulations make provision—
- (a) for determining when there is an absence of agreement for the purposes of sub-paragraph (2)(b) or (3)(b); 5
 - (b) about the procedure to be followed by an independent valuer in making a determination for the purposes of sub-paragraph (2)(b) (“a compensation determination”);
 - (c) specifying matters to which an independent valuer must have regard, or assumptions that an independent valuer must apply, in making a compensation determination; 10
 - (d) for an independent valuer to require the Secretary of State or the transferor to provide such information to the independent valuer as the independent valuer reasonably requires for the purposes of making a compensation determination; 15
 - (e) for an independent valuer’s determination to be binding on the Secretary of State and the transferor for the period specified in or determined under the regulations;
 - (f) about remuneration and expenses of an independent valuer;
 - (g) about enforcement of requirements imposed by the regulations. 20
- (6) Regulations under sub-paragraph (5) may confer a discretion on a person.

Taxation

- 9 (1) The Treasury may by regulations make provision varying the way in which a relevant tax has effect in relation to—
- (a) anything transferred, acquired or disposed of under a transfer scheme, or 25
 - (b) anything done for the purposes of, or in relation to, a transfer under a transfer scheme.
- (2) The provision that may be made under sub-paragraph (1)(a) includes, in particular, provision for— 30
- (a) a tax provision not to apply, or to apply with modifications, in relation to anything transferred;
 - (b) anything transferred to be treated in a specified way for the purposes of a tax provision;
 - (c) the Secretary of State to be required or permitted to determine, or to specify the method for determining, anything that needs to be determined for the purposes of any tax provision so far as relating to anything transferred. 35
- (3) The provision that may be made under sub-paragraph (1)(b) includes, in particular, provision for— 40
- (a) a tax provision not to apply, or to apply with modifications, in relation to anything done for the purposes of, or in relation to, the transfer;

- (b) anything done for the purposes of, or in relation to, the transfer to have or not have a specified consequence or be treated in a specified way;
- (c) the Secretary of State to be required or permitted to determine, or to specify the method for determining, anything that needs to be determined for the purposes of any tax provision so far as relating to anything done for the purposes of, or in relation to, the transfer. 5
- (4) In this paragraph –
- “relevant tax” means income tax, corporation tax, capital gains tax, stamp duty, stamp duty reserve tax, stamp duty land tax, land and buildings transaction tax, land transaction tax or value added tax; 10
- “tax provision” means any provision –
- (a) about a relevant tax, and
- (b) made by an enactment.
- Power to amend transfer scheme* 15
- 10 (1) The Secretary of State may amend a transfer scheme if the Secretary of State considers that the amendment is appropriate –
- (a) in preparation for or in connection with the designation of a person under section 116(1),
- (b) for the purpose of enabling the ISOP to carry out any of its functions, or 20
- (c) for the purpose of enabling a transferor to carry out any of its functions.
- (2) The power under sub-paragraph (1) is not exercisable in relation to a transfer scheme after the end of the period of 12 months beginning with the day on which the scheme takes effect. 25
- (3) Paragraphs 2 to 7 apply in relation to the amendment of a transfer scheme as they apply in relation to a transfer scheme.
- (4) A transfer scheme may provide for a transferor or transferee under the scheme to be entitled to compensation in consequence of the amendment of the scheme. 30
- (5) Paragraph 8(2) to (6) applies (with any necessary modifications) in relation to an entitlement to compensation under sub-paragraph (4) as it applies in relation to an entitlement to compensation under paragraph 8(1).
- National Security and Investment Act 2021* 35
- 11 The making of a transfer scheme is not a trigger event for the purposes of the National Security and Investment Act 2021.

PART 2

OTHER PROVISION ABOUT TRANSFERS AND DESIGNATION

Provision of information or assistance

- 12 (1) The Secretary of State may direct a person within sub-paragraph (2) to provide the Secretary of State with such specified information or assistance as the Secretary of State may reasonably require – 5
- (a) in preparation for or in connection with the designation of a person under section 116(1), or
 - (b) in connection with the making of a transfer scheme.
- (2) A person is within this sub-paragraph if – 10
- (a) property, rights or liabilities are likely to be transferred from or to the person by a transfer scheme, or
 - (b) the person is a body corporate that is likely to be transferred under a transfer scheme.
- (3) The Secretary of State may direct a person (other than a person within sub-paragraph (2)) to provide the Secretary of State with such specified information or assistance as the Secretary of State may reasonably require in preparation for or in connection with the designation of a person under section 116(1). 15
- (4) A direction under sub-paragraph (1) or (3) must – 20
- (a) be in writing, and
 - (b) specify the sub-paragraph under which it is given.
- (5) The power to give a direction under sub-paragraph (3) ceases to be exercisable – 25
- (a) at the end of the period of 3 years beginning with the time from which the first designation under section 116(1) has effect, or
 - (b) if at any time before the end of that period a transfer scheme is made under paragraph 1(1), at the end of the period of 3 years beginning with the date (or, if there is more than one, the first date) from which the transfer of property, rights or liabilities under the scheme takes effect. 30
- (6) A person to whom a direction is given under sub-paragraph (1) or (3) must, so far as reasonably practicable, provide the Secretary of State with the specified information or assistance – 35
- (a) within the specified period, and
 - (b) in the specified form and manner.
- (7) A direction under sub-paragraph (1) or (3) is enforceable by the Secretary of State in civil proceedings – 40
- (a) for an injunction,
 - (b) for specific performance of a statutory duty under section 45 of the Court of Session Act 1988, or

- (c) for any other appropriate remedy or relief.
- (8) The Secretary of State –
- (a) must reimburse a person in respect of costs reasonably incurred by the person in complying with a direction under sub-paragraph (1) or (3); 5
 - (b) may reimburse a person in respect of costs reasonably incurred by the person in complying with a request (whether made before or after the day on which this Act is passed) to provide the Secretary of State with information reasonably required by the Secretary of State for a purpose mentioned in sub-paragraph (1)(a) or (b). 10
- (9) In this paragraph –
- “assistance” includes assistance provided in a country or territory other than the United Kingdom;
 - “information” includes documents;
 - “specified” means specified in the direction. 15

Co-operation

- 13 (1) A person within sub-paragraph (2) must co-operate with, and so far as practicable must not take any step that may reasonably be expected to impede, the Secretary of State in relation to the doing of anything by the Secretary of State – 20
- (a) in preparation for or in connection with the first designation of a person under section 116(1), or
 - (b) in connection with the making of a transfer scheme.
- (2) The persons within this sub-paragraph are – 25
- (a) National Grid plc and its associates (within the meaning of section 1152 of the Companies Act 2006);
 - (b) any person who, at any time during the period mentioned in sub-paragraph (3), has acquired property, rights or liabilities from a person within paragraph (a) (whether or not as a result of a transfer scheme under paragraph 1). 30
- (3) The period mentioned in sub-paragraph (2)(b) is the period beginning on 20 July 2021 and ending with the first designation of a person under section 116(1).

Reimbursement and compensation: further provision

- 14 (1) The Secretary of State may reimburse a person in respect of expenditure reasonably incurred by the person – 35
- (a) in preparation for or in connection with the designation of a person under section 116(1), or
 - (b) in connection with the making of a transfer scheme.
- (2) The Secretary of State may make regulations providing for the payment of compensation by the Secretary of State to a person (other than the transferor) 40

in relation to a transfer scheme) who has suffered loss or damage in consequence of anything done by the Secretary of State in preparation for or in connection with the designation of a person under section 116(1).

SCHEDULE 8

Section 129

INDEPENDENT SYSTEM OPERATOR AND PLANNER: PENSIONS

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Introductory

1 (1) In this Schedule –

“active member” has the same meaning as in section 124(1) of the Pensions Act 1995;

“associate” has the same meaning as in section 1152 of the Companies Act 2006; 10

“member” has the same meaning as in section 124(1) of the Pensions Act 1995;

“prescribed” means prescribed by regulations made by the Secretary of State; 15

“qualifying accrued rights” means –

(a) any right which, at the relevant time, has accrued to or in respect of a qualifying member of a qualifying pension scheme to future benefits under the scheme,

(b) any entitlement under a qualifying pension scheme to the present payment of a pension or other benefit that a qualifying member of the scheme has at the relevant time, or 20

(c) any entitlement to benefits, or rights to future benefits, under a qualifying pension scheme that a person who has survived a qualifying member of the scheme has at the relevant time in respect of the member; 25

“qualifying member”, in relation to a qualifying pension scheme, means a person who is or has been a member of the scheme;

“qualifying pension scheme” means a pension scheme that provides for the payment of pensions or other benefits to or in respect of employees or former employees of – 30

(a) a transferor in relation to a transfer scheme under paragraph 1 of Schedule 7, or

(b) an associate of such a transferor; 35

“the relevant time” means the time immediately before the prescribed date (which may be before the passing of this Act).

(2) For the purposes of the definition of “qualifying accrued rights” in sub-paragraph (1) –

(a) references to pensions or other benefits (including future benefits) include money purchase benefits; 40

- (b) references to a right include a pension credit right.
- (3) In the event that a section of a qualifying pension scheme is constituted as a separate pension scheme the members of which consist of or include persons who are qualifying members of the qualifying pension scheme, any reference in this Schedule to the qualifying pension scheme includes a reference to that separate pension scheme. 5

Participation in qualifying pension schemes and transfer of assets and rights

- 2 (1) The Secretary of State may by regulations make such pensions provision as the Secretary of State considers appropriate –
- (a) in preparation for or in connection with the designation of a person under section 116(1), or 10
- (b) otherwise in connection with the making of a transfer scheme under paragraph 1 of Schedule 7.
- (2) “Pensions provision” means provision in connection with a qualifying pension scheme, including provision for – 15
- (a) enabling an entity to which sub-paragraph (3) applies to participate in the scheme;
- (b) the division of the scheme into different sections;
- (c) the participation in the different sections of different persons (including entities to which sub-paragraph (3) applies); 20
- (d) the allocation of assets, rights, liabilities or obligations between the different sections;
- (e) the transfer of assets and qualifying accrued rights from the scheme to another pension scheme (whether or not a qualifying pension scheme), without the need for any approval or consent to the transfer; 25
- (f) the valuation of assets and qualifying accrued rights in accordance with provision made by the regulations, for the purposes of their allocation to a particular section or for the purposes of their transfer as mentioned in paragraph (e); 30
- (g) the discharge of liabilities in respect of qualifying accrued rights that are transferred.
- (3) This sub-paragraph applies to the following entities –
- (a) the ISOP;
- (b) an associate of the ISOP; 35
- (c) any other entity which employs a person –
- (i) whose contract of employment is transferred by a transfer scheme under paragraph 1 of Schedule 7, and
- (ii) who is an active member of the qualifying pension scheme at the relevant time. 40
- (4) Regulations under sub-paragraph (1) may have retrospective effect.

- (5) Before making regulations under sub-paragraph (1), the Secretary of State must consult—
- (a) the trustee of the qualifying pension scheme or schemes in question, and
 - (b) the person who is the principal employer in relation to that scheme or those schemes.

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Amendment of qualifying pension schemes

- 3 (1) The Secretary of State may by regulations make such amendments of a qualifying pension scheme as the Secretary of State considers appropriate—
- (a) in preparation for or in connection with the designation of a person under section 116(1),
 - (b) otherwise in connection with the making of a transfer scheme under paragraph 1 of Schedule 7, or
 - (c) in connection with the making of regulations under paragraph 2 of this Schedule.
- (2) The provision that may be made under sub-paragraph (1) includes—
- (a) provision authorising or requiring the amount of pensions or other benefits payable to or in respect of qualifying members of the scheme to be determined in particular circumstances by reference to pensionable service under the scheme in question before and after the relevant time;
 - (b) provision for the transfer out of assets, rights, liabilities or obligations from one or more new sections of a qualifying pension scheme to another pension scheme (whether or not a qualifying pension scheme);
 - (c) provision for the transfer in of assets, rights, liabilities or obligations to one or more new sections of one qualifying pension scheme from one or more new sections of another qualifying pension scheme.
- (3) Regulations under sub-paragraph (1) may have retrospective effect.
- (4) Before making regulations under sub-paragraph (1), the Secretary of State must consult—
- (a) the trustee of the qualifying pension scheme being amended, and
 - (b) the person who is the principal employer in relation to that scheme.
- (5) In this paragraph—
- (a) the reference to making amendments of a qualifying pension scheme includes a reference to amending the trust deed or rules of that scheme or any other instrument relating to the constitution, management or operation of the scheme;
 - (b) references to a “new” section of a qualifying pension scheme are to one of the sections into which the scheme is divided by regulations under paragraph 2(1);
 - (c) “pensionable service” has the same meaning as in section 124(1) of the Pensions Act 1995.

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Protection against adverse treatment

- 4 (1) When exercising the power to make regulations under paragraph 2 or 3, the Secretary of State must ensure that the following requirements are met in respect of each person who is or has been a qualifying member of a qualifying pension scheme— 5
- (a) the general scheme requirement;
 - (b) where the regulations relate to a person’s rights or entitlements to money purchase benefits other than pensions in payment, the money purchase requirement.
- (2) The general scheme requirement is that the provision for the payment of pensions or other benefits that is contained in a qualifying pension scheme or any other pension scheme to which a transfer is made by virtue of paragraph 2(2)(e) is, in all material respects, at least as good immediately after the exercise of the power as it is immediately before its exercise. 10
- (3) The money purchase requirement is that the value of the rights or entitlements to money purchase benefits, other than pensions in payment, that a person has under a qualifying pension scheme or any other pension scheme to which a transfer is made by virtue of paragraph 2(2)(e) immediately after, and as a result of, the exercise of the power is at least equivalent to the value of the person’s rights or entitlements before its exercise. 15 20
- (4) Nothing in sub-paragraph (1) requires—
- (a) the different sections (if any) of a qualifying pension scheme to be established in a particular way,
 - (b) particular provisions of the sections, or of a pension scheme to which a transfer is made by virtue of paragraph 2(2)(e), to take the same or similar form, or 25
 - (c) any power or duty conferred or imposed by a qualifying pension scheme to be exercised or performed in a particular way.
- (5) The power of the Secretary of State to amend a qualifying pension scheme may not be exercised in any way that would or might adversely affect any provision of the scheme made in respect of qualifying accrued rights unless— 30
- (a) the applicable consent requirements are satisfied in respect of the exercise of the power in that way, or 35
 - (b) the scheme is amended in the prescribed manner.
- (6) The applicable consent requirements are the requirements that apply in relation to obtaining the consent of members of the scheme to its amendment (including any such requirements set out in the trust deed or rules of the scheme). 40

Information and assistance

- 5 (1) The Secretary of State may direct a person within sub-paragraph (3) to provide the Secretary of State with—

- (a) specified pensions information, or
 - (b) such specified assistance in relation to a qualifying pension scheme as the Secretary of State may reasonably require in preparation for or in connection with the exercise of a power conferred on the Secretary of State by this Schedule. 5
- (2) “Pensions information” means information that—
 - (a) relates to pensions or other benefits under a qualifying pension scheme, or
 - (b) relates to the administration of a qualifying pension scheme in respect of pensions or other benefits under the scheme. 10
- (3) The following persons are within this sub-paragraph—
 - (a) the trustee of a qualifying pension scheme;
 - (b) any person who exercises functions on behalf of a person within paragraph (a);
 - (c) any person who is or has been an employer of a qualifying member of a qualifying pension scheme. 15
- (4) The power under sub-paragraph (1) ceases to be exercisable—
 - (a) at the end of the period of 3 years beginning with the time from which the first designation under section 116(1) has effect, or
 - (b) if at any time before the end of that period a transfer scheme is made under paragraph 1(1) of Schedule 7, at the end of the period of 3 years beginning with the date (or, if there is more than one, the first date) from which the transfer of property, rights or liabilities under the scheme takes effect. 20
- (5) A person to whom a direction is given under sub-paragraph (1) must, so far as reasonably practicable, provide the Secretary of State with the specified pensions information or assistance—
 - (a) within the specified period, and
 - (b) in the specified form and manner. 25
- (6) A direction under sub-paragraph (1) is enforceable by the Secretary of State in civil proceedings—
 - (a) for an injunction,
 - (b) for specific performance of a statutory duty under section 45 of the Court of Session Act 1988, or
 - (c) for any other appropriate remedy or relief. 30
- (7) The Secretary of State must reimburse a person for costs reasonably incurred by the person in complying with a direction under sub-paragraph (1).
- (8) In this paragraph, “specified” means specified in the direction. 35

Consultation

- 6 Any requirement imposed by this Schedule to carry out consultation may be satisfied by consultation before the passing of this Act (as well as by consultation after that time). 40

National Security and Investment Act 2021

- 7 The exercise by the Secretary of State of a power conferred on the Secretary of State by any provision of this Schedule is not a trigger event for the purposes of the National Security and Investment Act 2021.

SCHEDULE 9

Section 133

5

MINOR AND CONSEQUENTIAL AMENDMENTS RELATING TO PART 4

Gas Act 1986

- 1 The Gas Act 1986 is amended as follows.
- 2 In section 6A (exemptions from prohibition), in subsection (1), after “(c)” insert “, (ca)”. 10

Electricity Act 1989

- 3 The Electricity Act 1989 is amended as follows.
- 4 In section 4 (prohibition on unlicensed supply, transmission etc of electricity), in subsection (3A)–
- (a) omit paragraph (a) (including the “or” at the end); 15
 - (b) in paragraph (b), for “such a transmission system” substitute “a transmission system by means of which the transmission of electricity takes place”.
- 5 In section 5 (exemptions from prohibition), in subsection (1), after “(c),” insert “(ca),”. 20
- 6 In section 10 (powers etc of licence holders), in subsection (1)(a), after “licence” insert “or of an electricity system operator licence”.
- 7 In section 49 (keeping of register), in subsection (2)(c), after “under” insert “or in respect of”.

Utilities Act 2000

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- 8 (1) Section 105 of the Utilities Act 2000 (general restrictions on disclosure of information) is amended as follows.
- (2) In subsection (1)(a), after “2022” insert “or Part 4 of the Energy Act 2023”.
- (3) In subsection (4), after paragraph (ba) insert–
- “(bb) for the purpose of facilitating the performance by the Independent System Operator and Planner of any of its functions;”. 30

(4) In subsection (10), at the appropriate place insert—

““the Independent System Operator and Planner” means the person for the time being designated under section 116(1) of the Energy Act 2023;”.

SCHEDULE 10

Section 154(1)

5

GOVERNANCE OF GAS AND ELECTRICITY INDUSTRY CODES: TRANSITIONAL PROVISION

Meaning of “qualifying document”, “qualifying contract” and “qualifying central system”

- 1 (1) In this Schedule, “qualifying document” means a document that—
 - (a) is maintained in accordance with the conditions of a relevant licence, and 10
 - (b) is designated for the purposes of this Schedule by notice given by the Secretary of State.
- (2) Where at any time after the day on which this paragraph comes into force the whole or part of the provision made by a qualifying document is incorporated into a different document (“document B”), document B is to be treated for the purposes of this Schedule as if it were a qualifying document even if it is not designated under sub-paragraph (1)(b). 15
- (3) In this Schedule, “qualifying contract” means a contract—
 - (a) that constitutes the whole or part of the arrangements under which a qualifying document has effect, 20
 - (b) that relates to the governance of a qualifying document, or
 - (c) that is a central system contract.
- (4) For the purposes of sub-paragraph (3)(c), a contract is a “central system contract” if—
 - (a) it relates to the operation of a qualifying central system, and 25
 - (b) the person responsible for operating or procuring the operation of the central system is a party to the contract.
- (5) In this Schedule, “qualifying central system” means a central system that is designated for the purposes of this Schedule by notice given by the Secretary of State. 30
- (6) The Secretary of State may revoke a designation under sub-paragraph (1)(b) or (5).
- (7) The Secretary of State may not designate a document or central system under sub-paragraph (1)(b) or (5), or revoke a designation, except so as to give effect to a recommendation of the GEMA. 35
- (8) Before making a recommendation to the Secretary of State for the purposes of sub-paragraph (7), the GEMA must consult such persons as it considers appropriate.

Purposes for which powers under this Schedule may be exercised

- 2 (1) The GEMA may exercise a power conferred on it by paragraph 4, 6, 7, 8 or 11 only if the GEMA considers it appropriate to exercise the power –
- (a) for the purposes of or in connection with establishing the role of code manager in respect of a document that is expected to become a designated document, 5
 - (b) in preparation for the granting of a code manager licence to a person in respect of a designated document,
 - (c) for the purposes of facilitating the carrying out by the GEMA of its functions under this Part, 10
 - (d) for the purposes of promoting the efficient governance of arrangements under one or more qualifying documents (subject to sub-paragraph (2)), or
 - (e) for the purposes of harmonising the governance of particular qualifying documents or of qualifying documents in general. 15
- (2) Sub-paragraph (1)(d) does not apply to the exercise of the power conferred by paragraph 6 in relation to a qualifying contract within paragraph 1(3)(b) or (c).

Expiry of powers under this Schedule

- 3 The powers conferred on the GEMA by paragraphs 4, 6, 7, 8 and 11 in relation to a particular qualifying document expire – 20
- (a) when the document becomes a designated document, or
 - (b) if earlier, at the end of the period of 7 years after the day on which this Act is passed.

Modification of qualifying documents and relevant licences 25

- 4 (1) The GEMA may modify –
- (a) a qualifying document;
 - (b) the conditions of a particular relevant licence;
 - (c) the standard conditions of relevant licences of a particular type.
- (2) Before making a modification under sub-paragraph (1), the GEMA must – 30
- (a) publish a notice about the proposed modification,
 - (b) send a copy of the notice to the persons listed in sub-paragraph (3), and
 - (c) consider any representations made within the period specified in the notice about the proposed modification or the date from which it would take effect. 35
- (3) The persons mentioned in sub-paragraph (2)(b) are –
- (a) the Secretary of State;
 - (b) each relevant licence holder;
 - (c) the National Association of Citizens Advice Bureaux; 40

- (d) the Scottish Association of Citizens Advice Bureaux;
 - (e) Consumer Scotland;
 - (f) where the proposed modification relates to a licence for the purposes of section 5 of the Gas Act 1986, the Health and Safety Executive;
 - (g) such other persons as the GEMA considers appropriate. 5
- (4) A notice under sub-paragraph (2) must—
- (a) state that the GEMA proposes to make a modification;
 - (b) set out the proposed modification and its effect;
 - (c) specify the date from which the GEMA proposes that the modification will have effect; 10
 - (d) state the reasons why the GEMA proposes to make the modification.
- (5) If, after complying with sub-paragraphs (2) to (4) in relation to a modification, the GEMA decides to make a modification, it must publish a notice about the decision.
- (6) A notice under sub-paragraph (5) must— 15
- (a) state that the GEMA has decided to make the modification;
 - (b) set out the modification and its effect;
 - (c) specify the date from which the modification has effect;
 - (d) state how the GEMA has taken account of any representations made in the period specified in the notice under sub-paragraph (2); 20
 - (e) state the reason for any differences between the modification set out in the notice and the proposed modification.
- (7) A notice under this paragraph about a modification or decision must be published in such manner as the GEMA considers appropriate for bringing it to the attention of those likely to be affected by the making of the modification or decision. 25
- (8) In this paragraph, “relevant licence holder”—
- (a) in relation to the modification of a qualifying document, means the holder of a relevant licence in accordance with the conditions of which the document is maintained; 30
 - (b) in relation to the modification of standard conditions of relevant licences of any type, means the holder of a relevant licence of that type—
 - (i) that is to be modified by the inclusion of any new standard condition, or 35
 - (ii) that includes any standard conditions to which the modifications relate which are in effect during the period specified by virtue of sub-paragraph (2)(c);
 - (c) in relation to the modification of a condition of a particular relevant licence (other than a standard condition), means the holder of that particular relevant licence. 40

- (9) For the purposes of this paragraph, “modification”, in relation to a qualifying document, includes the incorporation of the whole or part of the provision made by the document into another document.
- 5 (1) Sub-paragraphs (2) and (3) apply where at any time the GEMA modifies the conditions of licences of any type under paragraph 4. 5
- (2) If the conditions modified are standard conditions, the GEMA must—
- (a) also make (as nearly as may be) the same modifications of those conditions for the purposes of their incorporation in licences of that type granted after that time, and
- (b) publish the modifications in such manner as it considers appropriate 10 for the purpose of bringing them to the attention of persons likely to be affected by the making of the modifications.
- (3) The GEMA may make such incidental or consequential modifications of any conditions of licences of any type as it considers necessary or expedient.
- (4) The modification of part of a standard condition of a particular licence 15 under paragraph 4 does not prevent any other part of the condition from continuing to be regarded as a standard condition for the purposes of Part 1 of the Electricity Act 1989 (in the case of a licence under section 6(1) of that Act) or Part 1 of the Gas Act 1986 (in the case of a licence under section 7, 7ZA, 7A or 7AB of that Act). 20

Amendment or termination of qualifying contracts

- 6 (1) The GEMA may amend a qualifying contract.
- (2) Before making an amendment under sub-paragraph (1), the GEMA must—
- (a) send a notice about the proposed amendment to the persons listed 25 in sub-paragraph (4), and
- (b) consider any representations made within the period specified in the notice about the proposed amendment or the date from which it would take effect.
- (3) A notice under sub-paragraph (2) must—
- (a) state that the GEMA proposes to make an amendment; 30
- (b) set out the proposed amendment and its effect;
- (c) specify the date from which the GEMA proposes that the amendment will have effect;
- (d) state the reasons why the GEMA proposes to make the amendment.
- (4) The persons mentioned in sub-paragraph (2)(a) are— 35
- (a) each person who is a party to the contract to which the proposed amendment relates;
- (b) any person liable by virtue of paragraph 12 to make a payment by way of compensation as a result of the proposed amendment;
- (c) such other persons as the GEMA considers appropriate. 40

- (5) If, after complying with sub-paragraphs (2) to (4) in relation to an amendment, the GEMA decides to make an amendment, it must send a notice to the persons listed in sub-paragraph (4) about the decision.
- (6) A notice under sub-paragraph (5) must—
- (a) state that the GEMA has decided to make the amendment; 5
 - (b) set out the amendment and its effect;
 - (c) specify the date from which the amendment has effect;
 - (d) state how the GEMA has taken account of any representations made in the period specified in the notice under sub-paragraph (2);
 - (e) state the reason for any differences between the amendment set out in the notice and the proposed amendment. 10
- (7) In this paragraph, “amend”, in relation to a contract, includes terminate.

Arrangements in connection with code consolidation

- 7 (1) The GEMA may, in connection with the consolidation of one or more qualifying documents, make a scheme for the purpose of securing the continued effect of rights or liabilities under a contract that is a qualifying contract within paragraph 1(3)(a). 15
- (2) “Consolidation”, in relation to a qualifying document, means the incorporation of the whole or part of the provision made by the document into another document. 20
- (3) A scheme under this paragraph may make incidental, supplementary or consequential provision (including provision amending the qualifying contract).

Transfer schemes

- 8 (1) The GEMA may make one or more schemes for the transfer of designated property, rights or liabilities from one person (“the transferor”) to another person (“the transferee”) where the condition in sub-paragraph (2) is met. 25
- (2) The condition is that the designated property, rights or liabilities—
- (a) relate to the operation of the provisions of a qualifying document, and 30
 - (b) are reasonably required by the transferee for the purposes of its obligations under a code manager licence (whether or not the licence has yet been granted to the transferee).
- (3) On the transfer date, the designated property, rights and liabilities are transferred and vest in accordance with the scheme. 35
- (4) The rights and liabilities that may be transferred by a scheme include those arising under or in connection with a contract of employment.
- (5) A certificate by the GEMA that anything specified in the certificate has vested in any person by virtue of a scheme is conclusive evidence for all purposes of that fact. 40

- (6) A scheme may make provision—
- (a) for anything done by or in relation to the transferor in connection with any property, rights or liabilities transferred by the scheme to be treated as done, or to be continued, by or in relation to the transferee; 5
 - (b) for references to the transferor in any agreement (whether written or not), instrument or other document relating to any property, rights or liabilities transferred by the scheme to be treated as references to the transferee;
 - (c) about the continuation of legal proceedings; 10
 - (d) for transferring property, rights or liabilities that could not otherwise be transferred or assigned;
 - (e) for transferring property, rights and liabilities irrespective of any requirement for consent that would otherwise apply;
 - (f) for preventing a right of pre-emption, right of reverter, right of forfeiture, right to compensation or other similar right from arising or becoming exercisable as a result of the transfer of property, rights or liabilities; 15
 - (g) for dispensing with any formality in relation to the transfer of property, rights or liabilities by the scheme; 20
 - (h) for transferring property acquired, or rights or liabilities arising, after the scheme is made but before it takes effect;
 - (i) for apportioning property, rights or liabilities;
 - (j) for creating rights, or imposing liabilities, in connection with property, rights or liabilities transferred by the scheme; 25
 - (k) for requiring the transferee to enter into any agreement of any kind, or for a purpose, specified in or determined in accordance with the scheme.
- (7) Sub-paragraph (6)(b) does not apply to references in—
- (a) primary legislation, or 30
 - (b) an instrument made under primary legislation.
- (8) A scheme may—
- (a) include incidental, supplementary or consequential provision;
 - (b) make transitory or transitional provision or savings;
 - (c) make different provision for different purposes; 35
 - (d) make provision subject to exceptions.
- (9) In this paragraph—
- “designated”, in relation to a scheme, means specified in or determined in accordance with the scheme;
 - “primary legislation” means— 40
 - (a) an Act of Parliament,
 - (b) an Act of the Scottish Parliament,
 - (c) an Act or Measure of Senedd Cymru, or

- (d) Northern Ireland legislation;
“property” includes interests of any description;
“the transfer date” means a date specified by a scheme as the date on which the transfer is to have effect.
- 9 (1) Before making a scheme under paragraph 8, the GEMA must consult – 5
(a) the transferor;
(b) the transferee;
(c) such other persons as the GEMA considers appropriate.
- (2) The approval of the Secretary of State is required for the making of a scheme under paragraph 8. 10
- 10 (1) The GEMA may modify a scheme under paragraph 8.
- (2) The power under sub-paragraph (1) is not exercisable in relation to a scheme after the end of the period of 12 months beginning with the day on which the scheme takes effect.
- (3) Paragraphs 8 and 9 apply in relation to the modification of a scheme as they apply in relation to the making of the scheme. 15

Information

- 11 (1) The GEMA may direct a person who holds information reasonably required by the GEMA – 20
(a) in preparation for the granting of a code manager licence, or
(b) for the purposes of or in connection with the exercise of any of the other functions of the GEMA under this Schedule,
to provide the information to the GEMA.
- (2) A person to whom a direction is given under sub-paragraph (1) must, so far as reasonably practicable, provide the GEMA with the information – 25
(a) within the period specified in the direction, and
(b) in the form and manner so specified.
- (3) A direction given to a person under sub-paragraph (1) is enforceable by the GEMA in civil proceedings – 30
(a) for an injunction,
(b) for specific performance of a statutory duty under section 45 of the Court of Session Act 1988, or
(c) for any other appropriate remedy or relief.

Compensation

- 12 (1) The relevant code manager must make a payment to a person within sub-paragraph (2) in compensation for financial loss suffered by the person in consequence of the exercise by the GEMA of – 35
(a) the power under paragraph 6 in relation to a qualifying contract within paragraph 1(3)(b) or (c), or
(b) the power under paragraph 8 (transfer schemes). 40

- (2) The persons within this sub-paragraph are –
- (a) a person who is a party to a contract that is amended or terminated under paragraph 6;
 - (b) the transferor in relation to a scheme under paragraph 8;
 - (c) a person, other than the transferor or transferee in relation to a scheme under paragraph 8, who has a right in relation to anything transferred by the scheme. 5
- (3) The amount of a payment under sub-paragraph (1) is to be –
- (a) in a case relating to the exercise of the power under paragraph 6, such amount as the GEMA considers to be just; 10
 - (b) in a case relating to the exercise of the power under paragraph 8, an amount specified in or determined in accordance with provision made in the scheme in question.
- (4) In this paragraph, “the relevant code manager” means –
- (a) in relation to the exercise of the power under paragraph 6, the person who holds a code manager licence in relation to the document to which the qualifying contract in question relates; 15
 - (b) in relation to the exercise of the power under paragraph 8, the person who is the transferee in relation to the scheme in question.
- (5) The GEMA may in a particular case direct – 20
- (a) which person is the relevant code manager for the purposes of this paragraph;
 - (b) that two or more persons are jointly to be the relevant code manager for those purposes.
- (6) The Secretary of State may in a particular case direct that the duty under sub-paragraph (1) is to be discharged by a person specified in the direction (instead of by the relevant code manager). 25

Other

- 13 Any requirement imposed by this Schedule to carry out consultation may be satisfied by consultation before the passing of this Act (as well as by consultation after that time). 30

SCHEDULE 11

Section 154(2)

GOVERNANCE OF GAS AND ELECTRICITY INDUSTRY CODES: PENSIONS

Introductory

- 1 (1) In this Schedule – 35
- “active member” has the same meaning as in section 124(1) of the Pensions Act 1995;

- “associate” has the same meaning as in section 1152 of the Companies Act 2006;
- “member” has the same meaning as in section 124(1) of the Pensions Act 1995;
- “prescribed” means prescribed by regulations made by the GEMA; 5
- “qualifying accrued rights” means –
- (a) any right which, at the relevant time, has accrued to or in respect of a qualifying member of a qualifying pension scheme to future benefits under the scheme,
 - (b) any entitlement under a qualifying pension scheme to the present payment of a pension or other benefit that a qualifying member of the scheme has at the relevant time, or 10
 - (c) any entitlement to benefits, or rights to future benefits, under a qualifying pension scheme that a person who has survived a qualifying member of the scheme has at the relevant time in respect of the member; 15
- “qualifying member”, in relation to a qualifying pension scheme, means a person who is or has been a member of the scheme;
- “qualifying pension scheme” means a scheme that provides for the payment of pensions or other benefits to or in respect of employees or former employees of – 20
- (a) a transferor in relation to a scheme under paragraph 8 of Schedule 10, or
 - (b) an associate of such a transferor; 25
- “the relevant time” means the time immediately before the prescribed date (which may be before the passing of this Act).
- (2) For the purposes of the definition of “qualifying accrued rights” in sub-paragraph (1) – 30
 - (a) references to pensions or other benefits (including future benefits) include money purchase benefits;
 - (b) references to a right include a pension credit right.
 - (3) In the event that a section of a qualifying pension scheme is constituted as a separate pension scheme the members of which consist of or include persons who are qualifying members of the qualifying pension scheme, any reference in this Schedule to the qualifying pension scheme includes a reference to that separate pension scheme. 35

Participation in qualifying pension schemes and transfer of assets and rights

- 2 (1) The GEMA may by regulations make such pensions provision as it considers appropriate in preparation for the granting of a code manager licence to a person in respect of a designated document. 40
- (2) “Pensions provision” means provision in connection with a qualifying pension scheme, including provision for –

- (a) enabling a person to participate in the scheme;
 - (b) the division of the scheme into different sections;
 - (c) the participation in the different sections of different persons;
 - (d) the allocation of assets, rights, liabilities or obligations between the different sections; 5
 - (e) the transfer of assets and qualifying accrued rights from the scheme to another pension scheme (whether or not a qualifying pension scheme), without the need for any approval or consent to the transfer;
 - (f) the valuation of assets and qualifying accrued rights in accordance with provision made by the regulations, for the purposes of their allocation to a particular section or for the purposes of their transfer as mentioned in paragraph (e); 10
 - (g) the discharge of liabilities in respect of qualifying accrued rights that are transferred. 15
- (3) Regulations under sub-paragraph (1) may have retrospective effect.
- (4) Before making regulations under sub-paragraph (1), the GEMA must consult—
- (a) the trustee of the qualifying pension scheme or schemes in question, and 20
 - (b) the person who is the principal employer in relation to that scheme or those schemes.
- (5) The approval of the Secretary of State is required for the making of regulations under sub-paragraph (1).

Amendment of qualifying pension schemes 25

- 3 (1) The GEMA may by regulations make such amendments of a qualifying pension scheme as it considers appropriate—
- (a) in preparation for the granting of a code manager licence to a person in respect of a designated document, or
 - (b) in connection with the making of regulations under paragraph 2. 30
- (2) The provision that may be made under sub-paragraph (1) includes—
- (a) provision authorising or requiring the amount of pensions or other benefits payable to or in respect of qualifying members of the scheme to be determined in particular circumstances by reference to pensionable service under the scheme in question before and after the relevant time; 35
 - (b) provision for the transfer out of assets, rights, liabilities or obligations from one or more new sections of a qualifying pension scheme to another pension scheme (whether or not a qualifying pension scheme); 40
 - (c) provision for the transfer in of assets, rights, liabilities or obligations to one or more new sections of one qualifying pension scheme from one or more new sections of another qualifying pension scheme.

- (3) Regulations under sub-paragraph (1) may have retrospective effect.
- (4) Before making regulations under sub-paragraph (1), the GEMA must consult—
 - (a) the trustee of the qualifying pension scheme being amended, and
 - (b) the person who is the principal employer in relation to that scheme. 5
- (5) The approval of the Secretary of State is required for the making of regulations under sub-paragraph (1).
- (6) In this paragraph—
 - (a) the reference to making amendments of a qualifying pension scheme includes a reference to amending the trust deed or rules of that scheme or any other instrument relating to the constitution, management or operation of the scheme; 10
 - (b) references to a “new” section of a qualifying pension scheme are to one of the sections into which the scheme is divided by regulations under paragraph 2(1); 15
 - (c) “pensionable service” has the same meaning as in section 124(1) of the Pensions Act 1995.

Protection against adverse treatment

- 4 (1) When exercising the power to make regulations under paragraph 2 or 3, the GEMA must ensure that the following requirements are met in respect of each person who is or has been a qualifying member of a qualifying pension scheme— 20
 - (a) the general scheme requirement;
 - (b) where the regulations relate to a person’s rights or entitlements to money purchase benefits other than pensions in payment, the money purchase requirement. 25
- (2) The general scheme requirement is that the provision for the payment of pensions or other benefits that is contained in a qualifying pension scheme or any other pension scheme to which a transfer is made by virtue of paragraph 2(2)(e) is, in all material respects, at least as good immediately after the exercise of the power as it is immediately before its exercise. 30
- (3) The money purchase requirement is that the value of the rights or entitlements to money purchase benefits, other than pensions in payment, that a person has under a qualifying pension scheme or any other pension scheme to which a transfer is made by virtue of paragraph 2(2)(e) immediately after, and as a result of, the exercise of the power is at least equivalent to the value of the person’s rights or entitlements before its exercise. 35
- (4) Nothing in sub-paragraph (1) requires— 40
 - (a) the different sections (if any) of a qualifying pension scheme to be established in a particular way,

- (b) particular provisions of the sections, or of a pension scheme to which a transfer is made by virtue of paragraph 2(2)(e), to take the same or similar form, or
 - (c) any power or duty conferred or imposed by a qualifying pension scheme to be exercised or performed in a particular way. 5
- (5) The power of the GEMA to amend a qualifying pension scheme may not be exercised in any way that would or might adversely affect any provision of the scheme made in respect of qualifying accrued rights unless—
- (a) the applicable consent requirements are satisfied in respect of the exercise of the power in that way, or 10
 - (b) the scheme is amended in the prescribed manner.
- (6) The applicable consent requirements are the requirements that apply in relation to obtaining the consent of members of the scheme to its amendment (including any such requirements set out in the trust deed or rules of the scheme). 15

Information

- 5 (1) The GEMA may direct a person who holds relevant pensions information to provide it to the GEMA.
- (2) “Pensions information” means specified information that—
- (a) relates to pensions or other benefits under a qualifying pension scheme, or 20
 - (b) relates to the administration of a qualifying pension scheme in respect of pensions or other benefits under the scheme.
- (3) A person to whom a direction is given under sub-paragraph (1) must, so far as reasonably practicable, provide the specified pensions information— 25
- (a) within the specified period, and
 - (b) in the specified form and manner.
- (4) A direction under sub-paragraph (1) is enforceable by the GEMA in civil proceedings—
- (a) for an injunction, 30
 - (b) for specific performance of a statutory duty under section 45 of the Court of Session Act 1988, or
 - (c) for any other appropriate remedy or relief.
- (5) In this paragraph, “specified” means specified in the direction.

SCHEDULE 12

Section 155

MINOR AND CONSEQUENTIAL AMENDMENTS RELATING TO PART 5

Gas Act 1986

- 1 The Gas Act 1986 is amended as follows.
- 2 In section 6A(1) (power to grant exemptions from prohibition), for “or (d)” 5
substitute “, (d) or (e)”.
- 3 (1) Section 28 (orders for securing compliance with certain provisions) is
amended as follows.
- (2) In subsection (8), in the definition of “regulated person”, after paragraph 10
(f) insert—
- “(g) a responsible body for a central system;”.
- (3) After subsection (8) insert—
- “(8A) In paragraph (g) of the definition of “regulated person” in subsection 15
(8), the reference to a responsible body for a central system is a
reference to a person for the time being specified in regulations
under section 138 of the Energy Act 2023 in relation to a designated
central system (within the meaning of that Act).”
- 4 In Schedule 4B (provisions imposing obligations enforceable as relevant
requirements), after paragraph 9A insert— 20
- “Responsible bodies for central systems*
- 9B (1) Section 148(3) of the Energy Act 2023 is a relevant provision in
relation to a responsible body for a central system.
- (2) The reference in sub-paragraph (1) to a responsible body for a
central system is a reference to a person for the time being 25
specified in regulations under section 138 of the Energy Act 2023
in relation to a designated central system (within the meaning of
that Act).”

Electricity Act 1989

- 5 The Electricity Act 1989 is amended as follows.
- 6 In section 5(1) (power to grant exemptions from prohibition), for “or (e)” 30
substitute “, (e) or (f)”.
- 7 (1) Section 25 (orders for securing compliance) is amended as follows.
- (2) In subsection (8), in the definition of “regulated person”, after paragraph
(d) insert—
- “(da) a responsible body for a central system;”;
- 35

(3) After subsection (8) insert—

“(8A) In paragraph (da) of the definition of “regulated person” in subsection (8), the reference to a responsible body for a central system is a reference to a person for the time being specified in regulations under section 138 of the Energy Act 2023 in relation to a designated central system (within the meaning of that Act).”

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8 In Schedule 6A (provisions imposing obligations enforceable as relevant requirements), after paragraph 9 insert—

“Responsible bodies for central systems

9ZA (1) Section 148(3) of the Energy Act 2023 is a relevant provision in relation to a responsible body for a central system.

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(2) The reference in sub-paragraph (1) to a responsible body for a central system is a reference to a person for the time being specified in regulations under section 138 of the Energy Act 2023 in relation to a designated central system (within the meaning of that Act).”

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Energy Act 2004

9 The Energy Act 2004 is amended as follows.

10 In section 173 (appeals to the Competition and Markets Authority), after subsection (2B) insert—

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“(2C) This section also applies to a decision by GEMA to modify a designated document (within the meaning of Part 5 of the Energy Act 2023) under section 146 of that Act.”

11 (1) Schedule 22 (procedure for appeals under section 173) is amended as follows.

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(2) In paragraph 4 (time limit for representations and observations)—

(a) in sub-paragraph (1), for the words from “fifteen working days” to the end substitute “the relevant period”;

(b) after sub-paragraph (1) insert—

“(1A) “The relevant period” means—

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(a) 15 working days following the day of the making of the application for permission to bring the appeal, or

(b) such longer period following that day as an authorised member of the CMA may allow.”;

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(c) in sub-paragraph (2), for “that period of fifteen working days” substitute “the relevant period”.

(3) In paragraph 6 (timetable for determination of appeal)—

(a) in sub-paragraph (1), for “thirty working days” substitute “4 months”;

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- (b) in sub-paragraph (2) –
 - (i) for “thirty working days” substitute “4 months”;
 - (ii) for “ten more working days” substitute “1 month”.

Energy Act 2023

- 12 In section 83 – 5
- (a) after subsection (1) insert –
 - “(1A) The Secretary of State may modify –
 - (a) a condition of a particular licence under section 6(1)(g) of the Electricity Act 1989 (code manager licence); 10
 - (b) a document maintained in accordance with the conditions of licences under section 6(1)(g) of the Electricity Act 1989, or an agreement that gives effect to a document so maintained.”;
 - (b) in subsection (2)(a) – 15
 - (i) after “7”, insert “or 7AC”;
 - (ii) after “transporters” insert “or code manager licence”;
 - (c) in subsection (2)(c), after “7” insert “or 7AC”;
 - (d) in subsection (7), after “(1)” insert “, (1A)”.

SCHEDULE 13 Section 156 20

COMPETITIVE TENDERS FOR ELECTRICITY PROJECTS

PART 1

AMENDMENTS OF ELECTRICITY ACT 1989

- 1 The Electricity Act 1989 is amended as follows.
- 2 After section 6B insert – 25
- “6BA Meaning of “relevant electricity project”, “relevant licence” and “relevant contract”**
- (1) In this Part, “relevant electricity project” means a project –
 - (a) that relates to the total system, an electricity interconnector or a multi-purpose interconnector, and 30
 - (b) in relation to which criteria specified in regulations made by the Secretary of State are satisfied.
 - (2) In subsection (1)(a), “the total system” means all transmission systems and distribution systems in Great Britain and offshore waters. 35

- (3) In this Part, “relevant licence” means –
- (a) a transmission licence that does not authorise the licence holder to co-ordinate and direct the flow of electricity as described in section 4(3A)(a);
 - (b) a generation licence, a distribution licence, an interconnector licence or an MPI licence. 5
- (4) In this Part, “relevant contract” means a contract, entered into by a person with the holder of a transmission licence, a system operator electricity licence or a distribution licence (referred to in this Part as a “contract counterparty”), for the carrying out of a relevant electricity project. 10
- (5) Regulations under this section may make different provision for different purposes.
- (6) Before making regulations under this section, the Secretary of State must consult – 15
- (a) the Authority,
 - (b) such holders of relevant licences as the Secretary of State considers appropriate, and
 - (c) such other persons as the Secretary of State considers appropriate. 20

6BB Designation of a delivery body

- (1) The Secretary of State may by regulations designate a person for the purposes of this section; and a person so designated is referred to in this Part as a “delivery body”.
- (2) The designation of a person for the purposes of this section has effect subject to any conditions imposed by the Secretary of State in the regulations designating the person. 25
- (3) More than one person may be designated for the purposes of this section at the same time.
- (4) Regulations under this section may designate different persons for different purposes. 30
- (5) The Secretary of State may by regulations revoke a person’s designation if the person ceases to meet any condition subject to which the designation has effect.
- (6) The Secretary of State may make indemnity payments to a delivery body (subject to subsection (9)). 35
- (7) An indemnity payment is a payment in respect of costs or expenses incurred by a delivery body in connection with judicial review proceedings in relation to anything done, or omitted to be done, in

the exercise (or purported exercise) of functions conferred on the body by regulations under section 6C.

- (8) An indemnity payment may be made subject to such conditions as may be determined by the Secretary of State.
- (9) Subsection (6) does not authorise the making of a payment to the Authority (where it is designated under subsection (1)).”

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3 For sections 6C and 6D substitute –

“6C Competitive tenders

(1) The Authority may by regulations (“tender regulations”) make such provision as appears to it to be appropriate for facilitating the making by a delivery body of –

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- (a) a decision whether to hold a tender exercise in relation to a relevant electricity project;
- (b) in prescribed circumstances, a determination on a competitive basis of any of the matters listed in subsection (2).

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(2) Those matters are –

- (a) the person by whom a relevant electricity project is to be carried out;
- (b) the person to whom a relevant licence is to be granted (whether for the purposes of a relevant electricity project or otherwise);
- (c) the person to whom a relevant contract is to be awarded.

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(3) The provision mentioned in subsection (1) includes –

- (a) provision for the Authority to determine, in prescribed cases, whether a tender exercise should be held, or continued, in relation to a relevant electricity project;
- (b) provision for the publication, in prescribed cases, of a proposal for a relevant licence to be granted or for a relevant contract to be awarded;
- (c) provision for the inclusion in such a proposal of an invitation to apply for such a licence or to bid for such a contract;
- (d) provision restricting applications and bids and imposing requirements as to the period within which they must be made;
- (e) provision for regulating the manner in which applications and bids are considered and determined.

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(4) The provision mentioned in subsection (1) also includes –

- (a) provision conferring functions on a delivery body;
- (b) provision authorising the Authority to conduct a review of the exercise by a delivery body of functions conferred on it by the regulations;

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- (c) provision authorising the Authority to appoint another person to conduct such a review on the Authority’s behalf.
- (5) The provision that may be made by virtue of subsection (4)(a) includes provision requiring a delivery body, in prescribed circumstances, to provide information about prescribed matters to the Authority. 5
- (6) Tender regulations—
 - (a) may make provision by reference to a determination by the Authority or by a delivery body, or to the opinion of the Authority or of a delivery body, as to any matter; 10
 - (b) may dispense with or supplement provision made in relation to applications for relevant licences by or under section 6A or 6B.
- (7) The approval of the Secretary of State is required for the making of tender regulations. 15
- (8) The making of a determination by virtue of subsection (2)(b) or (c) that a person is to be granted a relevant licence or awarded a relevant contract does not of itself require—
 - (a) the Authority to exercise its power to grant a relevant licence to the person, or 20
 - (b) a contract counterparty to award a relevant contract to the person,
 (as the case may be).

6CA Power to require information

- (1) Tender regulations may include provision authorising a person to whom subsection (2) applies (“P”), by notice given to another person (an “information notice”), to require the other person to provide relevant information to P. 25
- (2) This subsection applies to—
 - (a) the Authority; 30
 - (b) a delivery body;
 - (c) a contract counterparty.
- (3) “Relevant information” means information that P reasonably requires for the purposes of or in connection with the exercise of P’s functions. 35
- (4) References in this section to the Authority include a person appointed by the Authority by virtue of section 6C(4)(c), where the information sought relates to a function conferred by virtue of section 6C(4)(b) (review of activities of delivery body).

- (5) Provision made by virtue of subsection (1) must require an information notice –
 - (a) to specify or describe the information sought, and
 - (b) to specify the time by which the information must be provided. 5

- (6) Provision made by virtue of subsection (1) may include provision –
 - (a) for an information notice and information obtained in pursuance of it to be shared with the Authority, where the notice is given by a person other than the Authority;
 - (b) for the classification and protection of confidential or sensitive information; 10
 - (c) for the enforcement by the Authority of a requirement to provide information in pursuance of an information notice;
 - (d) for the amount of any financial penalty imposed on a person by virtue of paragraph (c) to be determined by the Authority in accordance with tender regulations; 15

6CB Recovery of tender costs

- (1) Tender regulations may include provision requiring –
 - (a) the payment to the Authority or a delivery body, in prescribed circumstances, of amounts in respect of – 20
 - (i) tender costs of the Authority, or of the delivery body, in relation to a tender exercise;
 - (ii) such amounts in respect of the Authority’s tender costs as the Authority considers appropriate, where those costs are not attributable to a particular tender exercise; 25
 - (iii) such amounts in respect of the delivery body’s tender costs as the Authority considers appropriate, where those costs are not attributable to a particular tender exercise. 30
 - (b) the provision to the Authority or to a delivery body, in prescribed circumstances, of a deposit of a prescribed amount in respect of a liability which a person has, or may in future have, by virtue of paragraph (a) in relation to a relevant licence or relevant contract; 35
 - (c) the provision to the Authority or to a delivery body, in prescribed circumstances, of security in a form approved by it in respect of such a liability.

- (2) The provision that may be made by virtue of subsection (1)(a) includes provision requiring the payment of cost assessment costs incurred by – 40
 - (a) the Authority, or
 - (b) the delivery body,

after the Authority or delivery body (as the case may be) has taken the steps required by virtue of subsections (7) to (9) in relation to the tender exercise.

- (3) The regulations may require the payments to be made, or the deposit or security to be provided, by one or more of the following— 5
- (a) any person who has made a connection request for the purposes of which the tender exercise has been, is being, or is to be, held;
 - (b) any person who made a connection request for the purposes of which any previous tender exercise relating to the same transmission system, or a transmission system consisting of some or all of the same lines or plant or connecting any of the same generating stations or substations, was held; 10
 - (c) any person who made a connection request for the purposes of which any previous tender exercise relating to the same distribution system, or a distribution system consisting of some or all of the same lines or plant or connecting any of same premises or other distribution systems, was held; 15
 - (d) any person who operates a generating station which is connected to the transmission or distribution system to which the tender exercise relates; 20
 - (e) any person who submits an application for the relevant licence or bids for the award of a relevant contract to which the tender exercise relates;
 - (f) any person who is the holder of a transmission licence, a distribution licence, an interconnector licence or an MPI licence. 25
- (4) The regulations may make provision about how—
- (a) payments are to be made, and
 - (b) deposits or other forms of security are to be provided, 30
- including provision for them to be made or provided by a person approved by the Authority or by a delivery body.
- (5) The regulations may include provision about—
- (a) the times at which payments are to be made, or deposits or other forms of security are to be provided, under the regulations; 35
 - (b) the circumstances in which a payment made in accordance with regulations made by virtue of subsection (1)(a) is to be repaid (wholly or in part);
 - (c) the circumstances in which such a repayment is to include an amount representing interest accrued on the whole or part of the payment; 40
 - (d) the circumstances in which a deposit (including any interest accrued on it) or other security provided in accordance with

- the regulations is to be released or forfeited (wholly or in part);
- (e) the effect on a person's participation in the tender exercise of a failure to comply with a requirement imposed by virtue of this section, and the circumstances in which the tender exercise is to stop as a result of such a failure. 5
- (6) The regulations may include provision for –
- (a) the review by the Authority, or by a person appointed by the Authority, of any tender costs determined by a delivery body; 10
- (b) the amendment by a delivery body of its tender costs following such a review.
- (7) The regulations must ensure that, as soon as reasonably practicable after a tender exercise or series of tender exercises is finished –
- (a) where the Authority is the delivery body, steps are taken 15
by the Authority, in accordance with the regulations, to ensure that the aggregate of the amounts in subsection (9) does not exceed the Authority's tender costs in respect of the exercise or series of exercises;
- (b) in any other case, steps are taken by the delivery body, in 20
accordance with the regulations, to ensure that the aggregate of the amounts in subsection (9) does not exceed the aggregate of –
- (i) the Authority's tender costs, and
- (ii) the delivery body's tender costs, 25
in respect of the exercise or series of exercises.
- (8) The regulations must also ensure that, in a case within subsection (7)(b), the aggregate of the amounts within subsection (9) so far as relating to any particular tender exercise does not include any amount that falls within paragraph (a) of the definition of tender costs in section 6CD(4) in relation to a different tender exercise. 30
- (9) The amounts are –
- (a) any fees under section 6A(2) in respect of applications for relevant licences,
- (b) any payments made or deposits provided in accordance with 35
regulations made by virtue of subsection (1)(a) or (b) and not repaid, and
- (c) the value of any security provided in accordance with regulations made by virtue of subsection (1)(c) and forfeited in accordance with regulations made by virtue of subsection (5)(d), 40
- so far as relating to the tender exercise or series of tender exercises in question.

6CC Competitive tenders: supplementary

- (1) For the purposes of section 6CB(3), a person makes a connection request when the person makes an application to—
- (a) the holder of a co-ordination licence (in accordance with any provision made by the licence) for an offer of connection to and use of a transmission system, or 5
 - (b) an electricity distributor (whether in accordance with any provision made by the distributor’s licence or otherwise) for an offer of connection to and use of the distributor’s distribution system. 10
- (2) A person (“P”) is to be treated for those purposes as having made a connection request if—
- (a) P would have made the connection request, but for the fact that another person had already made an application within subsection (1)(a) or (b), and 15
 - (b) the benefit of that application, or any agreement resulting from it, is vested in P.
- (3) Where tender regulations—
- (a) restrict the making of applications for relevant licences or bids for relevant contracts in relation to a relevant electricity project, or 20
 - (b) operate so as to prevent an application or bid from being considered or further considered, if the applicant does not meet one or more prescribed requirements,
- the regulations may make provision enabling a person to apply to a relevant body for a decision as to the effect of any such restriction or requirement if the person were to make such an application or bid. 25
- (4) Regulations made by virtue of subsection (3) may enable a relevant body to charge a person who makes such an application or bid a prescribed fee for any decision given in response to it. 30
- (5) Where the successful bidder, in relation to a tender exercise, already holds a relevant licence (“the existing licence”)—
- (a) the Authority may make such modifications of the existing licence as are necessary for the purpose of giving effect to the determination resulting from the tender exercise, and 35
 - (b) references in this Part to the grant of a relevant licence are to be read accordingly.
- (6) Before making any modifications under subsection (5)(a), the Authority must give notice— 40
- (a) stating that it proposes to make the modifications and setting out their effect, and

- (b) specifying the time (not being less than 28 days from the date of publication of the notice) within which representations or objections with respect to the proposed modifications may be made,
and must consider any representations or objections that are duly made and not withdrawn. 5
- (7) Any sums received by the Authority under tender regulations are to be paid into the Consolidated Fund.
- (8) In section 6CB and this section –
“co-ordination licence” means a transmission licence which authorises a person to co-ordinate and direct the flow of electricity onto and over a transmission system – 10
(a) by means of which the transmission of electricity takes place, and
(b) the whole or a part of which is at a relevant place (within the meaning of section 4(5)); 15
“functions” includes powers and duties;
“relevant body” means the Authority, a delivery body or a contract counterparty.
- 6CD Sections 6C to 6CC: further definitions** 20
- (1) This section defines expressions that are used in sections 6C to 6CC (as well as in this section).
- (2) “Prescribed” means prescribed in or determined under tender regulations.
- (3) “Tender exercise” means the steps taken in accordance with tender regulations with a view to determining one or more of the following – 25
(a) the person by whom a relevant electricity project is to be carried out;
(b) the person to whom a relevant licence is to be granted; 30
(c) the person to whom a relevant contract is to be awarded.
- (4) “Tender costs” means –
(a) costs (including any cost assessment costs) incurred or likely to be incurred by the Authority for the purposes of a particular tender exercise or prospective tender exercise; 35
(b) costs (including any cost assessment costs) incurred or likely to be incurred by a delivery body for the purposes of a particular tender exercise or prospective tender exercise;
(c) such proportion as the Authority considers appropriate of the costs that – 40

-
- (i) have been, or are likely to be, incurred by the Authority or by a delivery body under regulations under section 6C, and
 - (ii) are not directly attributable to a particular tender exercise. 5
- (5) “Cost assessment costs”, in relation to a tender exercise, means costs incurred or likely to be incurred by the Authority or by a delivery body in connection with any assessment of –
- (a) costs that have been or are to be incurred in connection with any property, rights or liabilities necessary or expedient for the performance by a person of functions under a relevant licence granted or a relevant contract awarded to the person as a result of the tender exercise; 10
 - (b) costs incurred in connection with any property, rights or liabilities that would have been necessary or expedient for the performance of functions under a relevant licence or a relevant contract if such a licence or contract had been granted or awarded to a person as a result of the tender exercise. 15
- (6) “Successful bidder”, in relation to a tender exercise, is the person in respect of whom (as a result of the exercise) any of the following applies – 20
- (a) a delivery body determines that a relevant electricity project is to be carried out by the person;
 - (b) a relevant licence has been or is to be granted to the person; 25
 - (c) a relevant contract has been or is to be awarded to the person.
- (7) Section 6C(8) applies for the purposes of subsections (3)(b) and (c) and (6)(b) and (c) as it applies for the purposes of section 6C(2)(b) and (c).” 30
- 4 In section 6E (property schemes) –
- (a) for “offshore transmission licences” substitute “relevant licences and awards of relevant contracts”;
 - (b) in the heading, for “offshore transmission licences” substitute “relevant licences and contracts”. 35
- 5 (1) Section 6F (offshore transmission during commissioning period) is amended as follows.
- (2) In subsection (2), for “an offshore” substitute “a”.
- (3) In subsection (4) –
- (a) at the beginning insert “In relation to an offshore transmission system,”; 40
 - (b) in paragraph (a), for “the tender regulations” substitute “offshore transmission tender regulations”.

- (4) After subsection (4) insert –
- “(4A) In relation to a transmission system other than an offshore transmission system, the third condition is that –
- (a) either –
- (i) a tender exercise for the granting of a relevant licence in respect of the system has been or is being held, or
- (ii) a delivery body has determined to hold a tender exercise for the granting of a relevant licence in respect of the system, and
- (b) the system, or anything forming part of it, has not been transferred to the successful bidder.”
- (5) In subsection (8) –
- (a) in the definition of “developer”, for the words from “section 6D(2)(a)” to the end substitute “section 6CB(3)(a) or (b) (person who makes the connection request, including any person who is to be so treated by virtue of section 6CC(2))”;
- (b) for the definitions of “offshore transmission” and “offshore transmission licence” substitute –
- ““offshore transmission” means the transmission within an area of offshore waters of electricity generated by a generating station in such an area;
- “offshore transmission licence” means a transmission licence authorising anything that forms part of a transmission system to be used for purposes connected with offshore transmission;
- “offshore transmission tender regulations” means tender regulations that provide for the determination on a competitive basis of the person to whom an offshore transmission licence is to be granted;”;
- (c) for the definitions of “successful bidder” and “tender exercise” substitute –
- ““tender exercise” has the meaning given by section 6CD(3);”;
- (d) in the definition of “relevant generating station”, for “an offshore” substitute “a”;
- (e) for the definition of “the tender regulations” substitute –
- ““tender regulations” has the meaning given by section 6C(1).”
- (6) In the heading omit “Offshore”.
- 6 (1) Section 6G (meaning of “commissioning period”) is amended as follows.
- (2) In subsection (1), for “an offshore” substitute “a”.
- (3) Omit subsections (3) to (5).
- (4) For subsection (6) substitute –
- “(6) In this section –

- “co-ordination licence” means a transmission licence which authorises a person to co-ordinate and direct the flow of electricity onto and over a transmission system by means of which the transmission of electricity takes place and the whole or part of which is at a place in Great Britain, in the territorial sea adjacent to Great Britain or in a Renewable Energy Zone; 5
- “relevant co-ordination licence holder” means the holder of a co-ordination licence to whom a person has applied (in accordance with any provision made by that licence) for an offer of connection to and use of a transmission system for the purposes of which the tender exercise is held.” 10
- 7 (1) Section 6H (modification of codes or agreements) is amended as follows.
- (2) In subsection (1), for “a transmission licence or a distribution licence” substitute “a relevant licence”. 15
- (3) For subsection (2) substitute –
- “(2) The Authority may make a modification under subsection (1) only if it considers it necessary or desirable for the purpose of –
- (a) implementing, or facilitating the implementation of, a determination made in accordance with regulations under section 6C, or 20
- (b) implementing or facilitating the operation of section 6F or 6G.”
- (4) For subsection (4) substitute –
- “(4) Before making a modification under subsection (1) the Authority must – 25
- (a) consult such persons as the Authority considers appropriate, and
- (b) publish a notice – 30
- (i) stating that it proposes to make the modification and its reasons for proposing to make it,
- (ii) setting out the proposed modification and its effect, and
- (iii) specifying the time within which representations may be made (which must not be less than the period of 28 days beginning with the day on which the notice is published).” 35
- (5) In subsection (5), for “the Energy Act 2013” substitute “the Energy Act 2023”.
- (6) In subsection (7), after “subsection” insert “(4) or”. 40
- (7) Omit subsection (8).
- (8) In the heading, after “Sections” insert “6C,”.

- 8 In section 11A (modification of conditions of licences), after subsection (9) insert –
- “(9A) This section does not apply to the modification of a licence in exercise of the power under section 6CC(5)(a) (modification of licence to give effect to determination on a tender exercise).” 5
- 9 In section 64(1) (interpretation etc of Part 1), at the appropriate places insert –
- ““contract counterparty” has the meaning given by section 6BA;”;
- ““delivery body” has the meaning given by section 6BB;”;
- ““offshore transmission” and “offshore transmission licence” have the meaning given by section 6F(8);”;
- ““offshore waters” means –
- (a) waters in or adjacent to Great Britain which are between the mean low water mark and the seaward limits of the territorial sea, and 10
- (b) waters within an area designated under section 1(7) of the Continental Shelf Act 1964;”;
- ““relevant contract” and “relevant licence” have the meaning given by section 6BA;”;
- ““relevant electricity project” has the meaning given by section 6BA;”;
- ““relevant licence” has the meaning given by section 6BA;”.
- 10 Schedule 2A (property schemes) is amended in accordance with paragraphs 11 to 24.
- 11 For paragraph 1 substitute –
- “Scheme-making power”* 25
- 1 (1) This paragraph applies where a tender exercise is held in relation to a relevant electricity project, a relevant licence or a relevant contract.
- (2) The Authority may, on an application under paragraph 3, make a scheme (“a property scheme”) providing for – 30
- (a) the transfer to the successful bidder of, or
- (b) the creation in favour of the successful bidder of rights in relation to,
- any property, rights or liabilities necessary or expedient for construction, commissioning or operational purposes.” 35
- 12 In paragraph 2, at the end insert –
- “(5) A property scheme may not contain provision for the transfer of, or creation of rights in relation to, property, rights or liabilities that the Authority considers it appropriate for the successful bidder to acquire by other means.” 40
- 13 Omit paragraph 5.

-
- 14 In paragraph 12, for “operational purposes” substitute “construction, commissioning or operational purposes” in each of the following places –
- (a) sub-paragraphs (1) to (3);
 - (b) sub-paragraph (10);
 - (c) sub-paragraph (11) (in both places). 5
- 15 For paragraph 13 substitute –
- “13 On an application for a property scheme, no scheme may be made until either a relevant licence has been granted or a relevant contract has been awarded to the successful bidder.”
- 16 In paragraph 14 – 10
- (a) in sub-paragraph (4), for “operational purposes” substitute “construction, commissioning or operational purposes”;
 - (b) in sub-paragraph (6), after paragraph (a) insert –
 - “(aa) a delivery body,
 - (ab) a contract counterparty,”. 15
- 17 In paragraph 15(2), for “operational purposes” substitute “construction, commissioning or operational purposes”.
- 18 Omit paragraph 16(1)(d).
- 19 In paragraph 25(2), for “operational purposes” substitute “construction, commissioning or operational purposes”. 20
- 20 In paragraph 30, for “operational purposes” substitute “construction, commissioning or operational purposes”.
- 21 (1) Paragraph 35 is amended as follows.
- (2) In sub-paragraph (2), for “the offshore transmission licence” substitute “a relevant licence”. 25
- (3) After sub-paragraph (2) insert –
- “(2A) Where a tender exercise is held, as soon as a contract counterparty is satisfied that it will enter into a relevant contract with a particular person if certain matters are resolved to the counterparty’s satisfaction, it must publish a notice to that effect.” 30
- (4) In sub-paragraph (3), for “The notice” substitute “A notice under sub-paragraph (2) or (2A)”.
- (5) After sub-paragraph (4) insert –
- “(4A) A contract counterparty may withdraw a notice given by it under sub-paragraph (2A) by publishing a notice to that effect.” 35
- (6) In sub-paragraph (5), after “(2)” insert “or (2A)”.
- 22 In paragraph 36 –
- (a) omit sub-paragraph (1);

- (b) for sub-paragraph (2) substitute –
- “(2) Where as a result of a tender exercise the Authority determines to grant a relevant licence to a person, it must publish a notice to that effect.
 - (2A) Where as a result of a tender exercise a person is awarded a relevant contract, the contract counterparty with which the contract is to be entered into must publish a notice to that effect.”.
- 23 After paragraph 36 insert –
- “Transmission owner and distribution network owner of last resort*
- 36A (1) Before directing the holder of a transmission licence to act as a transmission owner of last resort pursuant to the conditions of the licence, the Authority may publish a notice –
- (a) stating that it proposes to give the direction, and
 - (b) identifying the licence holder to whom it proposes to give the direction.
- (2) Where a notice is published under sub-paragraph (1), this Schedule has effect as if –
- (a) the licence holder is the preferred bidder in relation to a tender exercise, and
 - (b) the notice is one published under paragraph 35(2), identifying the licence holder as the preferred bidder.
- (3) Paragraph 35(4) applies in relation to a notice published under sub-paragraph (1) of this paragraph as it applies to a notice published under paragraph 35(2).
- (4) Where the Authority directs the holder of a transmission licence to act as a transmission owner of last resort pursuant to the conditions of the licence, this Schedule has effect as if –
- (a) the licence holder is the holder of a transmission licence granted as a result of a tender exercise in which the licence holder was the successful bidder, and
 - (b) a notice has been published under paragraph 36 identifying the licence holder as the successful bidder in relation to the tender exercise.
- 36B (1) Before directing the holder of a distribution licence to act as a distribution network owner of last resort pursuant to the conditions of the licence, the Authority may publish a notice –
- (a) stating that it proposes to give the direction, and
 - (b) identifying the licence holder to whom it proposes to give the direction.
- (2) Where a notice is published under sub-paragraph (1), this Schedule has effect as if –

- (a) the licence holder is the preferred bidder in relation to a tender exercise, and
- (b) the notice is one published under paragraph 35(2), identifying the licence holder as the preferred bidder.
- (3) Paragraph 35(4) applies in relation to a notice published under sub-paragraph (1) of this paragraph as it applies to a notice published under paragraph 35(2). 5
- (4) Where the Authority directs the holder of a distribution licence to act as a distribution network owner of last resort pursuant to the conditions of the licence, this Schedule has effect as if – 10
- (a) the licence holder is the holder of a distribution licence granted as a result of a tender exercise in which the licence holder was the successful bidder, and
- (b) a notice has been published under paragraph 36 identifying the licence holder as the successful bidder in relation to the tender exercise.” 15
- 24 In paragraph 38(1) –
- (a) at the appropriate place insert –
- ““construction, commissioning or operational purposes” means the purposes of performing any functions which the successful bidder has, or may in future have under or by virtue of – 20
- (a) a relevant licence which has been, or is to be, granted as a result of the tender exercise,
- (b) a relevant contract which has been, or is to be, awarded as a result of the tender exercise, or 25
- (c) any enactment, in the successful bidder’s capacity as holder of the relevant licence or party to the relevant contract;”;
- (b) omit the definitions of “co-ordination licence” and “relevant place”; 30
- (c) omit the definition of “operational purposes”;
- (d) for the definition of “successful bidder” substitute –
- ““successful bidder”, in relation to a tender exercise, has the meaning given by section 6CD(6);”;
- (e) for the definition of “tender exercise” substitute – 35
- ““tender exercise” has the meaning given by section 6CD(3);”.
- 25 (1) In Schedule 4 (powers of licence holders), paragraph 6 is amended as follows.
- (2) In sub-paragraph (1) –
- (a) in paragraph (a), after “licence holder” insert “to obtain the right”; 40
- (b) omit “for the licence holder”.

(3) After sub-paragraph (7) insert –

“(7A) A necessary wayleave granted to a licence holder under this paragraph may be transferred to another licence holder.”

PART 2

OTHER AMENDMENTS

5

Utilities Act 2000

26 (1) Section 105 of the Utilities Act 2000 (general restrictions on disclosure of information) is amended as follows.

(2) In subsection (3), after paragraph (ac) insert –

“(ad) it is made for the purpose of facilitating any functions of the Authority, a delivery body or a contract counterparty (within the meaning of Part 1 of the 1989 Act) under regulations under section 6C of that Act;”.

10

SCHEDULE 14

Section 157

MERGERS OF ENERGY NETWORK ENTERPRISES

15

PART 1

FURTHER DUTIES OF COMPETITION AND MARKETS AUTHORITY TO MAKE REFERENCES

1 Part 3 of the Enterprise Act 2002 (mergers) is amended as follows.

2 After section 68 insert –

“Mergers of energy network enterprises in Great Britain

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68A Relevant merger situations involving energy network mergers

(1) For the purposes of this Part, a relevant merger situation involves an energy network merger if two or more of the enterprises that cease to be distinct are energy network enterprises of the same type.

(2) For the purposes of this Part, the types of “energy network enterprise” are –

25

(a) an enterprise holding a licence under section 7 of the Gas Act 1986 (gas transporter);

(b) an enterprise holding a licence under section 6(1)(b) of the Electricity Act 1989 (transmission of electricity), except as mentioned in subsection (3);

30

-
- (c) an enterprise holding a licence under section 6(1)(c) of the Electricity Act 1989 (distribution of electricity), except as mentioned in subsection (3).
- (3) An enterprise holding a licence under section 6(1)(b) or (c) of the Electricity Act 1989 is not an energy network enterprise if— 5
- (a) the licence was granted following a tender exercise, and
- (b) either—
- (i) the enterprise does not hold any other licence of a type mentioned in subsection (2), or
- (ii) the enterprise holds one or more other licences under section 6(1)(b) or (c) of the Electricity Act 1989 and each of those other licences was granted following a tender exercise. 10
- (4) The Secretary of State may by regulations amend this section by—
- (a) adding to subsection (2) an enterprise holding a licence under the Gas Act 1986 or the Electricity Act 1989 of a type that is not specified in that subsection; 15
- (b) creating an exception in relation to a type of enterprise specified in subsection (2);
- (c) amending or removing an exception that applies in relation to a type of enterprise specified in subsection (2). 20
- (5) Before making regulations under subsection (4), the Secretary of State must consult—
- (a) the Gas and Electricity Markets Authority, and
- (b) the CMA. 25
- (6) In this section, “tender exercise” has the same meaning as in section 6CD of the Electricity Act 1989.

68B Further duty to make references in relation to completed mergers

- (1) The CMA must make a reference to its chair for the constitution of a group under Schedule 4 to the Enterprise and Regulatory Reform Act 2013 if the CMA believes that it is or may be the case that— 30
- (a) a relevant merger situation involving an energy network merger has been created, and
- (b) the creation of that situation has caused, or may be expected to cause, substantial prejudice to the ability of the Gas and Electricity Markets Authority, in carrying out its functions under Part 1 of the Gas Act 1986 or Part 1 of the Electricity Act 1989, to make comparisons between energy network enterprises of the type involved in the energy network merger; 35
- but this is subject to subsections (2) and (3). 40

- (2) The CMA may decide not to make a reference under this section if it believes that any relevant customer benefits in relation to the creation of the relevant merger situation outweigh the prejudice mentioned in subsection (1)(b).
- (3) The CMA must not make a reference under this section in any circumstances described in section 22(3). 5
- (4) A reference under this section must, in particular, specify –
 - (a) the enactment under which it is made, and
 - (b) the date on which it is made.

68C Further duty to make references in relation to anticipated mergers 10

- (1) The CMA must make a reference to its chair for the constitution of a group under Schedule 4 to the Enterprise and Regulatory Reform Act 2013 if the CMA believes that it is or may be the case that –
 - (a) arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation involving an energy network merger, and 15
 - (b) the creation of that situation may be expected to cause substantial prejudice to the ability of the Gas and Electricity Markets Authority, in carrying out its functions under Part 1 of the Gas Act 1986 or Part 1 of the Electricity Act 1989, to make comparisons between energy network enterprises of the type involved in the energy network merger, 20
 but this is subject to subsections (2) and (3).
- (2) The CMA may decide not to make a reference under this section if it believes that –
 - (a) the arrangements concerned are not sufficiently far advanced, or are not sufficiently likely to proceed, to justify the making of a reference, or 25
 - (b) any relevant customer benefits in relation to the creation of the relevant merger situation concerned outweigh the prejudice mentioned in subsection (1)(b). 30
- (3) The CMA must not make a reference under this section in any circumstances described in section 33(3).
- (4) A reference under this section must, in particular, specify –
 - (a) the enactment under which it is made, and 35
 - (b) the date on which it is made.

68D Opinion of the Gas and Electricity Markets Authority

- (1) Before forming a view for the purposes of section 68B(1)(b) or (2) or 68C(1)(b) or (2)(b), the CMA must –

-
- (a) ask the Gas and Electricity Markets Authority to give an opinion, and
 - (b) consider that opinion.
- (2) Where the CMA makes a request under this section, the Gas and Electricity Markets Authority must give its opinion on— 5
- (a) whether and to what extent the creation of the relevant merger situation has prejudiced, or may be expected to prejudice, the Authority’s ability, in carrying out its functions under Part 1 of the Gas Act 1986 or Part 1 of the Electricity Act 1989, to make comparisons between energy network enterprises of the type involved in the relevant merger situation, and 10
 - (b) whether any prejudice is outweighed by any relevant customer benefits in relation to the creation of the relevant merger situation. 15
- (3) The Gas and Electricity Markets Authority must prepare and publish a statement of the methods it considers should be applied in forming an opinion on the matters mentioned in subsection (1).
- (4) The statement must, in particular, set out—
- (a) the criteria to be used for assessing the effect of any particular energy network enterprises ceasing to be distinct enterprises on the Gas and Electricity Market Authority’s ability to make comparisons between such enterprises, and 20
 - (b) the relative weight to be given to the criteria.
- (5) Before preparing or altering the statement, the Gas and Electricity Markets Authority must consult— 25
- (a) the Secretary of State,
 - (b) the Scottish Ministers,
 - (c) the Welsh Ministers,
 - (d) the CMA, and 30
 - (e) each energy network enterprise.
- (6) The Gas and Electricity Markets Authority must from time to time—
- (a) review the statement, and
 - (b) where appropriate, change the statement and publish the new version. 35
- (7) In forming its opinion under this section, the Gas and Electricity Markets Authority must apply the methods set out in its latest statement.

68E Combined references

- (1) In respect of a relevant merger situation involving an energy network merger, the CMA may— 40

- (a) make a reference under both section 22 and section 68B, or
 - (b) make a reference under both section 33 and section 68C.
- (2) If the CMA does so—
- (a) the references may be decided by the same group constituted under Schedule 4 to the Enterprise and Regulatory Reform Act 2013; 5
 - (b) the functions of the CMA referred to in section 34C(1) and (2) may be carried out on behalf of the CMA by the same group in relation to both references; and
 - (c) the group’s duties under section 38 to prepare and publish a report on each reference may be satisfied by preparing and publishing a single report on both references. 10

68F Modification of this Part

- (1) In relation to—
- (a) a reference, or possible reference, under section 68B, and 15
 - (b) a reference, or possible reference, under section 68C,
- Chapter 1 of this Part applies with the modifications set out in Schedule 5A.
- (2) In Chapters 2 to 5 of this Part, references to a provision of Chapter 1 include that provision as applied by subsection (1) and Schedule 5A.” 20
- 3 After Schedule 5 insert—

“SCHEDULE 5A

Section 68F

ENERGY NETWORK MERGERS AFFECTING COMPARATIVE REGULATION: MODIFICATION OF CHAPTER 1 OF PART 3 25

General modifications

- 1 (1) Chapter 1 (other than sections 22 and 33) has effect as if—
- (a) references to a reference or possible reference under section 22 were references to a reference or possible reference under section 68B, and 30
 - (b) references to a reference or possible reference under section 33 were references to a reference or possible reference under section 68C.
- (2) The references in sub-paragraph (1) to a reference under a section include a reference treated as made under that section. 35

Turnover

- 2 Section 23 (relevant merger situations) has effect as if—

-
- (a) in subsection (1), for paragraph (b) there were substituted –
- “(b) the value of the turnover in Great Britain of the enterprise being taken over exceeds £70 million.”;
- (b) subsections (2) to (8) were omitted. 5
- 3 Section 28 (turnover test) has effect as if –
- (a) references to the United Kingdom were to Great Britain;
- (b) in subsection (5), for “The CMA shall” there were inserted “The CMA and the Gas and Electricity Markets Authority shall each”; 10
- (c) the reference in subsection (6) to section 23(1)(b) included a reference to that provision as modified by paragraph 2 of this Schedule.
- Relevant customer benefits* 15
- 4 Section 30 (relevant customer benefits) has effect as if –
- (a) in subsection (1)(a)(i), for “lessening of competition concerned” there were substituted “prejudice to the Gas and Electricity Markets Authority”;
- (b) in subsections (2)(b) and (3)(b), for “a similar lessening of competition” there were substituted “a similar prejudice to the Gas and Electricity Markets Authority”. 20
- Time limits for decisions about references*
- 5 Section 34ZA(1)(a) (time-limits for decisions about references) has effect as if – 25
- (a) the reference to section 22(2) were to section 68B(2);
- (b) the reference to section 22(3) were to –
- (i) that provision as applied by section 68B(4), and
- (ii) section 68B(3);
- (c) the reference to section 33(2) were to section 68C(2); 30
- (d) the reference to section 33(3) were to –
- (i) that provision as applied by section 68C(4), and
- (ii) section 68C(3).
- Questions to be decided in relation to completed mergers*
- 6 Section 35 (questions to be decided in relation to completed mergers) has effect as if – 35
- (a) in subsection (1)(a), after “situation” there were inserted “involving an energy network merger”;
- (b) in subsection (1)(b), for the words from “has resulted” to the end there were substituted “has caused, or may be 40

- expected to cause, substantial prejudice to the ability of the Gas and Electricity Markets Authority to make comparisons between energy network enterprises of the type involved in the energy network merger”;
- (c) for subsection (2) there were substituted – 5
- “(2) For the purposes of this section there is a prejudicial outcome if there is a situation described in subsection (1)(a) which has, or may be expected to have, the effect described in subsection (1)(b).”;
- (d) in subsection (3), for “an anti-competitive outcome (within the meaning given by subsection (2)(a))” there were substituted “a prejudicial outcome”; 10
- (e) in subsections (3)(a) and (b) and (4), for “lessening of competition” (in each place it appears) there were substituted “prejudice”. 15

Questions to be decided in relation to anticipated mergers

- 7 Section 36 (questions to be decided in relation to anticipated mergers) has effect as if –
- (a) in subsection (1)(a), after “situation” there were inserted “involving an energy network merger”; 20
- (b) in subsection (1)(b), for the words from “result” to the end there were substituted “cause substantial prejudice to the ability of the Gas and Electricity Markets Authority to make comparisons between energy network enterprises of the type involved in the energy network merger”; 25
- (c) after subsection (1) there were inserted –
- “(1A) For the purposes of this section there is a prejudicial outcome if there are arrangements described in subsection (1)(a) which may be expected to have the effect described in subsection (1)(b).”;
- (d) in subsection (2), for “an anti-competitive outcome (within the meaning given by section 35(2)(b))” there were substituted “a prejudicial outcome”; 30
- (e) in subsections (2)(a) and (b) and (3), for “lessening of competition” (in each place it appears) there were substituted “prejudice”. 35

Duty to remedy effects of completed or anticipated mergers

- 8 Section 41 (duty to remedy effects of completed or anticipated mergers) has effect as if – 40
- (a) in subsection (1), for “an anti-competitive outcome” there were substituted “a prejudicial outcome (within the meaning of section 35(2) or 36(1A))”;

- (b) in subsection (2)(a) and (b), for “lessening of competition” there were substituted “prejudice”;
- (c) in subsection (4), for “lessening of competition” there were substituted “prejudice”.

PART 2

5

CONSEQUENTIAL AMENDMENTS OF PART 3 OF ENTERPRISE ACT 2002

- 4 Part 3 of the Enterprise Act 2002 is amended as follows.
- 5 (1) Section 22 (duty to make references in relation to completed mergers) is amended as follows.
- (2) In subsection (3)(c), after “section 33” insert “or 68B or 68C”. 10
- (3) In subsection (7)(a), after “section 33” insert “, 68B or 68C”.
- 6 In section 33(3)(c) (circumstances in which references in relation to anticipated mergers may not be made), after “section 22” insert “or 68B or 68C”.
- 7 (1) Section 42 (intervention by Secretary of State in certain public interest cases) is amended as follows. 15
- (2) In subsection (1)(b), for “section 22 or 33” substitute “section 22, 33, 68B or 68C”.
- (3) In subsection (1)(c), after “33” insert “or subsection (2)(a) of section 68C”.
- (4) In subsection (1)(d) – 20
- (a) for “section 22 or 33” substitute “section 22, 33, 68B or 68C”;
 - (b) in sub-paragraph (1), after the second “or (a)” insert “(including those provisions as applied by sections 68B and 68C)”.
- 8 In section 56(2) (competition cases where intervention on public interest grounds ceases), for “or 33” (in both places it occurs) substitute “, 33, 68B or 68C”. 25
- 9 In section 57(1) (duties of CMA and OFCOM to inform Secretary of State), for “section 22 or 33” substitute “section 22, 33, 68B or 68C”.
- 10 In the italic heading at the beginning of Chapter 4, for “section 22 or 33” substitute “section 22, 33, 68B or 68C”. 30
- 11 (1) Section 72 (initial enforcement orders: completed or anticipated mergers) is amended as follows.
- (2) In subsection (1)(a), for “section 22 or 33” substitute “section 22, 33, 68B or 68C”.
- (3) In subsection (6)(a) and (d), for “section 22 or 33” substitute “section 22, 33, 68B or 68C”. 35
- 12 (1) Section 73 (undertakings in lieu of references) is amended as follows.
- (2) In the heading, for “22 or 33” substitute “22, 33, 68B or 68C”.

- (3) After subsection (3) insert—
- “(3A) Subsection (3B) applies if the CMA considers that it is under a duty to make a reference under section 68B or 68C; and for the purposes of this subsection it must—
- (a) disregard the operation of section 22(3)(b) or 33(3)(b) (as applied by section 68B or 68C), but
 - (b) take account of its power under section 68B(2) or 68C(2) to decide not to make such a reference.
- (3B) The CMA may, instead of making such a reference and for the purpose of remedying, mitigating or preventing the prejudice to the ability of the Gas and Electricity Markets Authority described in section 68B(1) or 68C(1), accept from such of the parties concerned as it considers appropriate undertakings to take such action as it considers appropriate.
- (3C) In proceeding under subsection (3B), the CMA must, in particular, have regard to the need to achieve as comprehensive a solution as is reasonable and practicable to the prejudice.
- (3D) Before proceeding under subsection (3B), the CMA must—
- (a) ask the Gas and Electricity Markets Authority to give its opinion on the effect of the undertakings offered, and
 - (b) consider the Authority’s opinion.”
- (4) In subsection (4), after “subsection (2)” insert “or (3B)”.
- 13 (1) Section 73A (time-limits for consideration of undertakings) is amended as follows.
- (2) In subsection (1), after “73(2)” insert “or (3B)”.
 - (3) In subsection (2), for “those purposes” substitute “the purposes of section 73(2) or (3B)”.
- 14 (1) Section 74 (effect of undertakings under section 73) is amended as follows.
- (2) In subsection (1), for “or 45” substitute “, 45, 68B or 68C”.
 - (3) In subsection (5)(a), for “or 33” substitute “, 33, 68B or 68C”.
- 15 In section 77(1)(a) (restrictions on certain dealings: completed mergers), after “22” insert “or 68B”.
- 16 In section 78(1)(a) (restrictions on certain share dealings: anticipated mergers), after “33” insert “or 68C”.
- 17 In section 79(1) and (2) (sections 77 and 78: further interpretation provisions), for “or 33” substitute “, 33, 68B or 68C”.
- 18 In section 80(1), (7) and (8) (interim undertakings), for “or 33” substitute “, 33, 68B or 68C”.
- 19 In section 81(1), (7) and (8) (interim orders), for “or 33” substitute “, 33, 68B or 68C”.

- 20 In section 82(3) and (4) (final undertakings), for “or 33” substitute “, 33, 68B or 68C”.
- 21 In section 84(5) (final orders), for “or 33” substitute “, 33, 68B or 68C”.
- 22 (1) Section 100 (exceptions to protection given by merger notices) is amended as follows. 5
- (2) In subsection (1), for “or (as the case may be) 33” substitute “, 33, 68B or 68C”.
- (3) In subsection (2)(a), for “or 33” substitute “, 33, 68B or 68C”.
- 23 In section 104(6) (certain duties of relevant authorities to consult), in the definition of “relevant decision”, in paragraph (a)(i), for “or 33” substitute “, 33, 68B or 68C”. 10
- 24 In section 105(1) (general information duties of CMA), for “or 33” substitute “, 33, 68B or 68C”.
- 25 (1) Section 106 (advice and information about references) is amended as follows.
- (2) In the heading, for “sections 22 and 33” substitute “section 22, 33, 68B or 68C”. 15
- (3) In subsection (1)(a), for “or 33” substitute “, 33, 68B or 68C”.
- 26 (1) Section 107 (further publicity requirements) is amended as follows.
- (2) In subsection (1)(a), for “or 33” substitute “, 33, 68B or 68C”.
- (3) In subsection (1)(aa), for “subsection (2)(b) of section 33” substitute “section 33(2)(b) or 68C(2)(a)”. 20
- (4) In subsection (1)(b), for “or 33” substitute “, 33, 68B or 68C”.
- (5) In subsection (2)(a), at the end insert “or 68C”.
- (6) In subsection (2)(b), for the words from “a reference” to the end substitute “a reference under section 22 or 68B as if it had been made under section 33 or 68C or to treat a reference under section 33 or 68C as if it had been made under section 22 or 68B”. 25
- 27 In section 109(A1)(a) (attendance of witnesses and production of documents etc), for “or 33” substitute “, 33, 68B or 68C”.
- 28 In section 110A(5) and (6) (restriction on powers to impose penalties under section 110), for “or 33” substitute “, 33, 68B or 68C”. 30
- 29 In section 110B(1) and (2) (restriction on powers to impose penalties under section 110), for “or 33” substitute “, 33, 68B or 68C”.
- 30 In section 121(3)(a) (fees), for “or 33” substitute “, 33, 68B or 68C”.
- 31 In section 124(5) (orders and regulations), at the beginning insert “Regulations made by the Secretary of State under section 68A or”. 35
- 32 In section 127(3) (associated person), for “or 62” substitute “, 62, 68B or 68C”.

- 33 (1) The table in section 130 (index of defined expressions) is amended as follows.
- (2) After the entry for “Enactment” insert –
- | | | |
|----------------------------|---------------|---|
| “Energy network enterprise | Section 68A | |
| Energy network merger | Section 68A”. | 5 |
- (3) In the entry for “Final determination of reference under section 22 or 33”, for “or 33” substitute “, 33, 68B or 68C”.
- (4) In the entry for “References under section 22, 33, 45 or 62” –
- (a) for “or 62” substitute “, 62, 68B or 68C”, and
- (b) after “37(2)” insert “(including as applied by Schedule 5A)”. 10
- (5) In the entry for “The turnover in the United Kingdom of an enterprise”, after “28(2)” insert “(including as applied by Schedule 5A)”.
- 34 (1) Schedule 7 (enforcement regime for public interest and special public interest cases) is amended as follows.
- (2) In paragraph 4(1), for “or 45” substitute “, 45, 68B or 68C”. 15
- (3) In paragraph 4(2)(a), for “or 33” substitute “, 33, 68B or 68C”.

PART 3

CONSEQUENTIAL AMENDMENTS OF OTHER ENACTMENTS

Utilities Act 2000

- 35 In section 105(3) of the Utilities Act 2000 (general restrictions on disclosure of information), in paragraph (azb), after “under” insert “Part 3 of the Enterprise Act 2002 or under”. 20

Enterprise and Regulatory Reform Act 2013

- 36 (1) Schedule 4 to the Enterprise and Regulatory Reform Act 2013 is amended as follows. 25
- (2) In paragraph 35(3) (membership of CMA panel), in the definition of “specialist utility functions”, after paragraph (d) insert –
- “(dza) a reference under section 68B or 68C of the Enterprise Act 2002;”.
- (3) In paragraph 56 (CMA group decision: requirement for two thirds majority), after sub-paragraph (2) insert – 30
- “(2A) Sub-paragraph (2B) applies where a decision of a CMA group under section 35(1) or 36(1) of that Act (as applied by section 68F of, and Schedule 5A to, that Act) that there is, or is likely to be,

prejudice of the kind described in section 68B(1)(b) or 68C(1)(b) of that Act is not a qualifying majority decision.

- (2B) The decision of the CMA group is to be treated as a decision under section 35(1) or, as the case may be, section 36(1) of that Act (as applied by section 68F of, and Schedule 5A to, that Act) that there is not, or is not likely to be, prejudice of that kind.” 5

SCHEDULE 15

Section 163

MULTI-PURPOSE INTERCONNECTORS: CONSEQUENTIAL AMENDMENTS

The Electricity Act 1989

- 1 The Electricity Act 1989 is amended as follows. 10
- 2 In section 3A (principal objective and general duties of Secretary of State and Gas and Electricity Markets Authority) –
- (a) in subsection (1B), after “interconnectors” insert “or multi-purpose interconnectors”;
- (b) in subsection (5)(a), after “interconnectors” insert “or multi-purpose interconnectors”; 15
- (c) in subsection (5B), in the definition of “electricity-supply emissions”, after “interconnectors” insert “or multi-purpose interconnectors”.
- 3 In section 3F(2) (Gas and Electricity Markets Authority to cooperate with Northern Ireland Authority), after “interconnection” insert “and multi-purpose interconnection”. 20
- 4 In section 7 (conditions of licences: general) –
- (a) in subsection (2), after “distribution licence” insert “or MPI licence”;
- (b) in subsection (2A), after “transmission licence” insert “or MPI licence”. 25
- 5 In section 29 (regulations relating to supply and safety) –
- (a) in subsection (1)(b), after “interconnectors” insert “or multi-purpose interconnectors”;
- (b) in subsection (2) –
- (i) in paragraph (b), after “interconnectors” insert “or multi-purpose interconnectors”;
- (ii) in paragraph (c), after “interconnector” insert “or multi-purpose interconnector”. 30
- 6 In section 30 (electrical inspectors), in subsection (2)(a), after “interconnectors” insert “or multi-purpose interconnectors”. 35
- 7 In section 43 (functions with respect to competition) –
- (a) in subsection (2A)(b), after “interconnectors” insert “or multi-purpose interconnectors”;

- (b) in subsection (2C)(b), after “interconnectors” insert “or multi-purpose interconnectors”;
- (c) in subsection (3), after “interconnectors” insert “or multi-purpose interconnectors”.
- 8 In subsection 44B (meaning of “section 44B dispute”), in subsection (1)(a), after sub-paragraph (iii) insert – 5
- “(iia) made against the holder of an MPI licence,”.
- 9 In section 56A(4) (scope of power to alter activities requiring licence), after “electricity” insert “, with the operation of a multi-purpose interconnector”.
- 10 In section 58(2) (direction restricting the use of certain information), after “interconnectors” insert “or multi-purpose interconnectors”. 10
- 11 In section 98(1) (provision of statistical information), after “interconnectors” insert “or multi-purpose interconnectors”.
- Scotland Act 1998*
- 12 In section 90B of the Scotland Act 1998 (the Crown Estate), in subsection (12)(d), after “interconnectors” insert “or multi-purpose interconnectors (within the meaning of Part 1 of the Electricity Act 1989)”. 15
- Utilities Act 2000*
- 13 In section 5A of the Utilities Act 2000 (duty of Authority to carry out impact assessment), in subsection (2) – 20
- (a) in paragraph (b), after “gas meters” insert “or in the operation of a multi-purpose interconnector”;
- (b) in paragraph (c), after “electricity” insert “or the operation of a multi-purpose interconnector”.
- Energy Act 2004* 25
- 14 Section 172 of the Energy Act 2004 (annual report on security of energy supplies) is amended as follows –
- (a) in subsection (2D)(b), after “interconnectors” insert “and multi-purpose interconnectors”;
- (b) in subsection (4), after ““generation”,” insert “, “multi-purpose interconnector”,”.
- 30
- Civil Contingencies Act 2004*
- 15 (1) Schedule 1 to the Civil Contingencies Act 2004 (category 1 and 2 responders) is amended as follows.
- (2) In paragraph 19, in sub-paragraph (2) – 35
- (a) omit the “and” after paragraph (b);

- (b) after paragraph (c) insert “, and
 - (d) an MPI licence.”
- (3) In paragraph 30, in sub-paragraph (2)–
 - (a) omit the “and” after paragraph (b);
 - (b) after paragraph (c) insert “, and
 - (d) an MPI licence.”

5

Consumers, Estate Agents and Redress Act 2007

- 16 In section 42 of the Consumers, Estate Agents and Redress Act 2007 (interpretation of Part 2), in subsection (4), in paragraph (c) of the definition of “electricity licensee”–
 - (a) for “or (e)” substitute “, (e) or (ea)”;
 - (b) for “and interconnector licences” substitute “, interconnector licences and MPI licences”.

10

Energy Act 2013

- 17 In section 59 of the Energy Act 2013 (suspension etc of emissions limit in exceptional circumstances), in subsection (4)(a), after “interconnector” insert “or multi-purpose interconnector”.

15

Regulation (EU) 2019/943 of the European Parliament and of the Council of 5th June 2019 on the internal market for electricity (recast)

- 18 In Article 63 of Regulation (EU) 2019/943 of the European Parliament and of the Council of 5th June 2019 on the internal market for electricity (recast), in paragraph 4A, for “granted under section 6(1)(e) of the Electricity Act 1989” substitute “or an MPI licence granted under section 6(1)(e) or (ea) respectively of the Electricity Act 1989”.

20

United Kingdom Internal Market Act 2020

25

- 19 In Part 2 of Schedule 2 to the United Kingdom Internal Market Act 2020 (services to which non-discrimination provisions do not apply), in the entry relating to services connected with the supply or production of electricity, after “interconnector” insert “or multi-purpose interconnector”.

SCHEDULE 16

Section 170

HEAT NETWORKS REGULATION

PART 1

INTERPRETATION

- 1 In this Schedule – 5
- “code manager licence” has the meaning given by paragraph 25;
 - “consumer redress order” has the meaning given by paragraph 37;
 - “designated document” has the meaning given by paragraph 22;
 - “emissions” has the same meaning as in the Climate Change Act 2008
(see section 97 of that Act); 10
 - “enforcement undertaking” has the meaning given by paragraph 38(2);
 - “heat network authorisation” has the meaning given by paragraph 13;
 - “heat network consumer” has the meaning given by the regulations;
 - “installation and maintenance licence” has the meaning given by
paragraph 31; 15
 - “licensed code manager”, in relation to a designated document, has
the meaning given by paragraph 25;
 - “regulated activity” has the meaning given by paragraph 12;
 - “the regulations” means regulations under section 170;
 - “relevant condition” has the meaning given by paragraph 37; 20
 - “relevant person” has the meaning given by paragraph 37;
 - “relevant requirement” has the meaning given by paragraph 37;
 - “targeted greenhouse gas” has the same meaning as in Part 1 of the
Climate Change Act 2008 (see section 24 of that Act).

PART 2 25

GENERAL PROVISION AS TO THE REGULATOR

Objectives

- 2 (1) The regulations may make provision about the objectives of the Regulator
in carrying out its functions under the regulations.
- (2) Regulations made by virtue of sub-paragraph (1) may, in particular, provide 30
that the principal objective of the Regulator is to protect the interests of
existing and future heat network consumers.
- (3) The regulations may specify particular interests of existing and future heat
network consumers that are to be protected.
- (4) The interests specified may, in particular, include – 35
- (a) their interests in the reliability of the supply of heating, cooling or
hot water by means of relevant heat networks;

- (b) their interests in the reduction of emissions of targeted greenhouse gases generated by relevant heat networks;
- (c) their interests in charges for the supply of heating, cooling or hot water by means of relevant heat networks being proportionate;
- (d) their interests in information about services and charges being communicated plainly. 5

General duties

- 3 (1) The regulations may make provision about the duties of the Regulator in carrying out its functions under the regulations.
- (2) The duties may, in particular, include— 10
- (a) a duty to carry out its functions in a manner best calculated to further its objectives;
 - (b) a duty to consider, when carrying out its functions, the need to ensure that persons carrying out activities under a heat network authorisation or under an installation and maintenance licence are able to finance obligations imposed by or under the regulations; 15
 - (c) a duty to have regard to the interests of heat network consumers who are in vulnerable circumstances when performing duties imposed by regulations made by virtue of paragraph (a) or (b).
- (3) Regulations made by virtue of sub-paragraph (2)(a) may require that the Regulator promote effective competition between persons engaged in, or in commercial activities connected with, the supply of heating, cooling or hot water by means of relevant heat networks. 20
- 4 (1) The regulations may provide for the Regulator to have regard, in carrying out a function under the regulations, to— 25
- (a) the interests of existing and future consumers in relation to electricity conveyed by distribution systems or transmission systems (within the meaning of the Electricity Act 1989);
 - (b) the interests of existing and future consumers in relation to gas conveyed through pipes (within the meaning of the Gas Act 1986); 30
 - (c) any interests of existing and future consumers in relation to—
 - (i) communications services and electronic communications apparatus, or
 - (ii) water services or sewerage services (within the meaning of the Water Industry Act 1991), 35
 which are affected by the carrying out of that function.
- (2) The regulations may provide for persons or bodies exercising regulatory functions in those fields to have regard, in carrying out a regulatory function, to the interests of existing or future consumers in relation to the supply of heating, cooling or hot water by means of relevant heat networks. 40

Delegation of functions

- 5 (1) The regulations may provide for the Regulator to delegate functions conferred on the Regulator by the regulations.
- (2) The regulations may specify functions which may be delegated only with the consent of the Secretary of State or, as the case may be, the Department. 5

Monitoring, records and information

- 6 (1) The regulations may require the Regulator to keep under review the carrying on of activities connected with heat networks in the part or parts of the United Kingdom in relation to which the Regulator has functions under the regulations. 10
- (2) The regulations may require the Regulator to monitor such matters relating to the activities regulated by the regulations or the persons who carry on those activities as the regulations may specify.
- (3) The regulations may, for the purposes of enabling the Regulator to perform a duty imposed by regulations made by virtue of sub-paragraph (2), make provision enabling the Regulator to require information to be supplied. 15
- 7 (1) The regulations may require the Regulator to collect information with respect to activities connected with heat networks and the persons who carry on those activities for such purposes as are specified in the regulations.
- (2) The regulations may, in particular, require the Regulator to collect information relating to standards of performance achieved by – 20
- (a) persons who hold a heat network authorisation;
 - (b) licensed code managers;
 - (c) persons who hold an installation and maintenance licence.
- 8 (1) The regulations may make provision requiring the Regulator to maintain records. 25
- (2) Regulations made by virtue of sub-paragraph (1) may, in particular, make provision requiring the Regulator to maintain records relating to – 30
- (a) persons whose application for a heat network authorisation, a code manager licence or an installation and maintenance licence has been refused;
 - (b) persons whose heat network authorisation, code manager licence or installation and maintenance licence has been revoked.
- (3) The regulations may make provision enabling or requiring the Regulator to provide information from its records to – 35
- (a) the Secretary of State or a person specified by the Secretary of State,
 - (b) the Department or a person specified by the Department, or
 - (c) the Scottish Ministers or a person specified by the Scottish Ministers.
- 9 (1) The regulations may make provision restricting the disclosure of information obtained by the Regulator under or by virtue of the regulations, subject to exceptions specified in the regulations. 40

- (2) The regulations may make provision about the disclosure to the Regulator of information held by other persons or bodies.
- 10 (1) The regulations may make provision for the purpose of securing that a disclosure of information which is authorised or required by the regulations does not contravene the data protection legislation. 5
- (2) In this paragraph, “the data protection legislation” has the same meaning as in the Data Protection Act 2018 (see section 3(9) of that Act).

Other general provision

- 11 (1) The regulations may make other general provision about the Regulator.
- (2) Regulations made by virtue of sub-paragraph (1) may, in particular, make provision about— 10
- (a) preparing and publishing documents about—
- (i) strategy and policies;
- (ii) plans for future work;
- (b) publishing reports annually; 15
- (c) publishing financial information in annual accounts;
- (d) preparing and publishing impact assessments.
- (3) Regulations made by virtue of sub-paragraph (1) may make provision about preparing, issuing, reviewing and revising guidance.
- (4) Regulations made by virtue of sub-paragraph (1) may provide for the publication of information and advice for the purpose of promoting the interests of existing and future heat network consumers. 20

PART 3

HEAT NETWORK AUTHORISATIONS

Prohibition from carrying on regulated activity 25

- 12 (1) The regulations may prohibit a person from carrying on a regulated activity, except as permitted by virtue of an authorisation conferred under regulations made by virtue of paragraph 13.
- (2) In this paragraph, “regulated activity” means an activity relating to a relevant heat network of such description as may be specified in the regulations. 30

Heat network authorisations

- 13 (1) The regulations may provide for the Regulator to confer authorisations (“heat network authorisations”) to carry on one or more regulated activities specified in the authorisation in relation to a particular relevant heat network. 35

- (2) The regulations may require a person who applies for a heat network authorisation—
 - (a) to satisfy such conditions relating to the person, the regulated activity or activities in question or the relevant heat network in question as the regulations may specify, and 5
 - (b) to provide such information as the regulations may specify.
- (3) The regulations may provide for the Regulator—
 - (a) to confer a heat network authorisation;
 - (b) to confer a heat network authorisation on a temporary basis;
 - (c) to refuse to confer a heat network authorisation. 10
- (4) The regulations may make provision about the procedure for applying for a heat network authorisation, including provision about—
 - (a) the form and content of an application,
 - (b) the manner in which the application and any accompanying documents are to be submitted to the Regulator; 15
 - (c) the payment of a fee.
- (5) Regulations made in relation to England and Wales and Scotland by virtue of sub-paragraph (2)(b) or (4) may provide for the Regulator to make provision by regulations about the matters referred to in that sub-paragraph.
- (6) Regulations made by the Regulator by virtue of sub-paragraph (5) are to be made by statutory instrument. 20
- (7) The regulations may make provision as to the period for which an authorisation may be in force.
- 14 (1) The regulations may make provision about the conditions to be included in heat network authorisations. 25
- (2) The regulations may, in particular—
 - (a) provide for the Regulator to determine and publish conditions to be included in each heat network authorisation or in each heat network authorisation of a particular description;
 - (b) provide for the Secretary of State or, in relation to Northern Ireland, the Department to determine and publish conditions to be included in each heat network authorisation or in each heat network authorisation of a particular description; 30
 - (c) provide for consultation on, and publication of, the conditions proposed to be so determined; 35
 - (d) make provision about the inclusion in a heat network authorisation of conditions that are special to that authorisation;
 - (e) make provision about including conditions that meet objectives or other criteria specified in the regulations.
- (3) The regulations may, in particular, provide for conditions to be included in a heat network authorisation requiring the person who holds the authorisation—
 - (a) to comply with the provisions of a particular designated document; 40

-
- (b) to enter into governance arrangements with the person who is from time to time the licensed code manager for that designated document and to comply with those arrangements;
 - (c) to provide funding for the person who is from time to time the licensed code manager for that designated document. 5
- (4) The regulations may, in particular, provide for the following sorts of conditions to be included in a heat network authorisation –
- (a) conditions about the terms on which premises are connected to a relevant heat network (whether for the purpose of supplying heating, cooling or hot water to premises, or supplying thermal energy to a relevant heat network); 10
 - (b) conditions about installing and maintaining equipment for measuring, displaying, recording and regulating consumption of heating, cooling and hot water supplied by means of relevant heat networks; 15
 - (c) conditions about –
 - (i) the charges payable by heat network consumers or a description of heat network consumers specified in the regulations,
 - (ii) the billing of heat network consumers; 20
 - (iii) service standards, or
 - (iv) the communication of information about the heat network, the services provided or the terms on which the services are provided;
 - (d) conditions relating to price regulation (including by means of regulation of charges or profits); 25
 - (e) conditions about complying with technical standards (including, in relation to England and Wales and Scotland, technical standards for which provision is made in a designated document);
 - (f) conditions about ensuring the continuity of the supply of heating, cooling and hot water to heat network consumers; 30
 - (g) conditions about limiting emissions of targeted greenhouse gases in relation to relevant heat networks in England or Northern Ireland;
 - (h) conditions about providing information to the Regulator;
 - (i) conditions about the payment of fees to the Regulator, including conditions about the payment of fees – 35
 - (i) in connection with the conferring of an authorisation;
 - (ii) while an authorisation continues to be in force in relation to a person;
 - (j) conditions about making payments to the Regulator of sums relating to the costs of the Regulator under regulations made by virtue of paragraph 46(2). 40
- (5) Conditions of the sort referred to in sub-paragraph (4)(c)(i) may, in particular –

- (a) provide for charges imposed on heat network consumers to be subject to a price cap;
 - (b) require a person who holds a heat network authorisation not to impose on heat network consumers charges that are disproportionate (see paragraph 42). 5
- (6) Conditions of the sort referred to in sub-paragraph (4)(c)(ii) may, in particular –
- (a) impose requirements about the bills given to heat network consumers (including requirements about their frequency, accuracy and the use of estimates); 10
 - (b) impose requirements about the information and explanatory material to be provided to heat network consumers;
 - (c) make provision about the charges that may be made in respect of the costs of providing bills and such information and explanatory material. 15
- (7) The regulations may, in particular, provide for conditions to be included in a heat network authorisation that –
- (a) in relation to England and Wales or Scotland, impose on the person who holds the authorisation a requirement of a kind that may be imposed under section 7(3) of the Electricity Act 1989 on the holder of a licence under section 6(1) of that Act; 20
 - (b) in relation to Northern Ireland, impose on the person who holds the authorisation a requirement of a kind that may be imposed under Article 11(3) of the Electricity (Northern Ireland) Order 1992 (S.I. 1992/231 (N.I. 1)) on the holder of a licence under Article 10(1) of that Order. 25

Conditions about technical standards: further provision

- 15 The technical standards for which regulations made by virtue of paragraph 14(4)(e) may make provision include technical standards relating to –
- (a) the design, construction, commissioning, operation or maintenance of a heat network; 30
 - (b) the decommissioning of a heat network;
 - (c) equipment or materials used in the construction, operation or maintenance of a heat network;
 - (d) the competence of persons engaged in the design, construction, commissioning, operation or maintenance of a heat network. 35

Conditions about continuity of supply: further provision

- 16 Conditions of the sort referred to in paragraph 14(4)(f) may, in particular, require the holder of a heat network authorisation to enter into and maintain contractual arrangements under which, in circumstances of a description specified in the conditions, one or more other persons are under an obligation to secure the continuity of the supply of heating, cooling or hot water. 40

- 17 Conditions of the sort referred to in paragraph 14(4)(f) may, in particular, require the holder of a heat network authorisation, when directed to do so by the Regulator in circumstances of a description specified in the conditions, to carry on a regulated activity in relation to a relevant heat network in the place of another person (see paragraph 44). 5

Modification of heat network authorisations

- 18 (1) The regulations may provide for the modification by the Regulator of—
 (a) the conditions of a particular heat network authorisation;
 (b) conditions that are included in two or more heat network authorisations. 10
- (2) Regulations made by virtue of sub-paragraph (1) may, in particular—
 (a) provide for the procedure to be followed by the Regulator when it proposes to make a modification;
 (b) provide for the communication of any modification;
 (c) provide for the time when any modification takes effect; 15
 (d) provide for the Regulator to comply with a direction of the Secretary of State or, in relation to Northern Ireland, the Department not to make a particular modification.
- (3) In sub-paragraphs (1) and (2), a reference to the modification of a condition includes a reference to the revocation of a condition. 20
- (4) The regulations may provide for the conditions of a heat network authorisation—
 (a) to have effect or cease to have effect at such times and in such circumstances as may be determined by or under the conditions;
 (b) to be modified in such manner as may be specified in the conditions 25
 at such times and in such circumstances as may be so determined.

Review and revocation of heat network authorisations

- 19 The regulations may provide for the conditions of, or the activities carried out by virtue of, a heat network authorisation to be reviewed by the Regulator at any time while it is in force. 30
- 20 (1) The regulations may provide—
 (a) for the revocation of a heat network authorisation by the Regulator;
 (b) for a heat network authorisation to cease to have effect in circumstances specified in or determined under the authorisation.
- (2) Regulations made by virtue of sub-paragraph (1)(a) may, in particular, provide for the procedure to be followed by the Regulator when it proposes to revoke the authorisation. 35

Initial period

- 21 (1) The regulations may make provision with respect to persons carrying on a regulated activity in relation to a relevant heat network during a period that –
- (a) begins with the day on which any regulations made by virtue of paragraph 12 come into force, and 5
 - (b) ends with a day specified in the regulations.
- (2) The regulations may –
- (a) provide for the period to be prolonged, or to be prolonged as it relates to a description of heat network authorisations, by the Regulator; 10
 - (b) require the consent of the Secretary of State or the Department (as the case may be) to such an alteration.
- (3) Regulations made by virtue of sub-paragraph (1) may –
- (a) provide for a person carrying on a regulated activity in relation to a relevant heat network to be treated as holding a heat network authorisation in relation to that activity and that relevant heat network during the period described in sub-paragraph (1) (or, if applicable, during that period as prolonged by virtue of sub-paragraph (2)); 15
20
 - (b) make provision as to the conditions of the heat network authorisation treated as conferred on such a person (including provision similar to the provision described in paragraph 14(2));
 - (c) require a person carrying on a regulated activity in relation to a relevant heat network to apply to the Regulator for a heat network authorisation to be conferred on the person by a time specified in or determined under the regulations. 25
- (4) Regulations made by virtue of sub-paragraph (3)(c) may provide for different times for different descriptions of case.

PART 4 30

CODE GOVERNANCE

Designated documents

- 22 (1) In this Part, “designated document” means a document that –
- (a) is maintained in accordance with the conditions of a code manager licence, and 35
 - (b) is designated for the purposes of this Part by or in accordance with the regulations.
- (2) The regulations may –
- (a) designate or provide for the designation of different documents for different purposes; 40
 - (b) provide for the time from which a designation has effect;

- (c) provide for the modification of a designated document and its reissuing in its modified form;
 - (d) revoke or provide for the revocation of a designated document;
 - (e) provide for a designated document otherwise ceasing to be a designated document. 5
- (3) The regulations may provide for a document that is designated to make provision by reference to material (including standards, specifications or requirements) contained in other documents that are published from time to time.
- (4) The regulations may, in particular, make provision about the cases in which the designated document may be modified by the Regulator. 10

Prohibition on performing the function of a code manager

- 23 (1) The regulations may, in relation to England and Wales and Scotland, prohibit a person from performing the function of code manager in relation to a designated document, except as permitted by virtue of a code manager licence (see paragraph 25). 15
- (2) A reference in this Part to a person performing the function of code manager in relation to a designated document is a reference to a person making arrangements, with persons to whom sub-paragraph (3) applies, under which the person is responsible for the governance of the designated document. 20
- (3) This sub-paragraph applies to the person who holds a heat network authorisation where a condition of the authorisation requires the person to comply with the designated document in question.

Licensed code managers 25

- 24 (1) The regulations may, in relation to England and Wales and Scotland, make provision about selecting a person to be a code manager in relation to a designated document.
- (2) Regulations made by virtue of sub-paragraph (1) may, in particular, make provision about the procedure for selecting a person, including provision for determining which procedure to apply in a particular case. 30
- (3) Regulations made by virtue of sub-paragraph (2) may include provision for the payment of a fee by a person seeking to be selected to be a code manager.
- (4) Regulations made by virtue of sub-paragraph (2) may provide for the Regulator to make provision by regulations about those matters. 35
- (5) Regulations made by the Regulator by virtue of sub-paragraph (4) are to be made by statutory instrument.
- 25 (1) The regulations may, in relation to England and Wales and Scotland, provide for the Regulator, where a person is selected to be the code manager in relation to a designated document, to issue a licence (a “code manager 40

- licence”) to the person which authorises the person to perform the function of code manager in relation to the designated document.
- (2) The regulations may make provision as to the period for which a licence may be in force.
- (3) In this Part, references to the licensed code manager, in relation to a designated document, are references to the person who is authorised by a code manager licence to perform the function of code manager in relation to the designated document. 5
- 26 (1) The regulations may make provision about the contents of a code manager licence. 10
- (2) Regulations made by virtue of sub-paragraph (1) may, in particular –
- (a) provide for the Regulator to determine and publish conditions to be included in each code manager licence or in each code manager licence of a particular description;
 - (b) provide for the Secretary of State to determine and publish conditions to be included in each code manager licence or in each code manager licence of a particular description; 15
 - (c) provide for consultation on, and publication of, the conditions proposed to be so determined;
 - (d) make provision about the inclusion in a code manager licence of conditions that are special to that licence; 20
 - (e) make provision about including conditions that meet objectives or other criteria specified in the regulations.
- (3) Regulations made by virtue of sub-paragraph (1) may, in particular, provide for the following sorts of conditions to be included in a code manager licence – 25
- (a) conditions about the nature of the governance arrangements that the licensed code manager may enter into with persons who hold a heat network authorisation (see paragraph 16(b));
 - (b) conditions about the content of those governance arrangements, which may include provision about the licensed code manager – 30
 - (i) modifying the designated document,
 - (ii) monitoring or enforcing compliance with the provisions of the designated document, or
 - (iii) developing guidance relating to the designated document; 35
 - (c) conditions about functions of the Regulator in connection with the modification of a designated document;
 - (d) conditions about providing information to the Regulator;
 - (e) conditions about complying with directions of the Regulator as to matters specified or of a description specified in the code manager licence; 40
 - (f) conditions about the payment of fees to the Regulator, including conditions about the payment of fees –
 - (i) when a code manager licence is first issued;

- (ii) while a code manager licence continues to be in force in relation to a person.
- (4) The regulations may, in particular, provide for conditions to be included in a code manager licence that –
- (a) in relation to England and Wales or Scotland, impose on the person who holds the licence a requirement of a kind that may be imposed under section 7(3) of the Electricity Act 1989 on the holder of a licence under section 6(1) of that Act; 5
 - (b) in relation to Northern Ireland, impose on the person who holds the licence a requirement of a kind that may be imposed under Article 11(3) of the Electricity (Northern Ireland) Order 1992 (S.I. 1992/231 (N.I. 1)) on the holder of a licence under Article 10(1) of that Order. 10
- 27 The regulations may provide for the Regulator to make payments to licensed code managers in respect of their costs. 15
- 28 (1) The regulations may provide for the modification by the Regulator of –
- (a) the conditions of a particular code manager licence;
 - (b) conditions that are included in two or more code manager licences.
- (2) Regulations made by virtue of sub-paragraph (1) may, in particular –
- (a) provide for the procedure to be followed by the Regulator when it proposes to make a modification; 20
 - (b) provide for the communication of any modification;
 - (c) provide for the time when any modification takes effect;
 - (d) provide for the Regulator to comply with a direction of the Secretary of State not to make a particular modification. 25
- (3) In sub-paragraphs (1) and (2), a reference to the modification of a condition includes a reference to the revocation of a condition.
- (4) The regulations may provide for the conditions of a code manager licence –
- (a) to have effect or cease to have effect at such times and in such circumstances as may be determined by or under the conditions; 30
 - (b) to be modified in such manner as may be specified in the conditions at such times and in such circumstances as may be so determined.

Review and revocation of code manager licences

- 29 The regulations may provide for a code manager licence, or the activities carried out by virtue of a code manager licence, to be reviewed by the Regulator at any time while it is in force. 35
- 30 (1) The regulations may provide –
- (a) for the revocation of a code manager licence by the Regulator;
 - (b) for a code manager licence to cease to have effect in circumstances specified in or determined under the licence. 40

- (2) Regulations made by virtue of sub-paragraph (1)(a) may provide for the procedure to be followed by the Regulator when it proposes to revoke the licence.

PART 5

INSTALLATION AND MAINTENANCE LICENCES

5

Installation and maintenance licences

- 31 (1) The regulations may provide for the issuing of licences (“installation and maintenance licences”) which authorise the holder of a licence to exercise the rights specified in the licence for purposes relating to the installation or maintenance of relevant heat networks – 10
- (a) in England and Wales, or
 - (b) in Northern Ireland.
- (2) The regulations may require the Regulator to be satisfied before issuing an installation and maintenance licence to a person that the person is an appropriate person to hold such a licence. 15
- (3) The regulations may require the Regulator, in deciding whether a person is an appropriate person to hold an installation and maintenance licence, to consider such matters as may be specified.
- (4) The matters specified may, in particular, relate to the abilities or financial resources of the person applying for a licence or the nature of the business carried on by the person. 20
- (5) The regulations may specify other conditions that are to be satisfied before a licence may be issued.
- (6) The regulations may make provision about the procedure for applying for a licence, including provision about – 25
- (a) the form and content of an application,
 - (b) the manner in which the application and any accompanying documents are to be submitted to the Regulator, and
 - (c) the payment of a fee.
- (7) Regulations made by virtue of sub-paragraph (6) may provide for the Regulator to make provision by regulations about the matters referred to in sub-paragraph (6) (including provision about the information that must be provided to the Regulator by a person applying for a licence), so far as relating to England and Wales. 30
- (8) Regulations made by the Regulator by virtue of sub-paragraph (7) are to be made by statutory instrument. 35
- (9) The regulations may make provision as to the period for which a licence may be in force.
- (10) The regulations may make provision about the transfer of a licence.

Rights that may be conferred

- 32 (1) The regulations must set out the rights relating to land that are capable of being conferred on a person by an installation and maintenance licence.
- (2) Regulations made by virtue of sub-paragraph (1) setting out a right may include provision about the restrictions, exceptions or conditions subject to which the right may be exercised. 5
- (3) The rights set out by regulations made by virtue of sub-paragraph (1) may include—
- (a) a right to apply to the Secretary of State or, in relation to Northern Ireland, the Department for authority to make a compulsory acquisition of an easement or other right over land by the creation of a new right for the purpose of installing or maintaining works and apparatus relating to a heat network; 10
- (b) a right—
- (i) to install and keep works and apparatus relating to a heat network in, under or over a street, 15
- (ii) to inspect, maintain, adjust, alter, repair, upgrade, operate or remove such works and apparatus, and
- (iii) to carry out such other works as are required for or incidental to those works, 20
- subject to such requirements as to notification, manner of working and compensation as may be specified in the regulations;
- (c) a right—
- (i) to install and keep works and apparatus relating to a heat network in, under or over transport land, 25
- (ii) to inspect, maintain, alter, repair, replace and remove such works and apparatus,
- (iii) to carry out any works on the transport land for or in connection with the exercise of a right described in sub-paragraph (i) or (ii), and 30
- (iv) to enter the transport land to inspect, maintain, adjust, alter, repair, upgrade, operate or remove the works or apparatus, subject to such requirements as to notification, compensation, arbitration and alteration of the works and apparatus as may be specified in the regulations; 35
- (d) a right to undertake works of a specified description without being required to obtain planning permission.
- (4) In this paragraph—
- “street” means a street in England, Wales or Northern Ireland and—
- (a) in relation to England and Wales, has the same meaning as in Part 3 of the New Roads and Street Works Act 1991; 40
- (b) in relation to Northern Ireland, has the same meaning as in the Street Works (Northern Ireland) Order 1995 (S.I. 1995/3210 (N.I. 19));

- “transport land” means land which is used wholly or mainly –
- (a) as a railway, tramway or waterway, or
 - (b) in connection with a railway, tramway or waterway on the land.

Further provision about installation and maintenance licences 5

- 33 (1) The regulations may make provision about the contents of installation and maintenance licences.
- (2) Regulations made by virtue of sub-paragraph (1) may, in particular –
- (a) provide for the Regulator to determine and publish conditions to be included in each installation and maintenance licence or in each installation and maintenance licence of a particular description; 10
 - (b) provide for the Secretary of State or, in relation to Northern Ireland, the Department to determine and publish conditions to be included in each installation and maintenance licence or in each installation and maintenance licence of a particular description; 15
 - (c) provide for consultation on, and publication of, the conditions proposed to be so determined;
 - (d) make provision about the inclusion in an installation and maintenance licence of conditions that are special to that licence;
 - (e) make provision about including conditions that meet objectives or other criteria specified in the regulations. 20
- (3) Regulations made by virtue of sub-paragraph (1) may, in particular, provide for the following sorts of conditions to be included in a licence –
- (a) conditions about providing information to the Regulator;
 - (b) conditions about the payment of fees to the Regulator, including conditions about the payment of fees – 25
 - (i) when a licence is first issued;
 - (ii) while a licence continues to be in force in relation to a person.
- (4) The regulations may, in particular, provide for conditions to be included in an installation and maintenance licence that – 30
- (a) in relation to England and Wales or Scotland, impose on the person who holds the licence a requirement of a kind that may be imposed under section 7(3) of the Electricity Act 1989 on the holder of a licence under section 6(1) of that Act; 35
 - (b) in relation to Northern Ireland, impose on the person who holds the licence a requirement of a kind that may be imposed under Article 11(3) of the Electricity (Northern Ireland) Order 1992 (S.I. 1992/231 (N.I. 1)) on the holder of a licence under Article 10(1) of that Order. 40
- 34 (1) The regulations may provide for the modification by the Regulator of –
- (a) the conditions of a particular installation and maintenance licence;

- (b) conditions that are included in two or more installation and maintenance licences.
- (2) Regulations made by virtue of sub-paragraph (1) may, in particular –
- (a) provide for the procedure to be followed by the Regulator when it proposes to make a modification; 5
 - (b) provide for the communication of any modification;
 - (c) provide for the time when any modification takes effect;
 - (d) provide for the Regulator to comply with a direction of the Secretary of State or, in relation to Northern Ireland, the Department not to make a particular modification. 10
- (3) In sub-paragraphs (1) and (2), a reference to the modification of a condition includes a reference to the revocation of a condition.
- (4) The regulations may provide for the conditions of an installation and maintenance licence –
- (a) to have effect or cease to have effect at such times and in such circumstances as may be determined by or under the conditions; 15
 - (b) to be modified in such manner as may be specified in the conditions at such times and in such circumstances as may be so determined.

Review and revocation of installation and maintenance licences

- 35 The regulations may provide for the conditions of, or the activities carried out by virtue of, an installation and maintenance licence to be reviewed by the Regulator at any time while it is in force. 20
- 36 (1) The regulations may provide –
- (a) for the revocation of an installation and maintenance licence by the Regulator; 25
 - (b) for an installation and maintenance licence to cease to have effect in circumstances specified in or determined under the licence.
- (2) Regulations made by virtue of sub-paragraph (1)(a) may, in particular, provide for the procedure to be followed by the Regulator when it proposes to revoke the licence. 30

PART 6

ENFORCEMENT OF CONDITIONS AND REQUIREMENTS

Methods of enforcement

- 37 (1) The regulations may make provision about the enforcement of relevant conditions or relevant requirements. 35
- (2) Regulations made by virtue of sub-paragraph (1) may, in particular, provide for the Regulator –
- (a) in a case where the Regulator is satisfied that a relevant person is contravening or is likely to contravene a relevant condition or

- requirement, to make a final order requiring the person to take such steps as the Regulator considers appropriate for the purpose of securing the person’s compliance with the relevant condition or requirement;
- (b) in a case where it appears to the Regulator that a relevant person is contravening or is likely to contravene a relevant condition or requirement, to make a provisional order requiring the person to take such steps as the Regulator considers appropriate for the purpose of securing compliance with the relevant condition or requirement;
- (c) to impose a penalty on a relevant person for the contravention of a relevant condition or requirement;
- (d) in relation to England and Wales and Scotland, in a case where the contravention of a relevant condition or requirement by a relevant person has caused or is causing one or more consumers to suffer loss or damage or to be caused inconvenience, to make an order (a “consumer redress order”) requiring the person to do such things as appear to the Regulator necessary for the purposes of—
- (i) remedying the consequences of the contravention, or
 - (ii) preventing the person contravening the relevant condition or requirement again in the same or a similar way.
- (3) Regulations made by virtue of sub-paragraph (1) may, in particular, provide for—
- (a) the making of an order,
 - (b) the imposition of a penalty, or
 - (c) the making of a consumer redress order,
- to be excluded if the Regulator considers that it would be more appropriate to proceed under the Competition Act 1998 (see paragraph 41).
- (4) Regulations made by virtue of sub-paragraph (1) may, in particular, make provision about the use of more than one method of enforcement.
- (5) Regulations made by virtue of sub-paragraph (1) may, in particular, make provision about enforcement in a case where a person who holds two or more heat network authorisations has contravened or is likely to contravene a relevant condition or requirement in those, or some of those, heat network authorisations.
- (6) In this paragraph—
- “relevant condition” means a condition of—
- (a) a heat network authorisation,
 - (b) a code manager licence, or
 - (c) an installation and maintenance licence;
- “relevant person” means—
- (a) a person who holds a heat network authorisation,
 - (b) a licensed code manager, or
 - (c) a person who holds an installation and maintenance licence;

“relevant requirement”, in relation to a relevant person, means a requirement imposed on the person by or under the regulations or by regulations made by the Regulator by virtue of any provision of this Schedule.

Final and provisional orders

5

- 38 (1) Regulations made by virtue of paragraph 37(2) may, in particular—
- (a) provide for the confirmation of a provisional order;
 - (b) make provision about procedure;
 - (c) provide for the grounds on which an order may be challenged in legal proceedings, the time within which it may be challenged and the remedies that may be given; 10
 - (d) specify how an order may be enforced (including by providing for non-compliance with an order to be a breach of duty);
 - (e) make provision enabling the Regulator to accept an enforcement undertaking from a relevant person and about the consequences of accepting such an undertaking. 15
- (2) An “enforcement undertaking” is an undertaking to take, within the period specified in the undertaking, such action as may be so specified to secure compliance with a relevant condition or requirement.
- (3) Except as provided by the regulations, the validity of an order made by virtue of paragraph 37(2)(a) or (b) is not to be questioned in any legal proceedings. 20

Penalties

- 39 (1) Regulations made by virtue of paragraph 37(2)(c) may, in particular—
- (a) make provision about the maximum amount that may be imposed by way of penalty; 25
 - (b) make provision about procedure;
 - (c) make provision about challenges to a penalty in legal proceedings (including, in particular, specifying the grounds on which and the time within which a penalty may be challenged and the remedies that may be given); 30
 - (d) make provision about the payment of interest;
 - (e) specify how a penalty (and any interest) may be recovered;
 - (f) make provision about payment of a penalty (and any interest) in instalments; 35
 - (g) require sums received by way of penalty (and interest) to be paid into—
 - (i) the Consolidated Fund, or
 - (ii) in relation to Northern Ireland, the Consolidated Fund of Northern Ireland; 40

- (h) make provision enabling the Regulator to accept an enforcement undertaking from a relevant person and about the consequences of accepting such an undertaking.
- (2) The regulations may provide for –
 - (a) publication by the Regulator of a statement of policy with respect to the imposition of penalties and the determination of their amount; 5
 - (b) revision of the statement of policy.
- (3) Except as provided by the regulations, the validity of a penalty imposed by virtue of paragraph 37 is not to be questioned in any legal proceedings.

Consumer redress orders 10

- 40 (1) Regulations made by virtue of paragraph 37(2)(d) may, in particular –
- (a) make provision about the requirements that may be imposed by a consumer redress order, including, in particular, requirements as to –
 - (i) paying compensation to affected heat network consumers; 15
 - (ii) preparing and distributing a written statement about the contravention;
 - (iii) terminating or varying contracts entered into with affected heat network consumers;
 - (b) make provision about the maximum amount of compensation that a relevant person may be required to pay; 20
 - (c) make provision about procedure;
 - (d) make provision about challenges to a consumer redress order in legal proceedings (including, in particular, specifying the grounds on which and the time within which an order may be challenged and the remedies that may be given); 25
 - (e) make provision about the payment of interest;
 - (f) make provision about payment of a penalty (and any interest) in instalments;
 - (g) specify how a consumer redress order may be enforced; 30
 - (h) make provision enabling the Regulator to accept an enforcement undertaking from a relevant person and about the consequences of accepting such an undertaking.
- (2) The regulations may provide for –
- (a) publication by the Regulator of a statement of policy with respect to the making of consumer redress orders and the determination of the requirements imposed by them; 35
 - (b) revision of the statement of policy.
- (3) Except as provided by the regulations, the validity of a consumer redress order is not to be questioned in any legal proceedings. 40

Functions under Part 1 of the Competition Act 1998 and Part 4 of the Enterprise Act 2002

- 41 (1) The regulations may make provision for the purpose of enabling the Regulator to exercise such functions of the Competition and Markets Authority under Part 1 of the Competition Act 1998, or such descriptions of those functions, as are specified in the regulations. 5
- (2) The regulations may make provision for the purpose of enabling the Regulator to exercise such functions of the Competition and Markets Authority under Part 4 of the Enterprise Act 2002, or such descriptions of those functions, as are specified in the regulations.
- (3) Regulations made by virtue of sub-paragraph (1) or (2) may, in particular, make provision – 10
- (a) about the concurrent exercise of functions by the Regulator and the Competition and Markets Authority;
 - (b) for the joint exercise of functions by the Regulator and the Competition and Markets Authority in a particular case; 15
 - (c) as to the procedure for determining which of the Regulator and the Competition and Markets Authority is to exercise functions in a particular case;
 - (d) as to the circumstances in which the exercise of a function by the Regulator or the Competition and Markets Authority precludes the exercise of the function by the other; 20
 - (e) about assistance that may be given by the Regulator to the Competition and Markets Authority.

PART 7

INVESTIGATION 25

Investigation of charges

- 42 (1) The regulations may make provision about how the Regulator is to determine whether charges payable by heat network consumers for, or in relation to, heating, cooling or hot water supplied by means of a relevant heat network contravene a condition of a heat network authorisation by reason of being disproportionate (see paragraph 14(5)(b)). 30
- (2) The regulations may, in particular, make provision enabling the Regulator to specify from time to time the methods that are to be used by the Regulator to determine whether charges are disproportionate.

Powers to require information etc 35

- 43 (1) The regulations may make provision conferring powers on the Regulator or imposing requirements on any person, for the purposes of or in connection with enabling the Regulator –
- (a) to monitor and secure compliance with relevant conditions or requirements; 40

- (b) to make an order in respect of the contravention of a relevant condition or requirement;
 - (c) to enforce relevant conditions or requirements;
 - (d) to make a determination under provision made by virtue of paragraph 42(1). 5
- (2) Regulations made by virtue of sub-paragraph (1) may, in particular, enable the Regulator –
 - (a) to require information to be supplied;
 - (b) to require copies of documents to be provided;
 - (c) to inspect premises; 10
 - (d) to inspect and take copies of documents or records;
 - (e) to conduct tests or to require tests to be conducted;
 - (f) to require a person to produce any equipment, document or record and to make available information stored electronically;
 - (g) to seize and detain equipment, documents and records. 15
- (3) Regulations made by virtue of sub-paragraph (1) may, in particular –
 - (a) confer powers to enter premises for the purposes of exercising powers conferred by the regulations;
 - (b) make provision about the circumstances in which a warrant is required to exercise a power conferred by virtue of paragraph (a); 20
 - (c) make provision for the issuing of such a warrant where conditions specified in the regulations are satisfied.
- (4) The regulations may provide for the Regulator to authorise others to exercise powers conferred on it by regulations made by virtue of sub-paragraph (1). 25
- (5) Regulations made by virtue of sub-paragraph (1) may, in particular, impose requirements relating to –
 - (a) the keeping of records by relevant persons;
 - (b) the provision of information by relevant persons and others;
 - (c) the audit and verification of that information. 30

PART 8

STEP-IN ARRANGEMENTS

- 44 The regulations may make provision for, or in connection with, securing that the holder of a heat network authorisation (“the new entity”) is able effectively to carry on a regulated activity in relation to a relevant heat network in the place of another person (“the old entity”) when directed to do so by the Regulator under a power conferred by a condition in its heat network authorisation (see paragraph 17). 35
- 45 (1) The regulations may provide for the Regulator to make one or more schemes making such provision as to property, rights and liabilities as is necessary or expedient for the purpose of enabling the new entity to carry on the 40

-
- regulated activity in relation to the relevant heat network in an effective manner.
- (2) Regulations made by virtue of sub-paragraph (1) may, in particular, authorise a scheme to provide for –
- (a) the transfer of property, rights or liabilities; 5
 - (b) the creation of interests in, or rights in relation to, property;
 - (c) the creation of rights and liabilities as between the old entity and the new entity;
 - (d) the modification of interests, rights or liabilities of third parties;
 - (e) the enforcement of a right or liability for whose transfer or creation the scheme provides; 10
 - (f) the entering into of agreements and the execution of instruments for the purposes of, or in connection with, the transfer of property or the transfer or creation of rights or liabilities;
 - (g) the time at which a transfer, creation or modification is to take place; 15
 - (h) the assessment and payment of compensation.
- (3) Regulations made by virtue of sub-paragraph (1) may provide for the scheme –
- (a) to contain incidental, supplementary, consequential, transitional, transitory or saving provision; 20
 - (b) to make different provision for different purposes.
- (4) The regulations may provide for the modification of a scheme.
- 46 (1) The regulations may –
- (a) provide for the old entity to give the Regulator such information and assistance as the Regulator may require for the purposes of, or in connection with, the making or implementation of a scheme; 25
 - (b) provide for the Regulator, for the purposes of, or in connection with, the making or implementation of a scheme, to direct the old entity to take, or to refrain from taking, such steps as are specified in the direction. 30
- (2) The regulations may provide for the Regulator –
- (a) to make payments to the new entity in respect of costs incurred in connection with carrying on the regulated activity in relation to the heat network;
 - (b) to indemnify the new entity in respect of liabilities arising from, or in connection with, carrying on the regulated activity in relation to the heat network. 35

PART 9

SPECIAL ADMINISTRATION REGIME

- 47 The regulations may make provision for, or in connection with, a special administration regime for companies that are holders of heat network authorisations. 5
- 48 (1) The regulations may make provision for a court to make an order (a “heat network administration order”) in relation to a company that is the holder of a heat network authorisation directing that the affairs, business and property of the company are to be managed by a person appointed by the court (referred to in this Part as the heat network administrator of the company). 10
- (2) The regulations may make provision about the court that has jurisdiction in a particular case.
- (3) The regulations may limit the effect of a heat network administration order applying to a non-GB company or a non-NI company to— 15
- (a) its affairs and business so far as carried on in Great Britain or Northern Ireland (as the case may be), and
 - (b) its property in Great Britain or Northern Ireland (as the case may be).
- 49 (1) The regulations may make provision about the objectives of a heat network administration order and the means by which the objectives may be secured. 20
- (2) The regulations may, in particular, require the heat network administrator to exercise functions so as to achieve the objectives set out in sub-paragraph (3) so far as possible.
- (3) The objectives referred to in sub-paragraph (2) are— 25
- (a) to secure that the supply of heating, cooling or hot water is continued at the lowest cost which it is reasonably practicable to incur,
 - (b) to secure that the company’s relevant heat network is and continues to be maintained and developed as an efficient and economical system, and 30
 - (c) to secure that it becomes unnecessary, by using such means as are allowed by the regulations, for the heat network administration order to remain in force.
- (4) The regulations may make provision about the means that may be used, including— 35
- (a) the rescue as a going concern of the company subject to the heat network administration order;
 - (b) a transfer as a going concern of so much of the undertaking of the company subject to the heat network administration order as is associated with the company’s relevant heat network. 40

-
- (5) Regulations made by virtue of sub-paragraph (4) may also provide for the heat network administrator to make arrangements for securing that heat network consumers who are supplied with heating, cooling or hot water by the company’s relevant heat network have an alternative supply of heating, cooling or hot water (as the case may be). 5
- (6) The regulations may make provision about—
- (a) the means by which a transfer falling within sub-paragraph (4)(b) may be effected;
 - (b) the circumstances in which the objectives set out in sub-paragraph (3) may or may not be achieved by means of such a transfer. 10
- (7) In this paragraph, “the company’s relevant heat network”, in relation to a company that is the holder of a heat network authorisation, means the relevant heat network to which the authorisation relates.
- 50 (1) The regulations may make provision for applying, with such modifications as appear to the appropriate authority to be appropriate, the provisions mentioned in sub-paragraph (2). 15
- (2) The provisions referred to in sub-paragraph (1) are—
- (a) sections 156 to 167 of, and Schedules 20 and 21 to, the Energy Act 2004 (special administration regime for energy licensees);
 - (b) sections 171 and 196 of the Energy Act 2004 (interpretation), so far as relating to the provisions mentioned in paragraph (a); 20
 - (c) sections 19 to 33 of, and the Schedule to, the Energy Act (Northern Ireland) 2011 (c. 6 (N.I.)) (special administration regime for protected energy companies);
 - (d) section 35 of the Energy Act (Northern Ireland) 2011 (interpretation), so far as relating to the provisions mentioned in paragraph (c). 25
- 51 In this Part—
- “company” means—
 - (a) a company registered under the Companies Act 2006, or
 - (b) an unregistered company; 30
 - “heat network administration order” has the meaning given by paragraph 48;
 - “heat network administrator” has the meaning given by paragraph 48;
 - “non-GB company” means a company incorporated outside Great Britain; 35
 - “non-NI company” means a company incorporated outside Northern Ireland;
 - “unregistered company” means a company that is not registered under the Companies Act 2006. 40

PART 10

SUPPLY TO PREMISES

- 52 (1) The regulations may make provision about—
- (a) offers to connect premises to a relevant heat network, the terms of such offers and acceptance of such an offer; 5
 - (b) the conduct of holders of heat network authorisations towards heat network consumers or in relation to premises connected or proposed to be connected to a relevant heat network.
- (2) Regulations made by virtue of this paragraph may make provision relating to the connection of premises to a relevant heat network whether a connection is for the purpose of—
- (a) supplying heating, cooling or hot water to premises, or
 - (b) supplying thermal energy to a relevant heat network. 10
- (3) The following paragraphs of this Part make further provision about regulations that may be made by virtue of this paragraph. 15
- 53 The regulations may—
- (a) impose duties, in circumstances specified by the regulations, to make and maintain a connection between a relevant heat network and any premises;
 - (b) impose duties as to providing such equipment as may be needed to make the connection function; 20
 - (c) provide for the procedure to be followed when seeking to have a connection made between a relevant heat network and any premises;
 - (d) provide for persons seeking a connection to premises to pay an amount in respect of costs incurred in making the connection or in respect of the cost of equipment provided; 25
 - (e) provide for the giving of security for the payment of such an amount in respect of the cost of equipment provided;
 - (f) make provision about the terms upon which a connection is made (including provision for deeming a contract to have been made and for making schemes for determining the terms and conditions to be incorporated in such a contract). 30
- 54 The regulations may—
- (a) make provision as to the meters and other equipment that may be installed for the purposes of making and maintaining a connection between a relevant heat network and any premises; 35
 - (b) impose requirements as to the operation of such meters and other equipment.
- 55 The regulations may—
- (a) prohibit the making of a charge where, for the purpose of meeting the needs of a disabled person, a meter or other equipment is moved or replaced; 40

- (b) make provision as to the steps that may be taken if payments relating to the supply of heating, cooling or hot water are not made (including provision for removing a connection to a relevant heat network or otherwise preventing the further supply of heating, cooling or hot water); 5
- (c) make provision as to the arrangements that may apply, and the steps that may be taken, if –
- (i) premises are supplied with heating, cooling or hot water without agreement as to the terms on which the supply is made, or 10
- (ii) a connection is made to a relevant heat network, or restored, without authority;
- (d) make provision in connection with securing the rights of a holder of a heat network authorisation as owner of equipment provided by it. 15
- 56 The regulations may –
- (a) confer powers to enter premises for the purposes of installing, inspecting, repairing, replacing, altering or removing meters or other equipment;
- (b) confer powers to enter premises for the purposes of reading a register on a meter or other equipment; 20
- (c) make provision for the issuing of warrants to enter premises for the purposes of exercising powers conferred by regulations made by virtue of this paragraph where conditions specified in the regulations are satisfied; 25
- (d) make provision as to the persons who may exercise powers conferred by regulations under this paragraph.
- 57 The regulations may revoke or amend the Heat Network (Metering and Billing) Regulations 2014 (S.I. 2014/3120).

PART 11

CONSUMER PROTECTION

Standards of performance

- 58 (1) The regulations may prescribe such standards of performance in connection with the regulated activities of holders of heat network authorisations, so far as affecting – 35
- (a) heat network consumers supplied by the relevant heat networks to which their authorisations relate, or
- (b) potential heat network consumers who would be supplied by those relevant heat networks,
- as in the Regulator’s opinion ought to be achieved as regards those persons. 40
- (2) The regulations may –

- (a) specify the circumstances in which the holders of heat network authorisations are to inform persons of rights conferred on them under regulations made by virtue of this paragraph;
 - (b) provide for exemptions from standards of performance;
 - (c) require the holders of heat network authorisations to provide information about their compliance with standards of performance. 5
- (3) The regulations may provide—
 - (a) for compensation to be made to persons affected by a failure to meet a standard of performance;
 - (b) for the determination of the amount of compensation. 10
- (4) The regulations may provide for the making of compensation under regulations made by virtue of this paragraph in respect of a failure to meet a standard of performance not to prejudice any other remedy which may be available in respect of the act or omission which constituted the failure.
- (5) Regulations made in relation to England and Wales and Scotland by virtue of sub-paragraphs (1) to (3), may provide for the Regulator to make provision by regulations about the matters referred to in those sub-paragraphs. 15
- (6) The regulations may require that regulations made by the Regulator by virtue of sub-paragraph (5) are made with the consent of the Secretary of State. 20
- (7) Regulations made by the Regulator by virtue of sub-paragraph (5) are to be made by statutory instrument.
- 59 (1) The regulations may provide for the Regulator, from time to time—
 - (a) to determine such standards of overall performance in connection with regulated activities as, in the Regulator’s opinion, ought to be achieved by holders of heat network authorisations; 25
 - (b) to publish those standards.
- (2) The regulations may provide for the Regulator to determine different standards for different descriptions of holders of heat network authorisations. 30
- (3) The regulations may require holders of heat network authorisations to conduct their regulated activities in such a way as can reasonably be expected to lead to compliance with standards set under regulations made by virtue of this paragraph. 35
- 60 (1) The regulations may make provision about the steps to be taken in connection with prescribing or determining standards of performance under paragraph 58 or 59.
- (2) The regulations may, in particular, make provision about—
 - (a) conducting research; 40
 - (b) publishing information about proposals to prescribe or determine standards;
 - (c) considering representations about proposals;

- (d) consulting such persons or descriptions of person as are specified in the regulations.

Consumer advocacy bodies

- 61 (1) The regulations may provide for Part 1 of the Consumers, Estate Agents and Redress Act 2007 (consumer advocacy bodies) to apply in relation to heat network consumers as it applies in relation to gas or electricity consumers, with such modifications as appear to the appropriate authority to be appropriate. 5
- (2) The regulations may provide for sections 24 and 25 of the Consumers, Estate Agents and Redress Act 2007 (provision of information to consumer advocacy bodies) to apply in relation to relevant persons as they apply to regulated providers within the meaning of section 25 of that Act, with such modifications as appear to the appropriate authority to be appropriate. 10
- (3) The regulations may also make provision extending to Northern Ireland or applying in relation to the General Consumer Council for Northern Ireland that corresponds to such provision in Part 1 of the Consumers, Estate Agents and Redress Act 2007 as does not extend to Northern Ireland or does not apply in relation to the General Consumer Council for Northern Ireland (as the case may be). 15
- (4) In this paragraph, “the appropriate authority” means – 20
- (a) in relation to England and Wales and Scotland, the Secretary of State;
- (b) in relation to Northern Ireland, the Department.

Complaints handling and redress schemes

- 62 The regulations may provide for Part 2 of the Consumers, Estate Agents and Redress Act 2007 (complaints handling and redress schemes) – 25
- (a) to apply in relation to heat network consumers in England, Wales or Scotland as it applies in relation to gas or electricity consumers, with such modifications as appear to the Secretary of State to be appropriate; 30
- (b) to apply in relation to relevant persons in England, Wales or Scotland as it applies in relation to regulated providers within the meaning of that Part, with such modifications as appear to the Secretary of State to be appropriate.

Consumer complaints and dispute resolution arrangements: Northern Ireland 35

- 63 (1) The regulations may, in relation to Northern Ireland, provide for consumer complaints legislation to apply in relation to a heat network consumer or potential heat network consumer as it applies in relation to a customer or potential customer of, or user of electricity or gas supplied by, an authorised supplier, with such modifications as appear to the Department to be appropriate. 40

(2) In this paragraph, “consumer complaints legislation” means Article 22 of the Energy (Northern Ireland) Order 2003 (S.I. 2003/419 (N.I. 6)) and such other provisions of that Order as relate to it.

64 The regulations may, in relation to Northern Ireland, make provision about the resolution of disputes involving a heat network consumer or potential heat network consumer (including by providing for a scheme under which complaints may be made to, and investigated and determined by, an independent person or may be referred to arbitration). 5

Documents for Citizens Advice, Consumer Scotland and the General Consumer Council for Northern Ireland 10

65 The regulations may make provision requiring the Regulator, where the Regulator publishes a document of a description specified in the regulations, to send a copy of the document to—
(a) Citizens Advice and Consumer Scotland, or
(b) the General Consumer Council for Northern Ireland (as the case may be). 15

PART 12

FINANCIAL ARRANGEMENTS

66 (1) The regulations may provide for the Regulator to include in the conditions of heat network authorisations provision requiring the payment of sums relating to the costs incurred by the Secretary of State or the Department in giving financial assistance under regulations made by virtue of paragraph 50 that apply— 20

- (a) any provision of sections 165 to 167 of the Energy Act 2004 (grants, loans, indemnities and guarantees given by the Secretary of State), or 25
- (b) any provision of sections 28 to 30 of the Energy Act (Northern Ireland) 2011 (grants, loans, indemnities and guarantees given by the Department).

(2) The regulations may— 30
(a) provide for the Secretary of State or the Department to give directions to the Regulator for the purpose of securing that sums relating to those costs are included in the sums payable by virtue of conditions in heat network authorisations;
(b) provide for the Regulator to comply with any such direction. 35

67 (1) The regulations may provide for the Regulator to include in—
(a) the conditions of a heat network authorisation, or
(b) the conditions of an installation and maintenance licence,
provision requiring the payment of sums relating to the costs incurred by a person or body in providing, or arranging for the provision of, consumer advocacy and advice in relation to heat network consumers. 40

- (2) The regulations may –
- (a) provide for the Secretary of State or the Department to give directions to the Regulator for the purpose of securing that sums relating to those costs are included in the sums payable by virtue of conditions in heat network authorisations or installation and maintenance licences; 5
 - (b) provide for the Regulator to comply with any such direction.
- 68 The regulations may make provision for the Regulator to pay into the Consolidated Fund or the Consolidated Fund of Northern Ireland sums received in consequence of – 10
- (a) provision made by or under the regulations, or
 - (b) a condition of a heat network authorisation, code manager licence or installation and maintenance licence.

PART 13

MISCELLANEOUS AND GENERAL 15

Consultation and cooperation

- 69 The regulations may –
- (a) make provision about consultation and cooperation with such persons or descriptions of person as are specified in the regulations;
 - (b) make provision as to the purposes of such cooperation. 20
- 70 The regulations may require the Regulator to assist a public authority that carries out, in relation to Wales or Scotland, functions as regards limiting targeted greenhouse gases in relation to heat networks (including by providing information).

Objectives of the Secretary of State and the Department 25

- 71 (1) The regulations may make provision about the objectives of the Secretary of State and the Department in carrying out functions under the regulations.
- (2) Regulations made by virtue of sub-paragraph (1) may, in particular, provide that the principal objective of the Secretary of State or the Department is to protect the interests of existing and future heat network consumers. 30
- (3) The regulations may specify particular interests of existing and future heat network consumers that are to be protected.

Offences

- 72 (1) The regulations may provide for the creation of offences.
- (2) The regulations may deal with matters relating to such offences, including the provision of defences and evidentiary matters. 35
- 73 (1) The regulations may provide for an offence created by virtue of regulations made under paragraph 72 to be triable –

- (a) only summarily, or
 - (b) either summarily or on indictment.
- (2) The regulations must provide for such an offence to be punishable on indictment with a fine.
- (3) The regulations must provide for such an offence to be punishable on summary conviction in England and Wales with a fine. 5
- (4) The regulations must provide for such an offence to be punishable on summary conviction in Scotland or Northern Ireland with a fine not exceeding an amount specified in the regulations.

Crown application 10

- 74 (1) The regulations may make provision about application to the Crown.
- (2) The regulations may also, to the extent that they bind the Crown, restrict or modify the application of the regulations.
- (3) Regulations made by virtue of sub-paragraph (2) may, in particular, provide that a power exercisable in relation to land in which there is a Crown or Duchy interest is subject to a requirement to obtain consent from a person specified in the regulations. 15
- (4) In this paragraph, “Crown or Duchy interest” means—
- (a) an interest belonging to His Majesty in right of the Crown or the Duchy of Lancaster, or to the Duchy of Cornwall; 20
 - (b) an interest which belongs to a government department or which is held in trust for His Majesty for the purposes of a government department;
 - (c) an interest which belongs to an office-holder in the Scottish Administration or which is held in trust for His Majesty for the purposes of the Scottish Administration by such an office-holder. 25
- (5) This includes, in particular—
- (a) an interest which belongs to His Majesty in right of His Majesty's Government in Northern Ireland, and
 - (b) an interest which belongs to a Northern Ireland department or which is held in trust for His Majesty for the purposes of a Northern Ireland department. 30
- (6) A reference in this paragraph to an office-holder in the Scottish Administration is to be construed in accordance with section 126(7) of the Scotland Act 1998. 35

SCHEDULE 17

Section 199

LICENSING OF ACTIVITIES RELATING TO LOAD CONTROL

- 1 The Electricity Act 1989 is amended as follows.

2 After section 56FB insert –

“56FBA New licensable activities: load control of energy smart appliances

- (1) The Secretary of State may by regulations amend this Part so as –
 - (a) to provide for one or more activities within subsection (2) to be added to the activities which are licensable activities, or 5
 - (b) where regulations have previously been made under paragraph (a) in relation to an activity –
 - (i) to amend the definition of the activity, or
 - (ii) to provide for the activity to cease to be a licensable activity. 10
- (2) The activities within this subsection are activities connected with –
 - (a) the carrying on or facilitating of load control;
 - (b) the provision of services or facilities related to load control; but not the activities mentioned in subsection (3). 15
- (3) The activities within this subsection are –
 - (a) the provision of relevant electronic communications networks;
 - (b) the making, selling, importing or distributing of energy smart appliances;
 - (c) things done by end-users of energy smart appliances (in their capacity as such). 20
- (4) Regulations under subsection (1)(a) may define activities which are to become licensable activities in any manner the Secretary of State considers appropriate, including –
 - (a) by reference to the purpose for which an activity is carried out; and 25
 - (b) by reference to the position of an activity in a sequence of activities necessary to secure a particular outcome.
- (5) Regulations under this section may make consequential, transitional, incidental or supplementary provision, including –
 - (a) amendments (or repeals) of any provision of this Act or any other enactment, including any enactment comprised in, or an instrument made under, an Act of the Scottish Parliament; 30
 - (b) in the case of regulations under subsection (1)(a), provision determining the conditions which are to be standard conditions for the purposes of licences authorising the undertaking of the activities; 35
 - (c) provision modifying any standard conditions of licences.
- (6) Transitional provision under subsection (5) may in particular include provision about persons already undertaking activities that are to become licensable activities by virtue of subsection (1)(a), such as provision – 40

- (a) about the application to such persons of section 4(1);
 - (b) about the granting of licences to such persons.
- (7) Regulations under this section may, in particular, also make provision—
- (a) for licences to authorise the holder to carry out the licensable activities in any area, or only in an area specified in the licence; 5
 - (b) enabling the terms of the licence to be modified so as to extend or restrict the area in which the licence holder may carry on the licensable activities; 10
 - (c) specifying that a licence, and any modification of a licence, must be in writing;
 - (d) for a licence, if not previously revoked, to continue in force for such period as may be specified in or determined by or under the licence; 15
 - (e) conferring functions on the Secretary of State or the Authority.
- (8) In this section, “energy smart appliance”, “load control” and “relevant electronic communications network” have the same meaning as in Part 8 of the Energy Act 2023. 20

56FBB Regulations under section 56FBA

- (1) Before making regulations under section 56FBA, the Secretary of State must consult—
- (a) the Authority, and
 - (b) such other persons as the Secretary of State thinks appropriate. 25
- (2) Subsection (1) may be satisfied by consultation before, as well as by consultation after, the passing of this Act.
- (3) The power to make such regulations may not be exercised after the end of a period of seven years beginning with the day on which the first such regulations come into force (for any purpose). 30
- (4) Regulations under section 56FBA may not be made unless a draft of the statutory instrument containing them has been laid before, and approved by resolution of, each House of Parliament.”
- 3 At the end of section 56FC(2) (competitive tenders: definition of “new licensable activities”), insert “or regulations under section 56FBA(1)(a)”. 35
- 4 In section 106(2)(a) (regulations and orders), after “State” insert “(other than regulations under section 56FBA)”.

SCHEDULE 18

Section 234

ENFORCEMENT UNDERTAKINGS

Procedure

- 1 (1) The Secretary of State must publish a procedure for entering into enforcement undertakings. 5
- (2) The Secretary of State may revise the procedure (and must publish any revised procedure).
- (3) The Secretary of State must consult any persons the Secretary of State considers appropriate before publishing or revising the procedure.

Variation of terms

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- 2 The terms of an enforcement undertaking (including, in particular, the action specified under it and the period so specified within which the action must be taken) may be varied if both parties agree in writing.

Compliance certificates

- 3 (1) Where the Secretary of State is satisfied that an enforcement undertaking has been complied with, the Secretary of State must issue a certificate to that effect (referred to in this Schedule as a “compliance certificate”). 15
- (2) A person may at any time apply to the Secretary of State for a compliance certificate.
- (3) The Secretary of State may specify in what form an application under sub-paragraph (2) must be made and what information (if any) must accompany it. 20
- (4) Where an application is made under sub-paragraph (2), the Secretary of State must give the applicant notice in writing of the Secretary of State’s decision on the application within 14 days beginning with the day after the day on which the application is received. 25

Inaccurate, incomplete or misleading information

- 4 Where the Secretary of State is satisfied that a person who has given an enforcement undertaking has provided inaccurate, misleading or incomplete information in relation to the undertaking, the Secretary of State may treat the person as having failed to comply with the undertaking (and, if the Secretary of State decides so to treat the person, must by notice revoke any compliance certificate given to the person in respect of the enforcement undertaking). 30

Appeal against decision under paragraph 3 or 4

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- 5 (1) An appeal lies to the First-tier Tribunal against a decision of the Secretary of State to refuse an application for a compliance certificate or, in reliance

on paragraph 4, to treat the person as having failed to comply with an enforcement undertaking.

- (2) The grounds for appeal are that the decision is –
- (a) based on an error of fact,
 - (b) wrong in law, 5
 - (c) unfair or unreasonable, or
 - (d) wrong for any other reason.
- (3) On an appeal under this paragraph, the First-tier Tribunal may –
- (a) confirm the Secretary of State’s decision or direct that it is not to have effect; 10
 - (b) award costs or, in Scotland, expenses.

SCHEDULE 19

Section 249

PETROLEUM LICENCES: AMENDMENTS TO MODEL CLAUSES

PART 1

PETROLEUM LICENSING (PRODUCTION) (SEAWARD AREAS) REGULATIONS 2008 15

- 1 In the Petroleum Licensing (Production) (Seaward Areas) Regulations 2008 (S.I. 2008/225), the Schedule (model clauses for seaward area production licences) is amended as follows.
- 2 After clause 40 insert –
- “40A Change in control of Licensee 20**
- (1) This clause applies if –
 - (a) the Licensee is a company, or
 - (b) where two or more persons are the Licensee, any of those persons is a company,
 and references in this clause to a company are to such a company. 25
 - (2) A change in control of a company is not permitted without the consent of the OGA.
 - (3) There is a “change in control” of a company if a person takes control of the company, not having previously been a person who controlled the company. 30
 - (4) If a change in control of a company is contemplated, the company must apply in writing to the OGA for consent at least three months before the date on which it is proposed that the change would occur (if consent were given).
 - (5) The OGA may – 35
 - (a) consent to the change in control unconditionally,

-
- (b) consent to the change in control subject to conditions, or
 - (c) refuse consent to the change in control.
 - (6) If the OGA proposes to grant consent subject to any condition or to refuse consent, the OGA must, before making a final decision—
 - (a) give the company an opportunity to make representations, 5
and
 - (b) consider any representations that are made.
 - (7) The general rule is that the OGA must decide an application within three months of receiving it, but the OGA may delay its decision by notifying the interested parties in writing. 10
 - (8) Conditions as mentioned in paragraph (5)(b) may be imposed on the person taking control of the company (as well as on the company), and may include—
 - (a) conditions relating to the arrangements for the change in control, including the date by which it must occur, 15
 - (b) conditions relating to the performance of activities permitted by this licence, and
 - (c) financial conditions.
 - (9) The OGA’s decision on the application, and any conditions as mentioned in paragraph (5)(b), must be notified in writing to the interested parties. 20
 - (10) In this clause “the interested parties” means—
 - (a) the company,
 - (b) the person who (if consent were granted) would take control of the company, and 25
 - (c) if the company and another person or persons are the Licensee, that other person or those other persons.
 - (11) For the purposes of this clause, “control” of a company is to be construed in accordance with sections 450(2) to (4) and 451(1) to (5) of the Corporation Tax Act 2010, modified as specified in clause 40(4).” 30
- 3 (1) Clause 41 (power of revocation) is amended as follows.
- (2) In paragraph (2)—
 - (a) after sub-paragraph (j) insert—
 - “(k) if the Licensee is a company, any breach of a 35
condition subject to which the OGA gave its consent to a change in control of the Licensee (see clause 40A),
 - (l) if the Licensee is a company, any failure to provide 40
full and accurate information in response to a notice given by the OGA to that company under section 5D of the Act.”;

- (b) in the closing words, after “(h)” insert “or (k) or (l)”.
- (3) Omit paragraphs (3) to (5).
- 4 (1) Clause 42 (power of partial revocation) is amended as follows.
- (2) For paragraph (1) substitute –
- “**(1)** This clause applies in a case where two or more persons are the Licensee and – 5
- (a) an event mentioned in clause 41(2)(c), (d), (e), (f) or (h) occurs in relation to one of those persons;
- (b) an event mentioned in clause 41(2)(b) occurs which consists of a breach of clause 40A(2) or (4) in relation to a change in control of one of those persons; 10
- (c) an event mentioned in clause 41(2)(k) occurs in relation to a change in control of one of those persons (see clause 40A); or
- (d) an event mentioned in clause 41(2)(l) occurs which consists of a failure by one of those persons as mentioned in that provision.” 15
- (3) In paragraph (2), for “or (b)” substitute “, (b), (c) or (d)”.

PART 2

PETROLEUM LICENSING (EXPLORATION AND PRODUCTION) (LANDWARD AREAS) REGULATIONS 2014 20

- 5 In the Petroleum Licensing (Exploration and Production) (Landward Areas) Regulations 2014 (S.I. 2014/1686), Schedule 2 (model clauses for petroleum exploration and development licences) is amended as follows.
- 6 After clause 40 insert – 25
- “40A Change in control of Licensee**
- (1) This clause applies if –
- (a) the Licensee is a company, or
- (b) where two or more persons are the Licensee, any of those persons is a company, 30
- and references in this clause to a company are to such a company.
- (2) A change in control of a company is not permitted without the consent of the OGA.
- (3) There is a “change in control” of a company if a person takes control of the company, not having previously been a person who controlled the company. 35
- (4) If a change in control of a company is contemplated, the company must apply in writing to the OGA for consent at least three months

before the date on which it is proposed that the change would occur (if consent were given).

- (5) The OGA may –
- (a) consent to the change in control unconditionally,
 - (b) consent to the change in control subject to conditions, or 5
 - (c) refuse consent to the change in control.
- (6) If the OGA proposes to grant consent subject to any condition or to refuse consent, the OGA must, before making a final decision –
- (a) give the company an opportunity to make representations, and 10
 - (b) consider any representations that are made.
- (7) The general rule is that the OGA must decide an application within three months of receiving it, but the OGA may delay its decision by notifying the interested parties in writing.
- (8) Conditions as mentioned in paragraph (5)(b) may be imposed on the person taking control of the company (as well as on the company), and may include – 15
- (a) conditions relating to the arrangements for the change in control, including the date by which it must occur,
 - (b) conditions relating to the performance of activities permitted by this licence, and 20
 - (c) financial conditions.
- (9) The OGA’s decision on the application, and any conditions as mentioned in paragraph (5)(b), must be notified in writing to the interested parties. 25
- (10) In this clause “the interested parties” means –
- (a) the company,
 - (b) the person who (if consent were granted) would take control of the company, and
 - (c) if the company and another person or persons are the Licensee, that other person or those other persons. 30
- (11) For the purposes of this clause, “control” of a company is to be construed in accordance with sections 450(2) to (4) and 451(1) to (5) of the Corporation Tax Act 2010, modified as specified in clause 40(4).” 35

7 (1) Clause 41 (power of revocation) is amended as follows.

(2) In paragraph (2) –

(a) after sub-paragraph (j) insert –

“(k) if the Licensee is a company, any breach of a condition subject to which the OGA gave its consent 40

- to a change in control of the Licensee (see clause 40A),
- (l) if the Licensee is a company, any failure to provide full and accurate information in response to a notice given by the OGA to that company under section 5D of the Act; 5
- (b) in the closing words, after “(h)” insert “or (k) or (l)”.
- (3) Omit paragraphs (3) to (5).
- 8 (1) Clause 42 (power of partial revocation) is amended as follows.
- (2) For paragraph (1) substitute – 10
- “(1) This clause applies in a case where two or more persons are the Licensee and –
- (a) an event mentioned in clause 41(2)(c), (d), (e), (f) or (h) occurs in relation to one of those persons;
- (b) an event mentioned in clause 41(2)(b) occurs which consists of a breach of clause 40A(2) or (4) in relation to a change in control of one of those persons; 15
- (c) an event mentioned in clause 41(2)(k) occurs in relation to a change in control of one of those persons (see clause 40A); or 20
- (d) an event mentioned in clause 41(2)(l) occurs which consists of a failure by one of those persons as mentioned in that provision.”
- (3) In paragraph (2), for “or (b)” substitute “, (b), (c) or (d)”.

SCHEDULE 20

Section 254 25

ACCESSION TO CONVENTION ON SUPPLEMENTARY COMPENSATION FOR NUCLEAR DAMAGE

- 1 In section 13 of the Nuclear Installations Act 1965 (“the 1965 Act”) (exclusion, extension or reduction of compensation in certain cases), in subsection (5A), after “(1ZA),” insert “(1ZAA),” 30
- 2 (1) Section 16 of the 1965 Act (satisfaction of claims) is amended as follows.
- (2) In subsection (1ZA) after “or 9” insert “, other than CSC-only claims,”.
- (3) After subsection (1ZA) insert –
- “(1ZAA) Notwithstanding subsection (1), if the amount payable by a person in respect of CSC-only claims for compensation under this Act in respect of any one occurrence or event constituting a breach of a duty imposed on that person by section 7, 7B, 8 or 9 reaches, in the aggregate and apart from interest or costs, the equivalent in sterling 35

of 300 million special drawing rights, that person is not required to satisfy further claims for compensation.”

- (4) In subsection (1ZB) –
- (a) in paragraph (a)(i) after “subsection (1ZA)” insert “or (1ZAA)”, and
 - (b) in paragraph (b) after “subsection (1ZA)” insert “or (as the case may be) (1ZAA)”. 5
- (5) In subsection (1A) for “or (3B)” substitute “, (1ZAA), (3B), (3BA), (3BB), (3BC) or (3BD)”.
- (6) In subsection (3)(a) after “subsection (1)” insert “, (1ZA), (1ZAA), (1ZB)”.
- (7) In subsection (3B) – 10
- (a) after “or 10” insert “, other than CSC-only claims (“non-CSC-only claims”),”,
 - (b) after “further” insert “non-CSC-only”, and
 - (c) after “special relevant claims” insert “or CSC claims (or both)”.
- (8) After subsection (3B) insert – 15
- “(3BA) To the extent that further non-CSC-only claims for compensation are special relevant claims, the appropriate authority may be required to satisfy them up to the equivalent in sterling of 1,500 million euros (in the aggregate and apart from interest or costs).
 - (3BB) To the extent that further non-CSC-only claims for compensation are CSC claims, the appropriate authority may be required to satisfy them up to the equivalent in sterling of the aggregate of 700 million euros and the value of the CSC international pooled funds (in the aggregate and apart from interest or costs). 20
 - (3BC) To the extent that further non-CSC-only claims for compensation are both special relevant claims and CSC claims, the appropriate authority may be required to satisfy them up to the equivalent in sterling of the aggregate of 1,500 million euros and the value of the CSC international pooled funds (in the aggregate and apart from interest or costs). 25 30
 - (3BD) If the amount payable in respect of CSC-only claims in respect of any one occurrence or event constituting a breach of a duty imposed on a person by section 7, 7B, 8, 9 or 10 reaches, in the aggregate and apart from interest or costs, the equivalent in sterling of the aggregate of 300 million special drawing rights and the value of the CSC international pooled funds, the appropriate authority is not required to satisfy further such claims for compensation. 35
 - (3BE) If the CSC international pooled funds are (or will be) reduced by virtue of claims to which subsection (3) applies by 50%, the appropriate authority is not required to satisfy further claims for compensation if that would give rise to a further reduction of those 40

funds except to the extent that those further claims are non-UK CSC claims.”

- (9) In subsection (3C)(a) after “subsection (3B)” insert “, (3BA), (3BB), (3BC), (3BD) or (3BE)”.
- (10) In subsection (3D) – 5
- (a) in paragraph (b)(i) and (ii) after “subsection (1ZA)” insert “, (1ZAA),” and
- (b) in paragraph (b)(iii) after “subsection (3B)” insert “, (3BA), (3BB), (3BC), (3BD), (3BE)”.
- 3 In section 16A of the 1965 Act (section 16: supplementary), in subsection 10
(7)(b) for “section 18(1A)” substitute “section 16(3BA)”.
- 4 After section 16A of the 1965 Act insert –
- “16AA Section 16: CSC-related definitions**
- (1) This section applies for the purposes of section 16.
- (2) A claim for compensation under this Act in the case of a breach of 15
a duty imposed by section 7, 7B, 8, 9 or 10 is a CSC claim if –
- (a) the injury or damage for which compensation is claimed is such injury or damage as is mentioned in subsection (3),
- (b) the significant impairment of the environment by reference 20
to which compensation is claimed by virtue of section 11A(1) or 11G(1) or paragraph 1 of Schedule 1A is such significant impairment of the environment as is mentioned in subsection (3), or
- (c) the preventive measures by reference to which compensation 25
is claimed by virtue of section 11H(1) or (2) are preventive measures relating to such injury, damage or significant impairment of the environment as is mentioned in subsection (3).
- (3) The injury, damage and significant impairment of the environment 30
referred to in subsection (2) are –
- (a) injury, damage or significant impairment of the environment 35
that is incurred within the territorial limits of the United Kingdom or another CSC territory;
- (b) injury, damage or significant impairment of the environment 35
that is incurred in or above the exclusive economic zone or on the continental shelf of the United Kingdom or another CSC territory in connection with the exploitation or exploration of the natural resources of that exclusive economic zone or continental shelf;
- (c) injury or damage that is incurred in or above the sea outside 40
the territorial limits of any country or territory by, or by persons or property on, a ship or aircraft registered in the United Kingdom or another CSC territory;

- (d) injury or damage that is incurred in or above the sea outside the territorial limits of any country or territory by a national of the United Kingdom or another CSC territory;
- (e) injury or damage that is incurred outside the territorial limits of any country or territory by, or by persons or property on, an artificial island, installation or structure that is subject to the jurisdiction of the United Kingdom or another CSC territory. 5
- (4) A CSC claim is a CSC-only claim if –
- (a) the injury or damage for which compensation is claimed is such injury or damage as is mentioned in subsection (5), 10
- (b) the significant impairment of the environment by reference to which compensation is claimed by virtue of section 11A(1) or 11G(1) or paragraph 1 of Schedule 1A is such significant impairment of the environment as is mentioned in subsection (5), or 15
- (c) the preventive measures by reference to which compensation is claimed by virtue of section 11H(1) or (2) are preventive measures relating to such injury, damage or significant impairment of the environment as is mentioned in subsection (5). 20
- (5) The injury, damage and significant impairment of the environment referred to in subsection (4) are –
- (a) injury, damage or significant impairment of the environment that is incurred within the territorial limits of a CSC-only territory; 25
- (b) injury, damage or significant impairment of the environment that is incurred in or above the exclusive economic zone or on the continental shelf of a CSC-only territory in connection with the exploitation or exploration of the natural resources of that exclusive economic zone or continental shelf; 30
- (c) injury or damage that is incurred in or above the sea outside the territorial limits of any country or territory by, or by persons or property on, a ship or aircraft registered in a CSC-only territory; 35
- (d) injury or damage that is incurred in or above the sea outside the territorial limits of any country or territory by a national of a CSC-only territory;
- (e) injury or damage that is incurred outside the territorial limits of any country or territory by, or by persons or property on, an artificial island, installation or structure that is subject to the jurisdiction of a CSC-only territory. 40
- (6) A CSC-only territory is a CSC territory that is not –
- (a) the United Kingdom, or

- (b) any other CSC territory that is a relevant territory in relation to a relevant international agreement other than the CSC.
- (7) A CSC claim is a non-UK CSC claim if –
- (a) the injury or damage for which compensation is claimed is such injury or damage as is mentioned in subsection (8), 5
 - (b) the significant impairment of the environment by reference to which compensation is claimed by virtue of section 11A(1) or 11G(1) or paragraph 1 of Schedule 1A is such significant impairment of the environment as is mentioned in subsection (8), or 10
 - (c) the preventive measures by reference to which compensation is claimed by virtue of section 11H(1) or (2) are preventive measures relating to such injury, damage or significant impairment of the environment as is mentioned in subsection (8). 15
- (8) The injury, damage and significant impairment of the environment referred to in subsection (7) are –
- (a) injury, damage or significant impairment of the environment that is incurred within the territorial limits of a CSC territory other than the United Kingdom; 20
 - (b) injury, damage or significant impairment of the environment that is incurred in or above the exclusive economic zone or on the continental shelf of a CSC territory other than the United Kingdom in connection with the exploitation or exploration of the natural resources of that exclusive economic zone or continental shelf; 25
 - (c) injury or damage that is incurred in or above the sea outside the territorial limits of any country or territory by, or by persons or property on, a ship or aircraft registered in the United Kingdom or another CSC territory; 30
 - (d) injury or damage that is incurred in or above the sea outside the territorial limits of any country or territory by a national of the United Kingdom or another CSC territory;
 - (e) injury or damage that is incurred outside the territorial limits of any country or territory by, or by persons or property on, an artificial island, installation or structure that is subject to the jurisdiction of the United Kingdom or another CSC territory. 35
- (9) In this section –
- “CSC territory” means – 40
 - (a) a country that is a party to the CSC, or
 - (b) an overseas territory of such a country, if the CSC applies to the overseas territory,
 - “national”, in relation to a CSC territory, includes –
 - (a) that CSC territory and any part of it, 45

- (b) a public or private body established in the CSC territory or part of it, whether a body corporate or not,
- (c) a partnership established in the CSC territory or part of it, and 5
- (d) a trust the validity of which is governed by the law of the CSC territory, and
- “the CSC” means the Convention on Supplementary Compensation for Nuclear Damage.
- (10) A reference in this section to a national of the United Kingdom is to be construed in accordance with section 16A(8).” 10
- 5 In section 17 of 1965 Act (jurisdiction, shared liability and foreign judgments), in subsection (3B)(a) and (b) after “section 16(1ZA)” insert “, (1ZAA)”.
- 6 (1) Section 18 of the 1965 Act (general cover for compensation) is amended as follows. 15
- (2) In subsection (1A) for “1,500 million euros” substitute “the aggregate of 1,500 million euros and the value of the CSC international pooled funds”.
- (3) In subsection (1D)–
- (a) in each of paragraphs (a) and (b) after “section 16(1ZA)” insert “, (1ZAA)”, and 20
- (b) in paragraph (c) after “section (3B)” insert “, (3BA), (3BB), (3BD), (3BE)”.
- (4) In subsection (4B)(b) after “section 16(1ZA)” insert “or, where relevant, (1ZAA)”. 25
- 7 After section 25B of the 1965 Act (amounts in euros) insert –
- “25C Special drawing rights**
- (1) In this Act “special drawing rights” means special drawing rights as defined by the International Monetary Fund; and for the purpose of determining the equivalent in sterling on any day of a sum expressed in special drawing rights, one special drawing right is to be treated as equal to such a sum in sterling as the International Monetary Fund have fixed as being the equivalent of one special drawing right – 30
- (a) for that day, or 35
- (b) if no sum has been so fixed for that day, for the last day before that day for which a sum has been so fixed.
- (2) A certificate given by or on behalf of the Treasury stating –
- (a) that a particular sum in sterling has been so fixed for a particular day, or 40
- (b) that no sum has been so fixed for a particular day and that a particular sum in sterling has been so fixed for a day which

- is the last day for which a sum has been so fixed before the particular day,
- is to be conclusive evidence of those matters for the purposes of subsection (1) of this section; and a document purporting to be such a certificate is in any proceedings to be received in evidence and, unless the contrary is proved, to be deemed to be such a certificate. 5
- (3) The Treasury may charge a reasonable fee for any certificate given in pursuance of subsection (2) of this section.
- (4) Any fee received by the Treasury by virtue of subsection (3) is to be paid into the Consolidated Fund.” 10
- 8 In section 26 of the 1965 Act (interpretation), in subsection (1)–
- (a) after the definition of “cover period” insert–
- ““CSC claim” has the meaning given by section 16AA;
 “CSC international pooled funds” means the funds referred to by Article III.1(b) of the Convention on Supplementary Compensation for Nuclear Damage; 15
 “CSC-only claim” has the meaning given by section 16AA;”;
- (b) in the definition of “event”–
- (i) after “(1ZA),” insert “(1ZAA),” and
- (ii) after “(3B)” insert “, (3BD)”;
- (c) after the definition of “the Minister” insert–
- ““non-UK CSC claim” has the meaning given by section 16AA;”;
- (d) in the definition of “occurrence”–
- (i) after “(1ZA),” insert “(1ZAA),” and
- (ii) after “(3B)” insert “, (3BD)”.
- 25

Energy Bill [HL]

[AS AMENDED IN COMMITTEE]

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Make provision about energy production and security and the regulation of the energy market, including provision about the licensing of carbon dioxide transport and storage; about commercial arrangements for industrial carbon capture and storage and for hydrogen production; about new technology, including low-carbon heat schemes and hydrogen grid trials; about the Independent System Operator and Planner; about gas and electricity industry codes; about heat networks; about energy smart appliances and load control; about the energy performance of premises; about energy savings opportunity schemes; about the resilience of the core fuel sector; about offshore energy production, including environmental protection, licensing and decommissioning; about the civil nuclear sector, including the Civil Nuclear Constabulary and pensions; and for connected purposes.

Lord Callanan

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Department for
Business, Energy
& Industrial Strategy

Energy Security Bill Policy Statement

Offshore Wind Environmental Improvement
Package Measures

January 2023



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Summary

The Energy Bill was introduced into Parliament on 6 July 2022. The Bill will deliver a cleaner, more affordable and more secure energy system for the long term. It builds on the ambitious commitments in the British Energy Security Strategy to invest in homegrown energy and maintain the diversity and resilience of the United Kingdom's energy supply.

Offshore wind has a central role to play in delivering Government's climate change and energy security objectives. It provides secure, domestically generated electricity and will play a key role in decarbonising the United Kingdom's power system by 2035, achieving net zero by 2050. The United Kingdom is already a world leader in offshore wind, with the most installed capacity in Europe. The British Energy Security Strategy, published in April 2022, builds on this success and sets out an increased ambition for up to 50 gigawatts of offshore wind, including up to 5 gigawatts of floating wind, by 2030.

Meeting these ambitions will require a significant increase in the pace of deployment, but in doing so we must continue to protect and enhance our marine environment and the vital ecosystem services it provides. The British Energy Security Strategy outlined a series of measures which collectively will accelerate deployment whilst protecting the marine environment. These include:

- Establishing a fast-track consenting route to reduce the offshore wind consent time from up to four years down to one year for priority cases where quality standards are met.
- Strengthening the National Policy Statement for Renewable Energy to reflect the importance of energy security and net zero.
- Developing an Offshore Wind Environmental Improvement Package to address the impacts of offshore wind infrastructure in the marine environment. The package will speed up the consenting process whilst protecting the environment, and will include measures to:
 - deliver Offshore Wind Environmental Standards (previously called nature-based design standards in the British Energy Security Strategy);
 - develop regulations and guidance to streamline the Habitats Regulations Assessment and Marine Conservation Zone assessment process for offshore wind projects;
 - deliver environmental compensatory measures across one or more offshore wind projects to compensate for adverse environmental effects on protected sites that cannot be otherwise avoided, reduced or mitigated;
 - implement a Marine Recovery Fund; and
 - introduce strategic monitoring to improve our understanding of the marine environment and the measures needed to further protect it.

Alongside the other measures, the Offshore Wind Environmental Improvement Package will help to contribute to the British Energy Security Strategy commitment to establish a fast-track consenting route. The Government is also leading wider work to address the coordination of infrastructure for offshore wind, and the impacts of that infrastructure (including the onshore impacts).

Government ran an ‘Opportunity to Comment’ on the Offshore Wind Environmental Improvement Package in summer 2022. Around 150 stakeholders attended discussion sessions and 33 written responses were received. The information generated through this process has informed the development and refinement of our policies. Further engagement will take place as Government continues to develop the Offshore Wind Environmental Improvement Package.

Of the five measures in the Offshore Wind Environmental Improvement Package, three require primary legislation which is being sought through Government amendments to the Energy Bill at the Lords Committee Stage. These are to enable:

- making of regulations about the assessment of the environmental effects on protected sites of offshore wind developments’ marine infrastructure, and about compensatory measures for adverse environmental effects;
- strategic compensatory measures to be taken or secured; and
- making regulations to introduce one or more Marine Recovery Funds, and to allow for delegation of the operation and management of the Funds to other bodies.

As a result of the importance of offshore wind deployment in delivering net zero and increasing domestic renewable energy generation, we propose that these measures are specifically for the development of offshore wind and associated infrastructure in the marine environment (including the intertidal area, from Mean High Water to 200 nautical miles).

These powers will enable improved assessment of the environmental effects of offshore wind developments’ marine infrastructure on protected sites, and earlier assessment to allow adequate time to resolve discrepancies in evidence and data. Where compensatory measures are required for damage to the national site network or a protected marine area, these amendments will allow compensation to be delivered by developers working together if that is more appropriate through “strategic compensation”. The Marine Recovery Fund will be an optional mechanism that developers can choose to use to deliver their compensatory measures.

Where Government is taking powers to introduce future regulations, we have included examples of how these powers are likely to be used and what they are intended to achieve. The examples provided are primarily illustrative in nature and are therefore subject to change prior to the laying of regulations as a result of further policy development and engagement with stakeholders.

This policy statement also describes the other measures Government intends to bring forward as part of the Offshore Wind Environmental Improvement Package, but for which primary

legislation is not necessary. Government will explore the most effective mechanism to implement a strategic monitoring system and is developing Offshore Wind Environmental Standards. Government is proposing to implement the Offshore Wind Environmental Standards under the National Policy Statement designated under the Planning Act 2008. A review of the National Policy Statement is ongoing and Government will publish a response to the public consultation on the National Policy Statement in due course.

Background on offshore wind consenting and environmental assessment

The United Kingdom Government and Devolved Administrations designate protected marine areas (Marine Conservation Zones in England, Wales and Northern Ireland, Marine Protected Areas in Scotland) under the Marine and Coastal Access Act 2009, the Marine (Scotland) Act 2010 and the Marine Act (Northern Ireland) 2013, and designate Special Areas of Conservation and Special Protection Areas under the Conservation of Habitat and Species Regulations 2017 in England and Wales, the Conservation of Offshore Habitats and Species Regulations 2017 in the United Kingdom offshore area, the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland and the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland, (from here on collectively referred to as the “Habitats Regulations”). The purpose of these designations is to restore, preserve and maintain biodiversity by protecting key habitats and species.

Offshore wind farm developers are required to consider the environmental impacts of their projects on protected marine areas and the national site network. This information is scrutinised by the decision-maker who subsequently undertakes the formal environmental assessment and takes the final decision on whether to consent to the windfarm based on advice from Statutory Nature Conservation Bodies and other relevant authorities.

Developers must first demonstrate how they propose to avoid, reduce or mitigate any impacts on protected habitats and species. A plan or project cannot be consented if it is not possible to rule out an adverse effect on site integrity (Special Areas of Conservation/Special Protection Areas). For protected marine areas, the same applies for any act that has a significant risk of hindering the achievement of a site’s conservation objectives.

However, where impacts cannot be avoided, reduced or mitigated, the public authority, such as the Department for Business, Energy and Industrial Strategy Secretary of State, can consider whether the plan or project should be considered for a derogation.

Under the Habitats Regulations, a derogation may be used if the public authority is satisfied that it is necessary due to Imperative Reasons of Overriding Public Interest. For protected marine areas such as Marine Conservation Zones, a developer must demonstrate that there is no other means of proceeding that would lower the risk of achieving the areas conservation objectives and that the public benefit outweighs the risk of environmental damage.

If a derogation is used, there is a duty on the public authority to secure compensatory measures from the developer, and they attach conditions to their consent, to ensure that the overall coherence of the national site network is protected for Special Areas of Conservation/Special Protection Areas and/or Measures of Equivalent Environmental Benefit to the damage which is likely in the protected marine area (from here on collectively referred to as ‘compensatory measures’). The public authority cannot consent the project unless these compensatory measures are secured. The purpose of compensatory measures is therefore to

offset unavoidable adverse environmental effects that hinder site conservation objectives of protected marine areas and maintain the coherence of the national site network (Special Areas of Conservation and Special Protection Areas).

Detail of Legislative Measures

Assessment of environmental effects of offshore wind on protected sites: this includes a power to amend or replace the Habitats Regulations Assessment or Marine Conservation Zone processes specifically for the marine aspects of offshore wind development

This power enables the appropriate regulation-making authority to make provision in regulations for a revised process for the assessment of environmental impacts on protected sites of offshore wind and associated infrastructure in the marine area.

The purpose of these amendments is to ensure that environmental protection of protected areas is addressed early enough in the pre-application planning process to inform adequate and ecologically robust mitigation measures. This in turn will improve the quality of the information coming into the examination stage of an application.

However, it will be critical to ensure that offshore wind developments are capable of remaining aligned with any future reforms to environmental assessment more broadly to retain a consistent approach as far as is possible across all types of development.

The regulations may also make provision about the compensatory measures that can be provided for any adverse environmental effects of offshore wind projects on protected sites.

Alongside the Secretary of State, this will give regulation-making powers to Scottish Ministers in relation to the Scottish inshore area; to Welsh Ministers for offshore wind infrastructure projects below 350 megawatts in the Welsh inshore area; and to the Department of Agriculture, Environment and Rural Affairs in the Northern Irish inshore area. In the offshore area, the Secretary of State will develop regulations which respect the current role of Devolved Administration Ministers in consenting offshore wind projects.

Any risk of a regulatory gap will be mitigated by consultation to ensure policies are aligned and joined up across boundaries. The Government recognises that consistency across regimes is essential. Where regulations are made by different authorities, for example by the Scottish Government for the Scottish inshore area and the Secretary of State for the Scottish offshore, those regulations will need to work together and therefore authorities must consult each other prior to making any such regulations. This requirement to consult will only apply to the new regulations made by the power taken to amend assessments of the environmental impacts of offshore wind and associated infrastructure in relation to the protected sites.

Why are we taking these powers?

Offshore wind farm developers are required to provide information to the public authority to inform a Habitats Regulations Assessment or an assessment of impact on a Marine

Conservation Zone. The British Energy Security Strategy committed to reforming this process to support the accelerated deployment of offshore wind whilst maintaining environmental protections.

The primary focus of the proposed environmental assessment reform is to tailor the existing processes for assessing the impact of offshore wind infrastructure projects on protected sites. Specifically, it will streamline inefficient elements of the existing process, such as the assessment of mitigation and how discrepancies between data and evidence provided by developers, statutory consultees and stakeholders are resolved, which otherwise can delay the consenting process. Together with the powers described below, these changes will potentially reduce Statutory Nature Conservation Body resources spent on examination of well-understood mitigation measures, and consequently accelerate the formal consenting process and subsequent decision-making.

Stakeholders are broadly supportive of streamlining of the current environmental assessment of protected sites processes for offshore wind, provided that environmental protections are retained (including use of the mitigation hierarchy); that a reformed process is easily understood and clear to follow; that all designated sites including Marine Conservation Zones are assessed properly and that cross-government environmental assessment policy proposals align.

How do we intend to use these powers?

Government intends to use these powers to move the assessment of mitigation measure effectiveness to an earlier stage in the environmental assessment of protected sites process.

The current process means that mitigation measures cannot be considered in the Habitats Regulations Assessment process by the public authority until the appropriate assessment stage, where the detailed environmental assessment is undertaken.

This proposed change would move assessment to an earlier stage, so that they are “deemed” as assessed or discounted from the appropriate assessment, thereby shortening the overall Habitats Regulations Assessment process.

This proposed change will also require assessment of impacts on Marine Conservation Zones to be considered and potential compensatory measures to be identified and agreed during the pre-application period rather than during the examination phase as currently.

Government also wishes to consider a broader approach to compensatory measures for offshore wind developments. At present, compensatory measures should be ‘like-for-like’, meaning they are targeted at providing benefit to the specific habitat or species that is being impacted. To support accelerated deployment, where like-for-like measures are not possible, Government intends, to consider enabling developers to provide broader measures that improve wider marine ecosystems but are not targeted at specific impacted habitats, species or protected sites. Government is also considering enabling developers to undertake work already identified by Government to improve the condition of protected species and habitats.

This would substantially increase the number of measures available to developers and also accelerate marine recovery for some sites.

Consent decisions and compensatory measures will remain subject to advice from Statutory Nature Conservation Bodies. This approach should make it quicker for Statutory Nature Conservation Bodies to identify measures and will allow us to take decisions about relative environmental priorities.

Strategic Compensatory Measures: enable measures to be taken or secured to compensate for adverse environmental effects on the integrity of any site within the national site network, and for adverse effects on the conservation objectives of a protected marine area , as a result of one or more offshore wind infrastructure projects.

As noted above, Government intends to agree a list of approved compensatory measures and to consider a broader approach than the current 'like-for-like' requirement. This power establishes a legal mechanism to use strategic compensatory measures to discharge, where required, obligations to compensate for the environmental effects of offshore wind farm development(s) on the national site network (Special Areas of Conservation and Special Protection Areas) and/or on nationally designated sites such as Marine Conservation Zones in English, Welsh and Northern Irish waters and Marine Protected Areas in Scottish waters. The Marine Recovery Fund would be a delivery mechanism for compensatory measures approved by Government. Alternatively, developers could deliver strategic compensatory measures through a collaborative approach, recognising that the scale of offshore wind delivery is likely to exceed the ability of developers to provide sufficient compensation on an individual project specific basis.

Why are we taking these powers?

As the speed of deployment increases, the environmental impacts of offshore wind developments on our protected marine areas and the national site network are becoming increasingly difficult to avoid, reduce and mitigate. In these circumstances, there is likely to be an increase in the number of cases where the public authority determines that the objective of an offshore wind project meets the derogation requirements and should receive consent, provided sufficient compensatory measures are provided.

The types of measures that work at sea are harder to identify or less certain than those on land due to the relatively less developed knowledge base and dynamic nature of the marine environment. Consideration needs to be given to alternative ways to compensate for adverse environmental effects.

Compensatory measures for offshore wind farm developments are currently proposed by individual applicants. Consenting delays can occur if compensatory measures have not been discussed and agreed sufficiently early in the process. Evidence underpinning the measures often requires extensive discussion between the applicant, Government departments and the Statutory Nature Conservation Bodies for which there is limited time during the examination of an application for consent. This can lead to unclear conclusions and the need for further consultation and discussion leading to delays in the granting of consents.

As offshore wind farms increase in number it is likely that it will become progressively more difficult to identify and deliver suitable compensatory measures on a project-by-project basis and/or within individual site envelopes. A strategic approach to deliver compensatory measures has been a priority area of consideration for Government and offshore wind industry expert groups.

Government envisages that Strategic Compensatory Measures will be delivered across projects and organisations. This could include measures delivered by a group of developers but could also be measures that can only be delivered by Government (e.g., enhanced management of existing Marine Protected Areas or the designation of new Marine Protected Areas).

How do we intend to use these powers?

Government proposals to enable the delivery of Strategic Compensatory Measures will dovetail with those of the Marine Recovery Fund and the reform of assessments of the impacts of offshore wind on protected sites. These powers will ensure that developers understand unambiguously whether Strategic Compensatory Measures will be suitable for their projects; which Strategic Compensatory Measures they should consider for inclusion in a 'without prejudice' compensation plan drafted prior to submission of their development proposal; whether these Strategic Compensatory Measures can be delivered (and obligations to compensate for a specific impact discharged) through the Marine Recovery Fund; and the extent to which conditions imposed on a developer under their consent (for example, delivery, monitoring and/or success of Strategic Compensatory Measures) would be discharged upon payment into the Marine Recovery Fund.

Government intends that the new powers in relation to Strategic Compensatory Measures will enable developers to discharge obligations to compensate for specific impacts with strategic measures, including when delivered through payment into the Marine Recovery Fund.

Government intends for Strategic Compensatory Measures to account for and apply across the differing legislative regimes that underpin the need to compensate for impacts to marine protected sites in relation to offshore wind infrastructure projects. Strategic Compensatory Measures delivered in a different jurisdiction to where the offshore wind project causing the impact is located, will have to follow any procedural requirements applicable within the Devolved Administration in which they are delivered.

The total environmental benefits of Strategic Compensatory Measures could exceed those required by individual projects. In such cases, the additional benefits could be used to

compensate for future projects if appropriate or used to create environmental headroom and thereby reduce the likelihood that future projects will trigger the need for further compensatory measures.

Government wishes to address the role of Statutory Nature Conservation Bodies in resolving discrepancies in data between developers, statutory consultees and stakeholders that can lead to delays in the consenting process. By generating a list of approved compensatory measures at both plan and project level, any such discrepancies in agreement on the efficacy of compensatory measures will be addressed before applications are submitted for consideration. This too should reduce discussion and delay during statutory timescales.

Taken together, moving the environmental assessment forward in the process, and making a list of approved compensatory measures available should also have the effect of improving the quality and clarity of information included in developers' applications, with evidenced advice from Statutory Nature Conservation Bodies on the effectiveness of well-understood mitigation measures considered prior to the appropriate assessment.

These changes will provide a strong incentive for developers to take appropriate steps to mitigate their environmental impact at the earliest possible stage and to agree well-evidenced solutions with Statutory Nature Conservation Bodies prior to submitting applications for consent.

Marine Recovery Fund: a power to make provision for the establishment, operation and management of a marine recovery fund or funds

A Marine Recovery Fund is a fund which will consist of amounts paid in respect of offshore wind infrastructure projects and out of which payments may be made to deliver measures to compensate for the adverse environmental effects of one or more offshore wind projects. It would be an optional framework through which developers could discharge a condition of their consent to compensate for adverse environmental effects on a protected site or sites which cannot be avoided or mitigated. Sufficient financial contributions to a Marine Recovery Fund would enable Government, or a delegated authority, to deliver approved Strategic Compensatory Measures.

This will not remove the option for developers to deliver Strategic Compensatory Measures collaboratively across projects without a Marine Recovery Fund or to deliver individual project compensation.

In order for a Marine Recovery Fund to deliver Strategic Compensatory Measures on behalf of offshore wind developers the Secretary of State will have powers to make provision for the establishment, operation and management of a Marine Recovery Fund.

While powers for the establishment, operation and management of a Marine Recovery Fund are conferred on the Secretary of State, operation and management of the funds may be delegated to other bodies including in the Devolved Administrations. For England possible options under consideration are Defra Arm's Length Bodies or an external third-party operator.

Why are we taking these powers?

The Marine Recovery Funds will provide an efficient method for delivering compensatory measures which are becoming increasingly difficult to identify at the individual project level. The Marine Recovery Funds will need to secure Strategic Compensatory Measures over multiple financial years given the 25–30-year lifespan of offshore wind farms and due to ongoing operational requirements, such as monitoring and enforcement.

Commercial, competition and other project management information sensitivities can limit the opportunities for developers themselves to easily deliver strategic compensatory measures in collaboration with other developers. The Marine Recovery Funds are intended to be an optional route for wind farm developers to choose to pay into to discharge their compensation obligations where appropriate measures are available and can be delivered without further input from the developers.

We intend for approved Strategic Compensatory Measures delivered by a Marine Recovery Fund to include those that can only be delivered by Government or with Government involvement or will be easier to deliver centrally.

The ability to pay into a Marine Recovery Fund to meet obligations associated with the Habitats Regulations and Marine and Coastal Access Act, and corresponding Devolved Administration legislation should speed up the consent process for individual projects. The approval process of Strategic Compensatory Measures that a Marine Recovery Fund will deliver will provide confidence to the decision maker, whilst ensuring that environmental protections are in place through compensatory measures being agreed and delivered via a Marine Recovery Fund operator and/or Government as appropriate.

How do we intend to use these powers?

Government intends to use these powers to make provision for more detailed regulations needed to ensure the efficient functioning of an Marine Recovery Fund.

For example, we expect the power to be used to make provision to enable the Marine Recovery Fund to:

- raise/collect the financial contributions from developers;
- allow the Secretary of State (or relevant body to whom functions have been delegated) to receive payments from developers;
- spend the funds on agreed measures with or through partners;
- monitor and enforce the measures (protection of the measures); and
- delegate these functions to other bodies as required.

Future regulations will also be used to confirm how payment amounts for Strategic Compensatory Measures will be set, as well as to clarify at what point in the consenting process a payment into the Marine Recovery Fund can be made.

Territorial extent of the measures

Government recognises the key role of the Devolved Administrations in delivering the United Kingdom's offshore wind ambition and their existing role in the consenting process.

Government also recognises the benefits of consistency as far as possible across Administrations' waters and is working closely with the Devolved Administrations to ensure the provisions will work for each of them in order to support increased offshore wind capacity whilst protecting the marine environment.

Government's view is that the primary purpose of these provisions is energy generation, and they also make provision affecting the seabed and sub-marine cabling. As energy generation is a reserved legislative matter in relation to Scotland and Wales, and seabed and sub-marine cabling is reserved in relation to Northern Ireland, the Government intends to legislate across the United Kingdom to avoid an inconsistent regulatory regime or a legislative gap where the United Kingdom Government has not legislated but the devolved legislatures do not have the legislative competence to do so.

For Strategic Compensatory Measures, Government intends to legislate in such a way that respects the relevant appropriate authority's existing duty to agree and secure compensatory measures. In addition to projects consented by the Department for Business, Energy and Industrial Strategy Secretary of State, this will include:

- Welsh Ministers for projects up to 350 megawatts in Welsh inshore and offshore waters;
- Northern Irish Ministers in Northern Irish inshore waters; and
- Scottish Ministers for Scottish inshore developments over 1 megawatt and offshore developments over 50 megawatts.

Government will continue to work closely with the Devolved Administrations to ensure that strategic compensatory measures are not limited across borders.

For the Marine Recovery Fund, Government's intention is to delegate operational delivery functions to relevant parties in the Devolved Administrations to ensure Ministers retain a role in delivering measures for projects they consent. We will work collaboratively on this approach, as well as on regulations for environmental assessments, as policy develops to avoid creating additional regulatory burdens and to provide consistency for developers across the United Kingdom.

On environmental assessments, the Secretary of State will make regulations in respect of English inshore marine area and all United Kingdom offshore areas. In the Scottish, Welsh and Northern Irish inshore marine areas, the relevant devolved legislature will have regulation-making powers to amend environmental assessments for those projects which they consent. Any risk of a regulatory gap will be mitigated by consultation requirements to ensure policies are aligned and joined up across boundaries.

Next steps and delivering the Offshore Wind Environmental Improvement Package beyond the Energy Bill

Government will continue to work closely with industry and other stakeholders as it develops the regulations for the environmental assessment of offshore wind on protected sites and the Marine Recovery Fund, as well as the wider Offshore Wind Environmental Improvement Package. This will include ensuring that provisions and future requirements are aligned with legislation being brought forward via the Energy Bill to support the accelerated deployment of offshore wind.

In addition to legislative provisions provided through the Energy Bill, Government is proposing to introduce a requirement to deliver Offshore Wind Environmental Standards, formally called nature-based design standards in the British Energy Security Strategy, through the National Policy Statement and will continue to explore the most effective policy mechanism to deliver a strategic monitoring approach.

Offshore Wind Environmental Standards

Offshore Wind Environmental Standards aim to reduce the overall environmental impact of a development, through providing clear guidance to developers on best practice to incorporate into the design, construction, operation and decommissioning of offshore wind farms. This should enable some environmental impacts to be scoped out at an earlier stage of the process, and potentially reduce the amount of mitigation and/or compensatory measures subsequently required. This should also help to minimise the time a project spends on environmental examinations and ensure the decision maker can make an informed consenting decision.

Offshore Wind Environmental Standards will not remove the need for all mitigation measures or the need to follow the mitigation hierarchy but will provide consistency for developers and reduce the time spent meeting tailored requirements for individual projects.

Government will continue to work closely with industry and stakeholders as the Offshore Wind Environmental Standards are developed and expects to consult on potential standards in 2023.

Strategic monitoring

Strategic monitoring will enable the collection of new evidence to improve our understanding of the environmental impacts of offshore wind, which would allow for a greater understanding of cumulative environmental impacts. We envisage that some site-specific monitoring would still be required to validate certain predictions made within environmental assessments.


We are working with stakeholders to identify possible opportunities for strategic monitoring. Following responses from the 'Opportunity to Comment', this includes looking at the breadth and scope of monitoring within the marine space. In considering how strategic monitoring could be delivered, we will take account of similar approaches employed in other countries to determine best practice and design an approach that works for our regulatory regimes. Engagement across wider stakeholder groups will continue as policy thinking develops.

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Appendix B.2

*This appendix has been produced to support the Applicant's response to the Examining Authority's First Written Question - Q1.2.3. This document should be read alongside the **Applicant's Response to the Examining Authority's First Written Questions** [document reference 12.4].*

A photograph of several offshore wind turbines in the ocean at sunset. The sun is low on the horizon, creating a bright orange glow and reflecting on the water. The turbines are silhouetted against the sky. The image is used as a background for a report cover.

July 2022

Pathway to 2030

A holistic network design to support offshore wind deployment for net zero

Navigation

To help you find the information you need quickly and easily we have published the report as an interactive document.

Page navigation explained

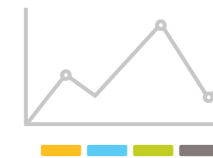


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Buttons

Button

Access additional information by hovering on the rectangular buttons positioned beneath many of our charts



Expand content



Rollover or click the plus symbol to expand or enlarge content



More information



Rollover or click the info symbol for more information



Text links

Click **highlighted** orange text to navigate to an external link. Or to jump to another section of the document



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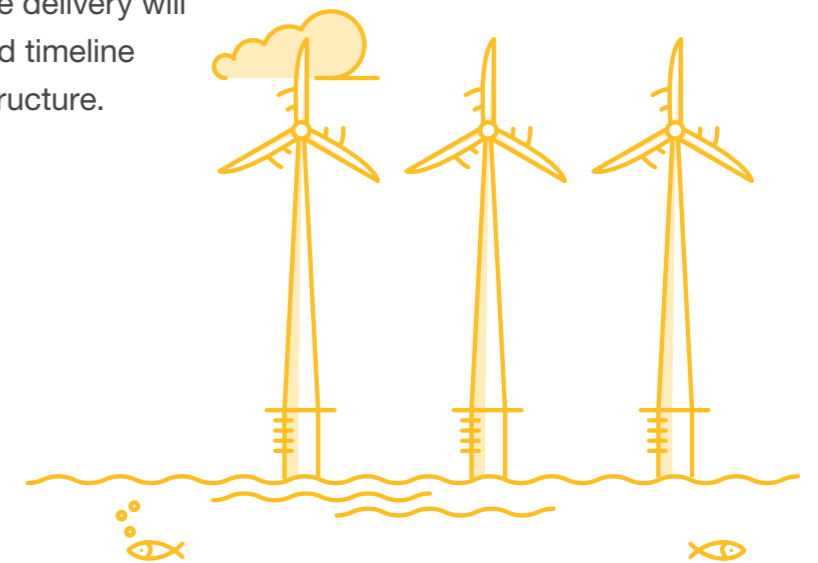
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Executive Summary

The Department for Business, Energy and Industrial Strategy (BEIS) launched the Offshore Transmission Network Review (OTNR) in July 2020. It is playing a key part in enabling the vital role offshore wind has in meeting the UK Government's target for net zero. The objective of the OTNR is to “ensure that the transmission connections for offshore wind generation are delivered in the most appropriate way, considering the increased ambition for offshore wind to achieve net zero. This will be done with a view to finding the appropriate balance between environmental, social and economic costs”.¹

The rising cost of energy is having a significant impact on the cost of living in Great Britain. This is largely because of rising global gas prices. The UK Government recognised this in the *British Energy Security Strategy (BESS)*, published in April 2022.² It set out a plan to increase the supply of electricity from zero-carbon British sources to deliver affordable, clean and secure power in the long term. Offshore wind has an important role to play in delivering this plan, with the ambition for 2030 increased to 50 GW in the UK, with 11 GW of that located in Scotland. The Holistic Network Design (HND) is a fundamental component of the *BESS* as it provides the design basis upon which other actions to accelerate delivery will build in order to reduce the end-to-end timeline for delivering strategic network infrastructure.



¹ [gov.uk/government/publications/offshore-transmission-network-review/offshore-transmission-network-review-terms-of-reference](https://www.gov.uk/government/publications/offshore-transmission-network-review/offshore-transmission-network-review-terms-of-reference)

² [gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy](https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy)

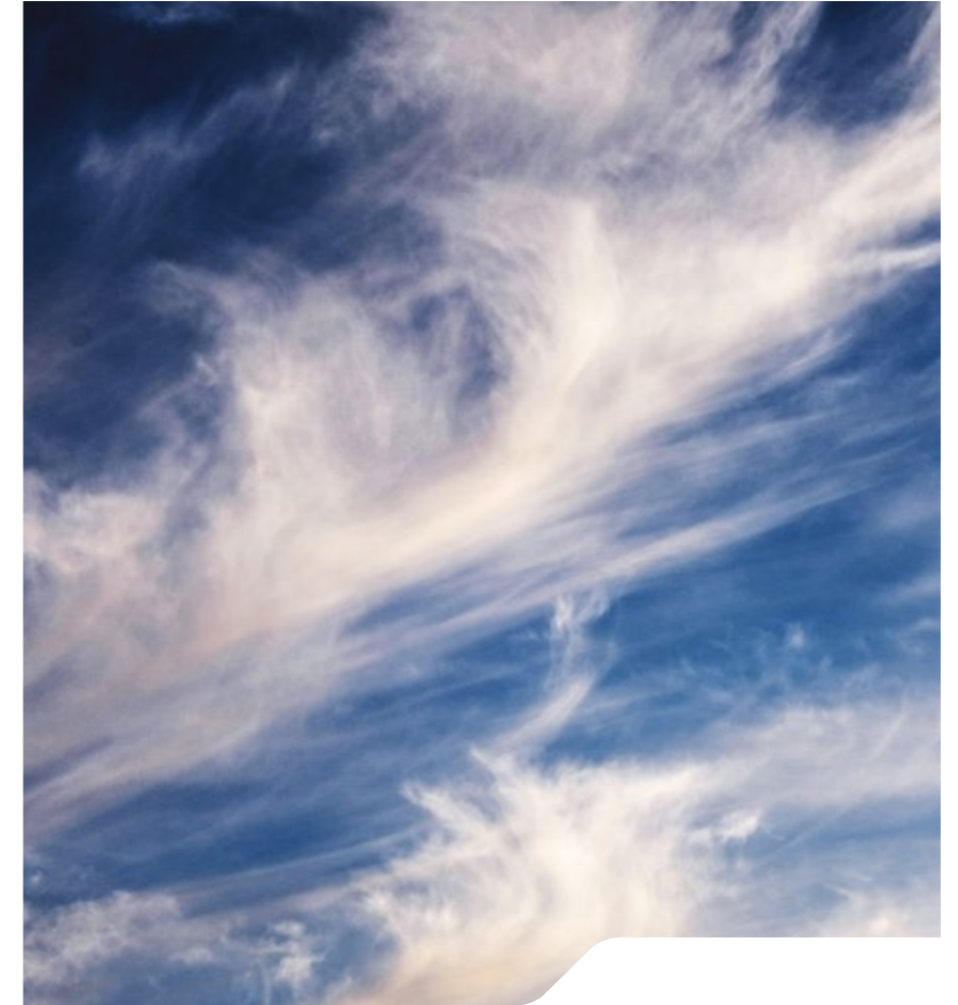
Executive Summary

As the scale of offshore wind deployment increases, so does the need for additional transmission network infrastructure to deliver the electricity generated to consumers. This infrastructure needs to be designed and built in a way that balances the impact on the environment and local communities with providing the greatest value for consumers across the country. A significant step change is required to move from the current capacity of 11.3 GW to 50 GW by 2030, both in the roll out of the additional offshore wind farms themselves and the network required to connect and transport the electricity to where it can be used. Therefore, innovative thinking in network design has never been more important to ensure delivery of affordable, clean and secure power and meet the UK Government's ambitions.

The original radial approach to designing, building, and connecting offshore wind farms involved limited coordination. The approach was developed when the technologies involved were at the early stages of deployment and it was appropriate for the levels of offshore wind at that time. Regulation was designed to de-risk the delivery of offshore wind, with project

developers provided with the option of building the associated network to bring the energy onshore. It incentivised developers to connect individually to shore to reduce their costs and minimise risks, which did not encourage coordination. The wind farms have also tended to be connected to the closest point on the onshore network and the network required to transport the electricity to where it is needed was thought about separately. With expectations of future offshore wind capacity now significantly higher, the original model is no longer fit for purpose without potentially risking avoidable impacts on consumers, the environment and communities. A more centralised and strategic approach to network planning is needed to deliver better outcomes, by integrating the connection of offshore wind farms to shore with the capability to transport electricity around Great Britain.

Three workstreams were created in the OTNR to cover offshore wind projects at different stages of development, namely Early Opportunities, Pathway to 2030 and Enduring Regime. Multi-purpose interconnectors are also considered across the three workstreams.



Executive Summary

The Early Opportunities workstream encourages developers of offshore wind and interconnector projects that are working to achieve planning consent to explore opportunities to coordinate their connections. Projects in scope are primarily based off the coast of East Anglia, have confirmed network connection arrangements in place and are more advanced in their development compared to those in the Pathway to 2030 workstream. The Early Opportunities workstream seeks to balance reducing the impact of network infrastructure on communities and the environment with not disrupting the projects' ongoing development, which could increase costs and put the ambition for 50 GW of offshore wind by 2030 at risk. BEIS has now announced four initial pathfinder projects. These are well-advanced projects that are leading the way in utilising the regulatory and policy changes being developed through the OTNR to increase transmission network coordination and deliver the OTNR's objectives.³ RenewableUK⁴ has also been playing a facilitative role in this workstream,

through engaging with the relevant developers in the East Anglia Region and seeking options to take coordination opportunities forward and identify additional pathfinder projects. The projects engaged in this RenewableUK workstream have published an update on the progress of this work alongside the HND.⁵

The Office of Gas and Electricity Markets (Ofgem) and the Electricity System Operator (ESO) have also been working hard to remove barriers to coordination opportunities within the Early Opportunities workstream. Ofgem published a minded-to decision on anticipatory investment and implementation of policy changes for Early Opportunities projects in April⁶ and we published our Early opportunities update in May.⁷ Both publications set out actions and changes to enable early coordination opportunities to take place.

The HND, described in this document, is part of the Pathway to 2030 workstream and goes hand in hand with Ofgem's minded-to decision on the delivery model for the offshore network.⁸ Offshore wind projects in scope of the Pathway

to 2030 workstream are at a fairly early stage of development and are located around Scotland, Wales, the east coast of England north of the Wash, and south west England. For the first time, the HND enables delivery of a network that simultaneously handles connection of offshore wind farms to shore as well as transporting the power to where it will be used. Led by the ESO, in close consultation with the onshore Transmission Owners (TOs) through the Central Design Group (CDG), the HND has looked holistically across four objectives when considering the connection arrangements for offshore wind farms:

- **Cost to consumers.**
- **Deliverability and operability.**
- **Impact on the environment.**
- **Impact on local communities.**



³ [gov.uk/government/publications/offshore-transmission-network-review/offshore-transmission-network-review-terms-of-reference](https://www.gov.uk/government/publications/offshore-transmission-network-review/offshore-transmission-network-review-terms-of-reference)
⁴ renewableuk.com
⁵ <https://www.gov.uk/government/groups/offshore-transmission-network-review>

⁶ [ofgem.gov.uk/publications/offshore-coordination-early-opportunities-consultation-our-minded-decision-anticipatory-investment-and-implementation-policy-changes](https://www.ofgem.gov.uk/publications/offshore-coordination-early-opportunities-consultation-our-minded-decision-anticipatory-investment-and-implementation-policy-changes)
⁷ nationalgrideso.com/document/259686/download
⁸ [ofgem.gov.uk/publications/minded-decision-and-further-consultation-pathway-2030](https://www.ofgem.gov.uk/publications/minded-decision-and-further-consultation-pathway-2030)

Executive Summary



By assessing environmental and community impact to a greater extent earlier in the project development process, the HND is expected to reduce the overall impact of transmission network infrastructure for projects within its scope and help expedite their delivery. We have kept the concerns of our varied stakeholders at the forefront of our mind while balancing these objectives. However, the nature of the infrastructure required means the design cannot be without impact. In developing the design though, careful consideration has been given to the location of interface points to minimise community and environmental impacts. Where the recommended design has a greater environmental impact than the radial design, this has been weighed against the benefit of maximising the design's contribution to meeting net zero targets.

Along with wind farms already connected and those that are fairly well advanced in their development, including within scope of the Early Opportunities workstream, the HND facilitates the *BESS* ambition for connecting 50 GW of offshore wind by

2030. This integrated design also provides the opportunity to get the full benefit of offshore wind as soon as possible by providing significant additional transmission capacity to transport renewable power to consumers across Great Britain. In this regard, the HND is a first and significant step towards centralised strategic network planning. The Centralised Strategic Network Plan (CSNP) proposed by Ofgem in their Electricity Transmission Network Planning Review (ETNPR)⁹ envisages an integrated approach to network design and delivery across the onshore and offshore networks. Offshore-specific arrangements will be established through the Enduring Regime workstream of the OTNR in alignment with the ETNPR. This includes deployment planning for future offshore wind leasing rounds and the rules associated with multi-purpose interconnectors.

Executive Summary

Publication of the innovative *HND* is just the start of the delivery of the transmission network required to facilitate 50 GW offshore wind by 2030. It will need to be followed by further innovation by the UK Government, Ofgem, the onshore TOs and other industry players to ensure delivery of the commitments in the *BESS*. Specifically, the time taken to build onshore transmission network infrastructure will need to be significantly reduced in order to meet the offshore wind ambitions and net zero targets. This particularly applies to 11 of the onshore transmission network reinforcements recommended in the *HND*, where delivery of the commitments in the *BESS*, and resulting commitments from the relevant TOs to earlier delivery dates, will be vital to meeting the 2030 ambition.¹⁰ However, reinforcements with 2030 and earlier delivery dates will also need to be accelerated to help manage supply chain availability. Particularly important will be to deliver a more efficient consenting process and provide earlier regulatory approval to key onshore transmission network projects.

The majority of the onshore reinforcement projects needed to enable the 2030 ambition have already been assessed by the TOs against similar design objectives as part of their project development options appraisal process. Some projects have yet to be appraised beyond a high-level assessment. More detailed environmental and community impact analysis will now be carried out by the TOs on these particular options to build on the initial assessment.

Beyond the *BESS* commitments, it is vitally important the supply chain for onshore and offshore transmission network is also in place. The offshore network design recommended in this document is ambitious but realistic, being based on known and well understood technology. Our aim is to leverage technology that is currently in development in future network plans, to enable an even greater level of integration.



¹⁰ More information on the 11 projects can be found in the System-wide view section, page 53.

Executive Summary

Our key messages

1

The HND is a first and significant step towards a more centralised and strategic approach to network planning: it integrates connecting offshore wind farms to shore with the capability to transport electricity around Great Britain.

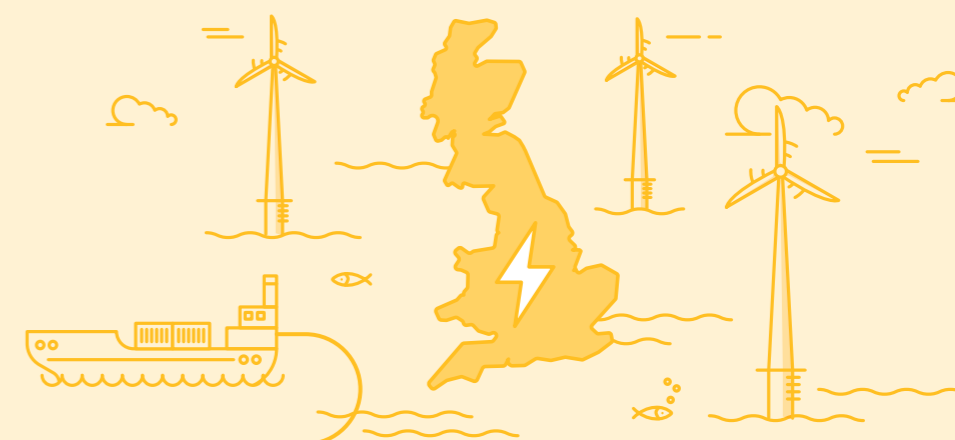
- The HND provides a high-level view of the required onshore and offshore network. For the offshore network, it defines a network topology, capacities and interface sites. For the onshore network, it outlines the necessary upgrades to the existing network and new transmission network infrastructure requirements to facilitate the connection of offshore wind and the increase in power flow transfer requirements that result.
- It provides connection recommendations for 23 GW of offshore wind and the associated transmission network infrastructure to get the power to where it is needed. When combined with existing offshore wind projects and those already further advanced in their development, the HND will enable the connection of 50 GW of offshore wind in Great Britain by 2030.

2

The HND balances deliverability, economic, environmental and community impact criteria and will deliver significant benefits when compared to an optimised radial design, including:

- Overall net consumer savings of approximately £5.5 billion. The recommended design leads to an additional £7.6 billion of capital costs due to the additional offshore infrastructure, but this is outweighed by the £13.1 billion savings in constraint costs¹¹ that are expected to result from the additional network capacity this infrastructure provides.¹² This equates to a saving of £2.18 per year on the average customer electricity bill.
- A reduction in the impact on the environment with up to a third smaller footprint from offshore cables connecting to shore as a result of the increased use of high voltage direct current (HVDC) technology, reducing the impact on the seabed.

- Increasing the availability of offshore wind on the system by 32 TWh over a ten year period from 2030, equivalent to powering 10 million homes for an entire year.¹³
- Reducing cumulative CO₂ emissions from gas powered generation between 2030 and 2032 by 2 million tones of CO₂ – equivalent to grounding all UK domestic flights for a year – through transporting power produced by offshore wind to where it will be used more of the time, reducing the need for fossil fuel generation to be used in its place.



¹¹ The cost of taking balancing actions to redispatch generation to prevent unacceptable network flows across parts of the network that have limited capacity. These consist of actions to decrease generation output in one part of the country, and actions to increase generation output in a different part of the country.
¹² All cost savings are calculated over a 40 year asset life period, starting in 2030, using 2021 prices, unless otherwise stated.
¹³ This is based on today's average household electricity consumption figures.

Executive Summary

3

The HND requires significant investment in our existing onshore system to transport electricity to where it will be used. It recommends 94 reinforcements totalling £21.7 billion, to be delivered by the end of the decade.

- 11 reinforcements require acceleration in their delivery to meet 2030 targets and are reliant on the commitments outlined in the *BESS*.
- Many of the remaining 83 projects will need to be delivered before 2030 to smooth the requirements on the supply chain and allow coordination of access to the main transmission network during construction.

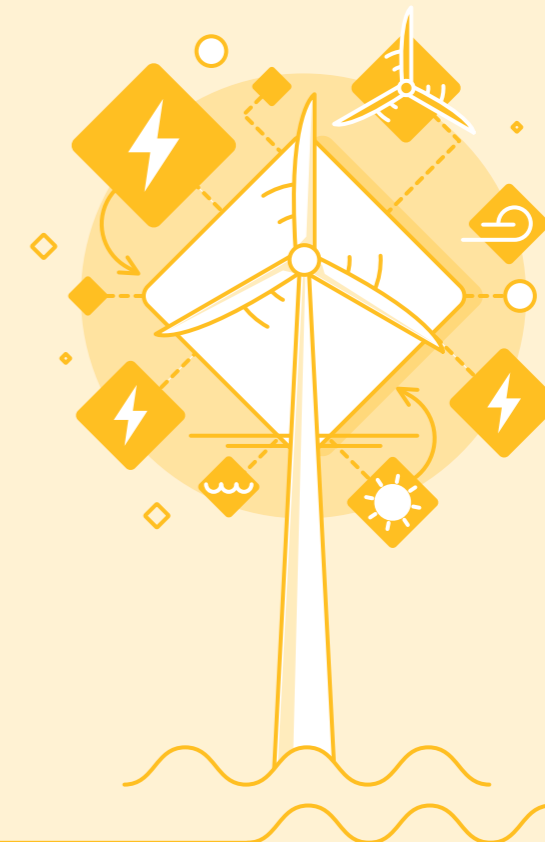
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For the 2030 ambitions to be achieved, the ESO, Government (UK, Scottish and Welsh), Ofgem and the TOs will work innovatively and collectively to deliver the level of ambition set out in the HND, and as committed to in the *BESS*.

This includes:

- Significantly reducing the time take from development to construction of strategic infrastructure projects, including expediting the consenting and regulatory approval processes.
- A regulatory framework to allow for strategic and anticipatory investment within the Pathway to 2030 workstream.
- The designation of transmission network infrastructure required for 2030 as strategic.¹⁴
- Commitments from the TOs to accelerate delivery of their reinforcement projects once detail of the changes set out in the *BESS* are confirmed, with the aim of delivering all necessary infrastructure by 2030.

- Supply chain availability to deliver the recommended network.
- The consideration of mitigation and strategic environmental compensation where needed.

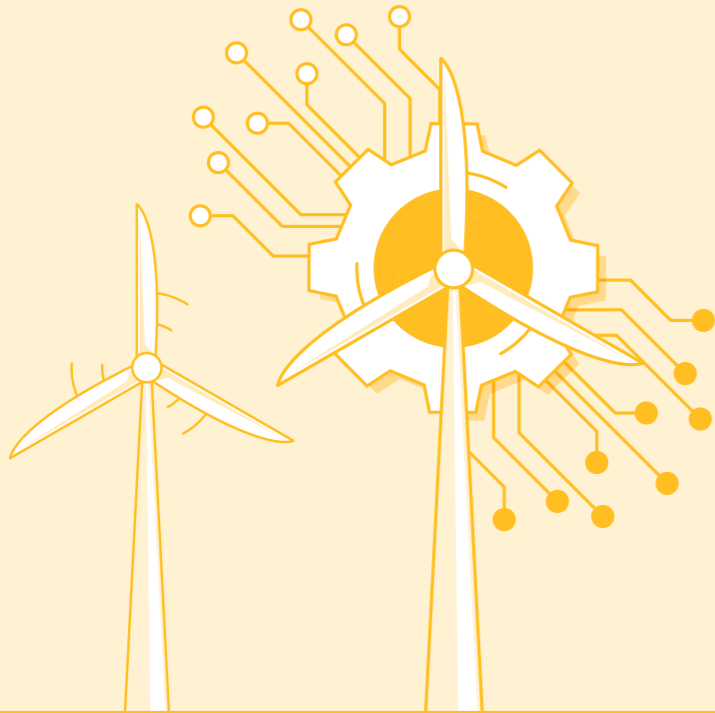


¹⁴ The definition of strategic investment in this context will be outlined in Ofgem's ETNPR consultation decision document.

Executive Summary

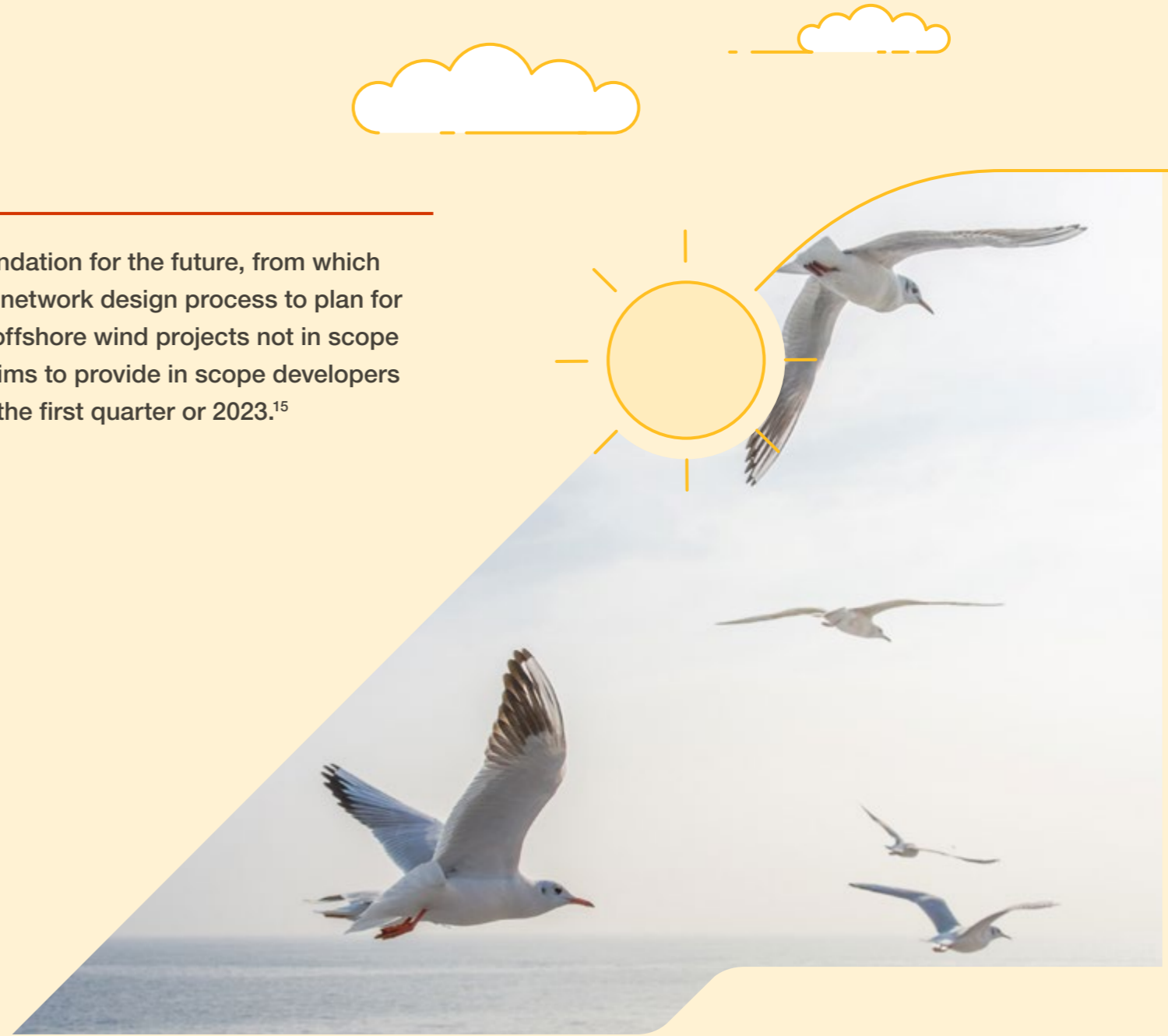
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Coordinated connections will also require significant changes to industry codes and standards, which we will further progress during the second half of 2022. We will work with developers in the HND with the aim of updating connection contracts in the autumn.



6

The HND provides the foundation for the future, from which we will deliver a follow-up network design process to plan for the connection of further offshore wind projects not in scope of the current HND. This aims to provide in scope developers with recommendations in the first quarter or 2023.¹⁵



¹⁵ This will include the remaining ScotWind leaseholders and any capacity made available through the ScotWind clearing process. It is also expected to include approximately 4 GW of Celtic Sea capacity. The details of the follow up process, including confirmation of scope and other key aspects, such as the methodology to be used for the process, will be communicated in summer 2022.

Executive Summary

Next steps

The HND will be followed by a Detailed Network Design (DND) and consenting process that will develop the HND recommendations further to determine technology choices, transmission routes and where substations and converter stations will be located. The DND and consenting process will be conducted by the party responsible for developing each asset. It is during this process that statutory consultations and relevant environmental assessments take place. It is also worth noting that the capital cost differentials quoted are based on high-level cost assumptions. The costs of each part of the design are expected to change as the design is developed in more detail during the DND stage.

Ahead of the start of the DND and consenting process, an exercise will need to be undertaken by Ofgem to determine which of the transmission assets in the HND will be regulated and developed as ‘onshore transmission’ and which will be

‘offshore transmission’. This will be determined from both a legal and a technical perspective based on their function within the transmission network, rather than where those assets are spatially. For example, there can be ‘onshore transmission’ in the sea and ‘offshore transmission’ on land. This exercise will identify who will be responsible for the DND and consenting process for each of the recommended transmission assets within the HND. Furthermore, for any ‘offshore transmission’, it will then be necessary to establish which of those assets are radial and which of those assets are non-radial in line with Ofgem’s recent minded-to decision on offshore delivery models.¹⁶ This is because there are expected to be different arrangements for the delivery of radial offshore transmission assets within the HND than there are for non-radial offshore transmission assets within the HND.¹⁷



¹⁶ [ofgem.gov.uk/publications/minded-decision-and-further-consultation-pathway-2030](https://www.ofgem.gov.uk/publications/minded-decision-and-further-consultation-pathway-2030) - for Ofgem’s definitions of radial and non-radial see 1.14 -1.16 of the Minded-to Decision.

¹⁷ Ofgem’s minded-to decision on offshore delivery models for Pathway to 2030 does not apply to the Celtic Sea and the organisation carrying out the DND onwards in the Celtic Sea will be determined at a later date.

Introduction

In July 2020 the Energy Minister launched the Offshore Transmission Network Review (OTNR). The objective of the OTNR is “to ensure that the transmission connections for offshore wind generation are delivered in the most appropriate way, considering the increased ambition for offshore wind to achieve net zero. This is with a view to finding the appropriate balance between environmental, social and economic costs.” The OTNR is led by the Department for Business, Energy and Industrial Strategy (BEIS) with support from a range of UK Government and industry bodies. The ESO and a number of other organisations are project partners. More information on the OTNR and the project partners can be found on BEIS’s website.¹⁸

In November 2020 the UK Government published its *Ten Point Plan for a Green Industrial Revolution*¹⁹, which makes clear that offshore wind is a critical source of renewable energy for the UK’s growing economy. In this plan the UK Government expressed its ambition to quadruple its offshore wind capacity by 2030 to 40 GW and achieve net zero greenhouse gas emissions by 2050. In the *British Energy Security Strategy (BESS)*²⁰, published April 2022, the UK Government increased its ambition for offshore wind to 50 GW by 2030. Alongside this the Scottish Government has an ambition for 11 GW offshore wind by 2030 and net zero greenhouse gas emissions by 2045.

To help realise these targets, a step change in both the speed and scale of deployment of offshore wind is required. The onshore and offshore transmission networks play a crucial role in making this happen. They need to change and grow in a way that is efficient for consumers and considers impacts on communities and the environment. Since the beginning of the OTNR, we have been playing a key role in actively assessing whether there is a better approach to planning offshore networks. We are committed to delivering better outcomes for consumers and communities and supporting delivery of the UK Government’s net zero ambitions.



¹⁸ <https://www.gov.uk/government/groups/offshore-transmission-network-review>
¹⁹ [gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution](https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution)
²⁰ [gov.uk/government/publications/british-energy-security-strategy](https://www.gov.uk/government/publications/british-energy-security-strategy)

Introduction



In December 2020 we concluded there is significant benefit to coordination

In December 2020 we published a report²¹ on the costs and benefits of a more coordinated approach to connecting offshore wind and interconnectors compared to the current radial connection approach. With a radial approach, wind farms have individual connections to the main transmission network. These individual connections are designed independently from the onshore network, which transports electricity around the country. We confirmed there is significant benefit in moving quickly to an integrated network in which the onshore and offshore networks are coordinated to optimise the investment across the two and balance the design objectives. The analysis also suggested it is important to consider what flexibility there is for coordination between 2025 and 2030.

²¹ nationalgrideso.com/document/183031/download

Introduction

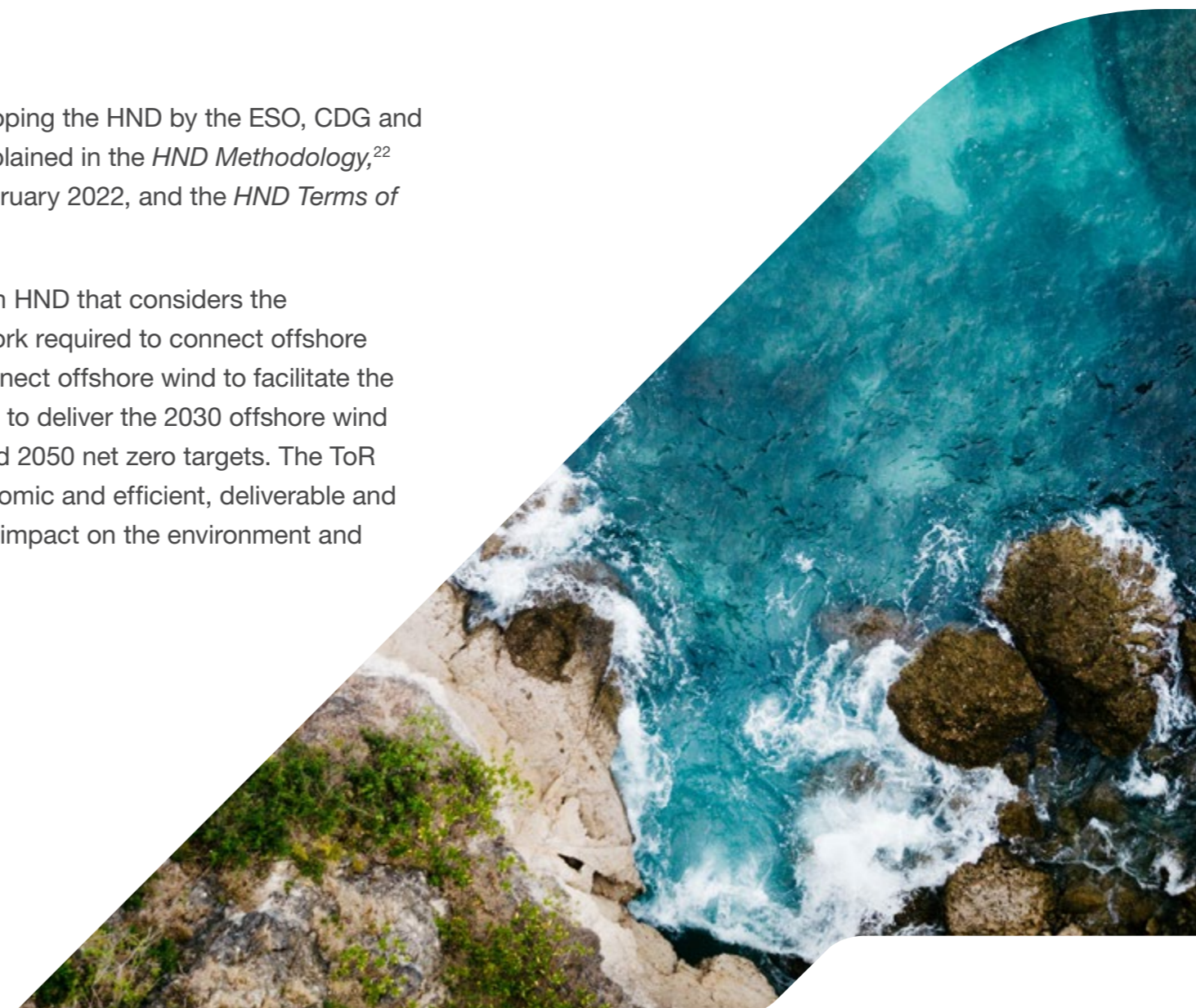
The Holistic Network Design is delivered in consultation with the Central Design Group and governed by terms of reference

Following the December 2020 publication, BEIS and The Office of Gas and Electricity Markets (Ofgem) requested that we deliver an HND, in consultation with the Central Design Group (CDG). This group was set up in 2021, to establish and support our development of the HND and to ensure stakeholder views were considered in the design. The purpose of the CDG is to act as a vehicle for us to consult and collaborate with TOs on the HND, and to consult with stakeholder groups as the HND is developed.

The CDG is chaired by the ESO with the Transmission Owners (TOs) and the ESO as members. BEIS, Ofgem and the Scottish and Welsh Governments are observers.

The specific roles for developing the HND by the ESO, CDG and the CDG subgroups are explained in the *HND Methodology*,²² which was published in February 2022, and the *HND Terms of Reference (ToR)*.²³

The ToR ask us to deliver an HND that considers the onshore and offshore network required to connect offshore wind. This is in order to connect offshore wind to facilitate the pace and certainty required to deliver the 2030 offshore wind ambitions, and the 2045 and 2050 net zero targets. The ToR require the HND to be economic and efficient, deliverable and operable, and minimise the impact on the environment and local communities.



²² nationalgrideso.com/document/239466/download

²³ assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1059676/otnr-central-design-group-network-design-tor.pdf

Introduction

Stakeholder engagement and feedback has been key in developing the Holistic Network Design

We have worked in collaboration with a wide range of stakeholders who have challenged, shaped and informed the proposals to help deliver the HND. Our *Stakeholder Approach, Engagement and Feedback Report* contains the view of developers, environmental and community stakeholders, as far as appropriate and reasonably practicable, in developing the HND. This is in line with the requirements of the ToR.

We have taken a collaborative approach to our stakeholder engagement. Whilst we did not undertake a formal consultation, bespoke engagement, including a feedback window on draft recommended designs, has been carried out with a targeted group of stakeholders. There will be the opportunity for wider consultation as part of the consenting process when projects reach the Detailed Network Design (DND) phase and more specific locations are developed for the various elements of the network infrastructure.

When developing the offshore design and interface sites for the HND, we assessed community constraint information and previous feedback provided by community stakeholders on the principles that should be followed when assessing interface sites for connection. This information is summarised in the Holistic Network Design document for the recommended design. Input from community stakeholders will be essential at the DND stage. We expect this to include engagement while plans are developed, as well as statutory consultation periods during the planning process.

The OTNR partners consist of:

BEIS, The Crown Estate, Crown Estate Scotland, The Department for Environment, Food and Rural Affairs (Defra), The Scottish Government, The Marine Management Organisation, The Department for Levelling Up, Housing and Communities, Ofgem, The Welsh Government and the Electricity System Operator. The following summary shows the extent of collaboration during the development of the HND:

Engagement with TOs:

- 86** ESO/TO meetings (including CDG),
- 06** Commercial and
- 12** Stakeholder and Communication subgroup meetings.

Offshore wind farm developers:

- 114** bilateral meetings,
- 02** Offshore Developer forums and
- 01** Offshore Developer Celtic Sea forum.

CDG Environmental subgroup:

- 06** meetings,
- 05** workshops

Responses received on the draft design recommendations:

- 41** responses from offshore wind developers, environmental stakeholders, TOs and OTNR project partners.

A variety of additional bilateral meetings with OTNR partners and environmental subgroup members were also held.

Navigating this suite of documents

The HND recommends the optimal transmission network based on the four design objectives to both connect the offshore wind farms to the transmission network and transport their power to where it is needed. This summary report sets out key messages from the following more detailed documents:

1. The **Holistic Network Design** sets out all of the network requirements to facilitate connection of the in scope offshore wind projects. This includes the offshore transmission network, the onshore works directly required to facilitate each connection and the network needed to transport the electricity around the country. It also includes two Appendices: 1) Comprehensive List of Onshore and Offshore Network Recommendations, including connections, enabling works and wider works and 2) Environment and Community Appraisal Summary.
2. The **Industry Code, Standard and Licence Recommendation Report** sets out our current view on the changes that need to be made to codes, standards and licences to enable delivery of the HND.
3. The **Stakeholder Approach, Engagement and Feedback Report** outlines the feedback we have received from our stakeholders and how that has shaped our recommendations.

4. The **HND Methodology** provides an overview of how we have delivered the HND and its building blocks, which was published in February 2022.²⁴
5. The **Network Options Assessment (NOA) 2021/2022 Refresh*** publication updates the NOA 2021/22, published in January 2022, by taking into account the offshore network design elements of the HND. It confirms the wider onshore network requirements that are set out in the HND against the established *NOA Methodology* and when they will be required. It also includes recommendations on onshore reinforcement projects that go beyond those required to meet the 2030 ambitions.
6. The **Glossary** explains the more technical terms used across the suite of documents.

Alongside this suite of documents, updates have been provided on coordination opportunities as part of the Early Opportunities workstream by the Department for Business, Energy and Industrial Strategy (BEIS) and organisations exploring the potential for offshore coordination as part of that workstream.



Holistic Network Design



Industry Code, Standard and Licence Recommendation Report



Stakeholder Approach, Engagement and Feedback Report



Methodology



Network Options Assessment 2021/22 Refresh*



Glossary

*The NOA 2021/22 Refresh publication is a standalone document that is represented here for completeness.

²⁴ nationalgrideso.com/document/239466/download

Navigating the HND reports

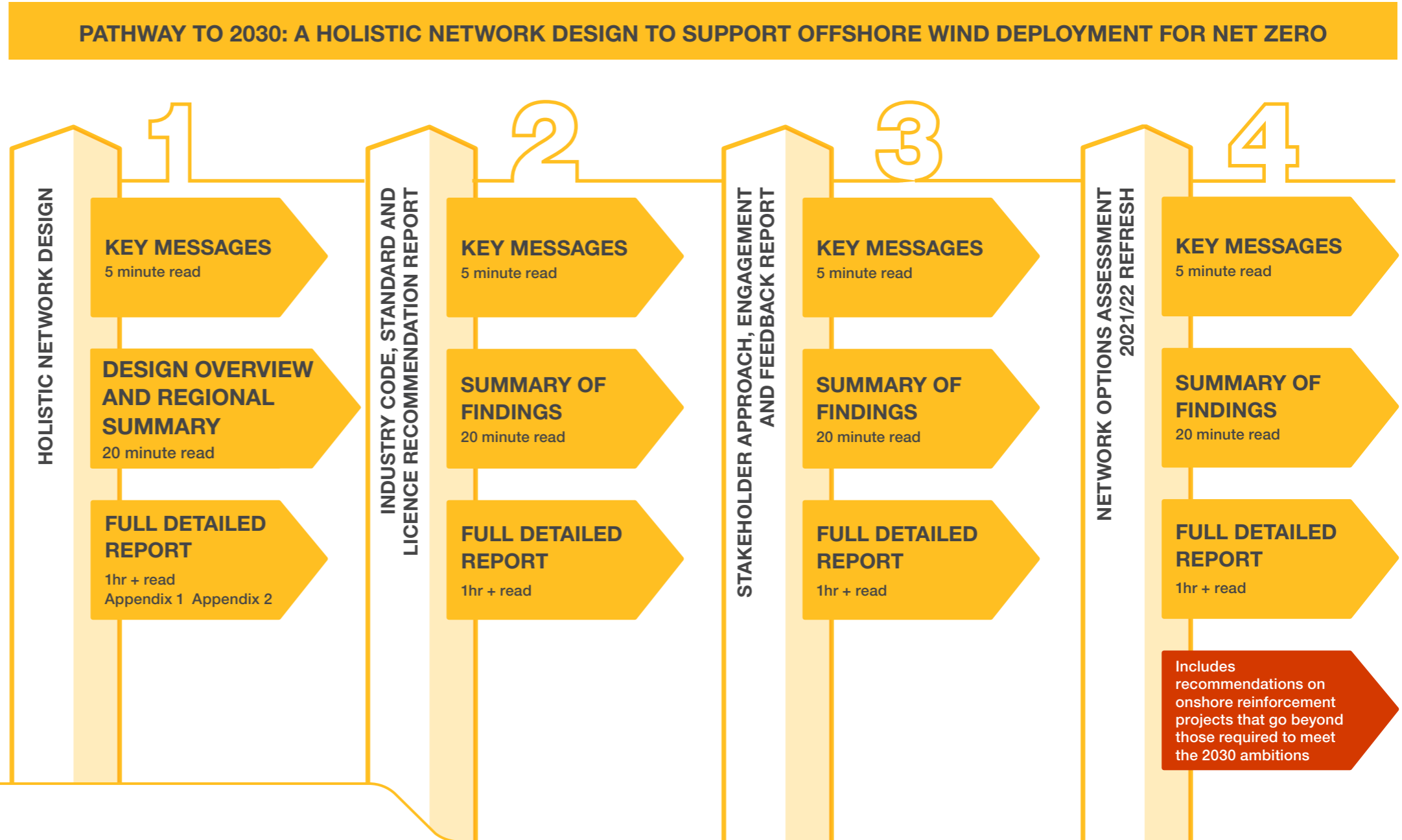
The HND recommends the optimal transmission network based on the four design objectives to both connect the offshore wind farms to the transmission network and transport their power to where it is needed. This summary report sets out key messages from the following more detailed documents:



The [Methodology](#) provides an overview of how we have delivered the HND and its building blocks, which was published in February 2022.

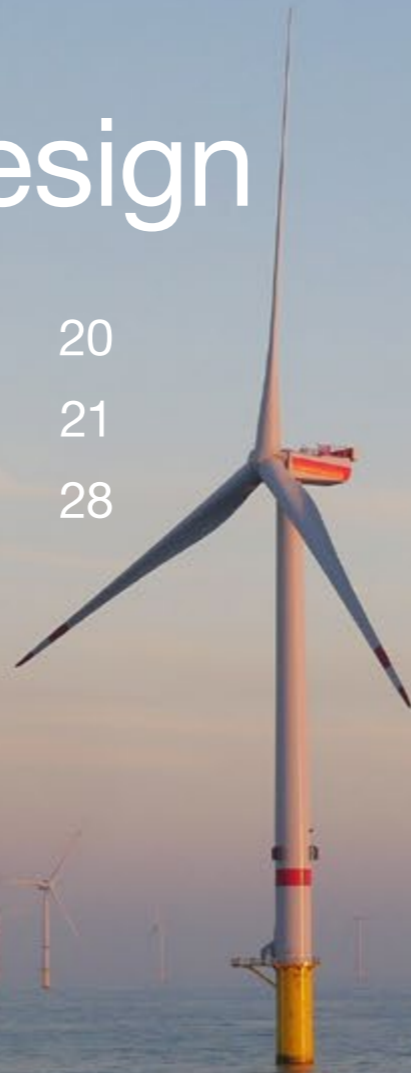


The [Glossary](#) explains the more technical terms used across the suite of documents.



A summary of the Holistic Network Design

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Our approach to developing the design	28



A summary of the Holistic Network Design

The Holistic Network Design combines coordinated solutions and radial solutions to maximise benefits and support delivery of 2030 offshore wind ambitions.

What is the Holistic Network Design?

The purpose of the HND is to provide a recommended onshore and offshore design for a 2030 network that can facilitate the UK Government ambition for 50 GW of offshore wind in Great Britain by 2030. In line with the ToR, the HND connects 23 GW of offshore wind, which combined with the existing and planned offshore wind projects that are out-of-scope of the HND, facilitates up to 50 GW by 2030. The HND aims to provide an economic, efficient, operable, sustainable, and coordinated National Electricity Transmission System (NETS) including the onshore and offshore transmission network required to connect offshore wind and transfer power to where it is needed. The HND is informed by the Network Options Assessment (NOA), which identifies

the wider network reinforcements needed to improve the capability of the network. The NOA 2021/22 publication has been refreshed to integrate the offshore network design and provide an updated view on the required onshore network reinforcements necessary to produce the HND. It assesses options required not only to meet our 2030 targets, but also those beyond 2030 to enable the transition to net zero. The HND has been delivered by the ESO in consultation with the CDG. The onshore TOs have played a key role in the process, by identifying onshore interface options and providing options and cost estimates for wider network reinforcements.

The HND covers the following future offshore wind projects:

- A total of 8 GW of projects successful in The Crown Estate Offshore Wind Leasing Round 4²⁵ (referred to as R4_X within this report, with X representing numbers used to refer to individual projects).

- A total of 11 GW of projects successful in the ScotWind leasing round,²⁶ with capacity located in each of the leasing zones (referred to as SW_X, with the letters W (west), N (north), E (east) and NE (north east) denoting the respective leasing zones).
- Assumptions on 1 GW of floating wind from the upcoming Celtic Sea leasing round²⁷ (notional projects referred to as CS_FW_X).
- 3 GW of other sites that are located near to Round 4 and ScotWind sites, to test whether there are opportunities for coordination (referred to as PA_X).

The ScotWind leasing round awarded seabed leases that allow for almost 25 GW of offshore wind, significantly exceeding the capacity assessed in the Scottish Government's Sectoral Marine Plan²⁸ of up to 10 GW. This capacity in Scotland surpassed the assumptions in the

Future Energy Scenarios 2021 that were used to inform the outputs of the NOA 2021/22, and which served as an input to the HND.

Initial enquiries with developers successful in the ScotWind leasing round helped us confirm the information we required on each project and build on the publicly available information from Crown Estate Scotland. After careful consideration of multiple options, and in consultation with OTNR stakeholders, we determined that the appropriate approach was to ensure the HND is published in July 2022 as planned, while delivering connection plans for at least one project located in each of the Crown Estate Scotland seabed leasing zones. For those ScotWind projects that will be subject to a follow up network design process, we are committed to establishing a plan to provide certainty on their connection locations and dates as soon as practically possible, with the aim of completing this process by the end of March 2023.

²⁵ thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/offshore-wind-leasing-round-4/

²⁶ crownstatescotland.com/news/scotwind-offshore-wind-leasing-delivers-major-boost-to-scotlands-net-zero-aspirations

²⁷ thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/energy/floating-offshore-wind/

²⁸ gov.scot/publications/sectoral-marine-plan-offshore-wind-energy/documents/

A summary of the Holistic Network Design

The recommended Holistic Network Design

The result of the HND process is a design that:

- Connects all 18 in scope offshore wind farms (with a total capacity of 23 GW) to the onshore network.
- Includes regions of strong coordination, and regions where radial connections are favourable.
- Has 15 landing points to shore.
- Establishes new offshore connections between different onshore regions to transfer power and avoid bottlenecks on the network, particularly between west Scotland and north Wales, as well as between east Scotland and the east of England.
- Identifies and clearly distinguishes onshore transmission projects that are required to facilitate the 2030 ambitions to allow the power to be transported to where it is needed.
- Identifies 11 onshore transmission projects that are required for 2030 but where a business-as-usual approach would result in delivery after 2030.

The technology recommended in the offshore design includes:

- 275 kV high voltage alternating current (HVAC) offshore substations and cables.
- 10 new, 525 kV high voltage direct current (HVDC) circuits with HVDC converter stations, offshore substations and cables.
- Two new multi-terminal HVDC systems.

The use of HVDC over HVAC connections is determined by the distance to the onshore interface points,²⁹ although some shorter HVDC corridors are included for operability and deliverability reasons.

The HND can deliver overall net consumer savings of approximately £5.5 billion compared to an optimised radial design. The recommended design requires an additional investment of £7.6 billion in additional offshore infrastructure, but this cost is outweighed by the £13.1 billion savings in constraint costs that are expected to result from the additional network capacity this infrastructure provides.



²⁹ With increasing cable length, the effective capacity of HVAC cables to transmit real power reduces due to increased reactive power and losses increase. With HVDC cables, there is no transmission of reactive power, and losses increase more moderately with increasing distance.

A summary of the Holistic Network Design

Based on the assumptions used in our economic modelling, the costs of the offshore network infrastructure required in the recommended design would be around £32 billion. This compares to around £24.4 billion for the optimised radial design (giving the differential of £7.6 billion). These costs are based on high level assumptions, and we would expect them to change during the DND stage as routing and technology choices are decided. These costs relate to connecting the 23 GW of offshore wind which is in scope of the HND. The total cost of onshore infrastructure recommended between now and 2030 is £21.7 billion across 94 projects. These costs relate to the full set of onshore network reinforcements required to connect 50 GW of offshore wind by 2030.³⁰

The HND builds upon previous recommendations

The HND is made up of a number of individual recommendations for the development of the onshore and offshore networks. These recommendations are expressed in terms of a need to be able to transmit power from one point to another, whether that is offshore, onshore or a combination of the two. Each of these recommendations needs to be considered carefully, designed in detail, and developed subject to the applicable planning and consenting processes.

Many of the HND's system-wide recommendations have been highlighted previously through our NOA process, where their description, driver and status is reassessed and published annually. New proposals for reinforcing the transmission system start with an initial assessment of early options submitted into the NOA. Following recommendations to 'proceed,' these projects are progressed and developed in more detail by the TOs. Some of these projects are now sufficiently advanced in development to have been shared with affected stakeholders and local communities.



³⁰ The £54 billion referred to in related communications is made up of the £32 billion for the recommended offshore design and £21.7 billion for the onshore design, rounded to £22 billion.

A summary of the Holistic Network Design

When considering the development of the transmission system, smaller, incremental reinforcements utilising existing assets are considered first. This begins with reduced and no build options such as commercial arrangements to manage flows on the network, followed by increasing the capability of existing assets. Once these options are exhausted, new reinforcement options must be considered. These include the construction of new transmission assets, or longer subsea cables to provide power transfer capability over greater distances. Figure 1 illustrates the transmission network development journey highlighting upgrades to existing assets in dark grey with proposed new onshore transmission assets in purple and new subsea network reinforcements in light green.

Those recommendations that have been identified as necessary previously are shown in **Figure 1**.

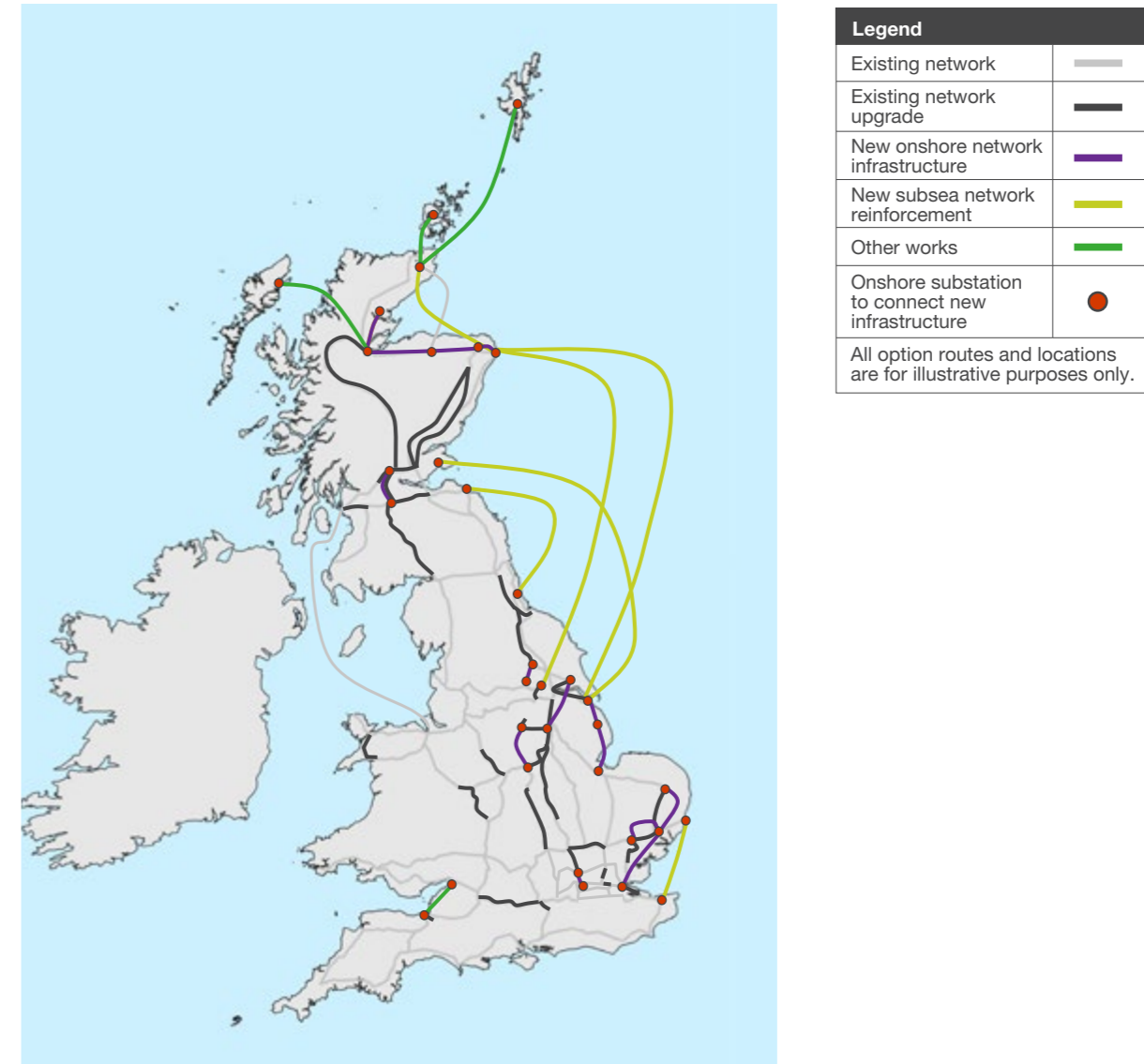


Figure 1: Those recommendations that have been identified as necessary previously.

Please note: The map is illustrative and highlights an identified need to transmit volumes of energy from point A to point B and does NOT represent specific routes. The next steps involve more detailed network design which will include specific locations and designs for projects. These will be designed and consulted on in future by the organisations appointed to fulfil the needs identified.

A summary of the Holistic Network Design

New network needs identified through the HND

Through the HND process we have developed a coordinated offshore network design. This design provides a greater level of coordination between offshore wind farms, optimising the number of landing points. In addition, we have recommended that some offshore wind farms connect further south than would have otherwise been considered through our usual connections approach. This coordination results in different power flows on the onshore network, driving some newly identified network needs.

These new network needs are illustrated in **Figure 2**. The HND has identified new needs for network located offshore, as well as three new requirements which build on the existing network and on previously planned development. These new network needs have not been previously published, unlike the other planned network reinforcements, which have been regularly assessed and documented in our NOA process.

These new network needs are still in the early stages of development and were assessed in the HND via the *NOA 2021/22 Refresh*, which has recommended the continued development of options with similar capabilities. As these options have been shown to provide significant benefit, further detailed design assessments will need to be undertaken by the relevant Transmission Owner to ensure a solution which balances the needs of the electricity system, environment and cost to energy consumers is taken forward. This will include exploring many different route options, including onshore, offshore or a combination of both. The selected option will then be taken forward to public consultation by the relevant TO as part of detailed design and consenting.

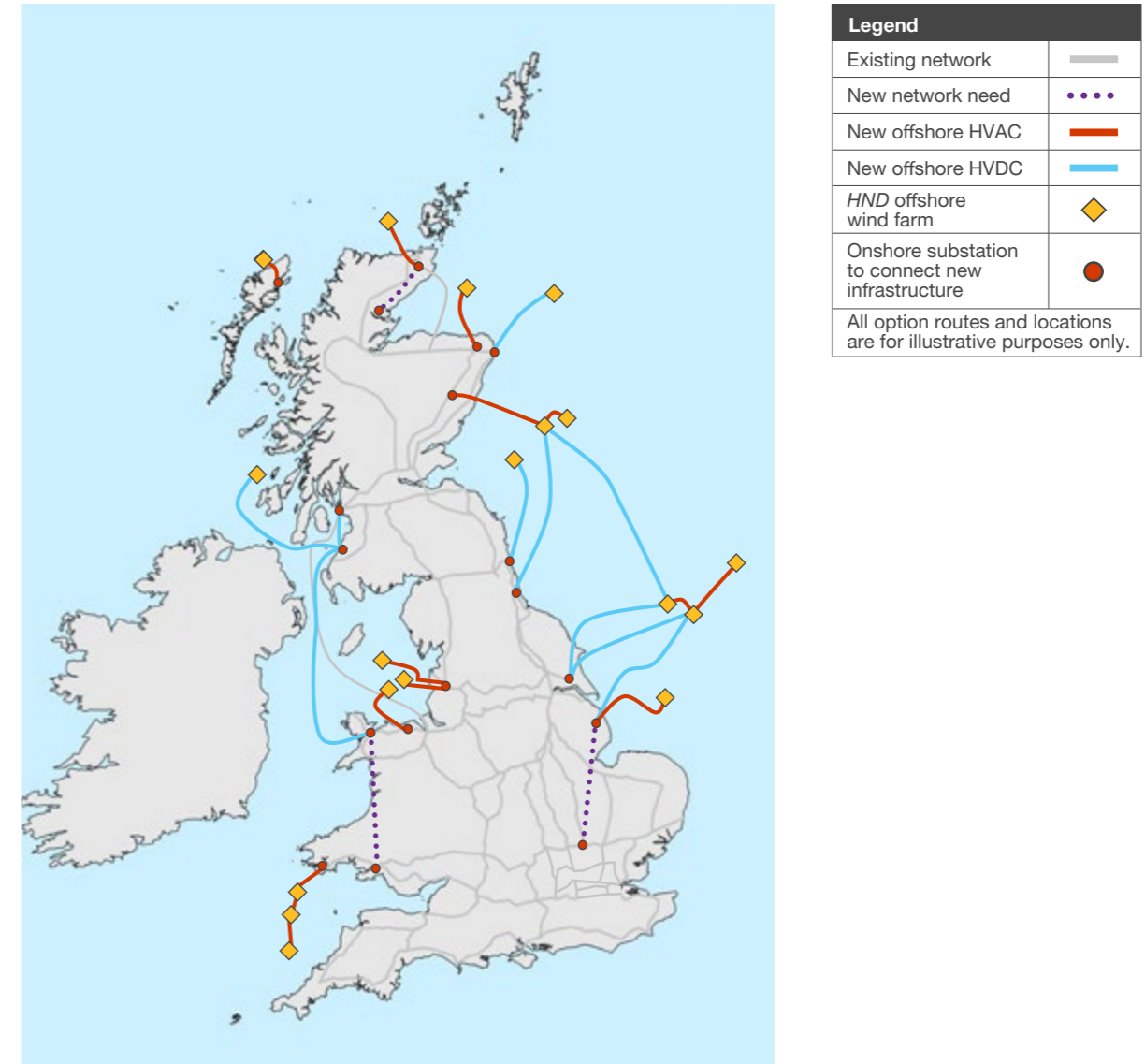


Figure 2: The new network needs identified through the HND.

Please note: The map is illustrative and highlights an identified need to transmit volumes of energy from point A to point B and does NOT represent specific routes. The next steps involve more detailed network design which will include specific locations and designs for projects. These will be designed and consulted on in future by the organisations appointed to fulfil the needs identified.

A summary of the Holistic Network Design

Overall HND view of the system

Figure 3 shows the final HND, highlighting key onshore transmission system upgrades alongside the recommended offshore design required to facilitate the connection of 50 GW of offshore wind by 2030. This provides a combined view of previously identified transmission reinforcements paired with those newly recommended as a part of the HND, outlining what is required to meet the Government offshore wind targets.

The map illustrates upgrades to the existing transmission system in dark grey, new onshore transmission reinforcements and subsea cables previously recommended in NOA in purple and light green respectively. New network needs are shown as dotted purple lines and the coordinated offshore network in red and blue, representing the type of technology proposed.

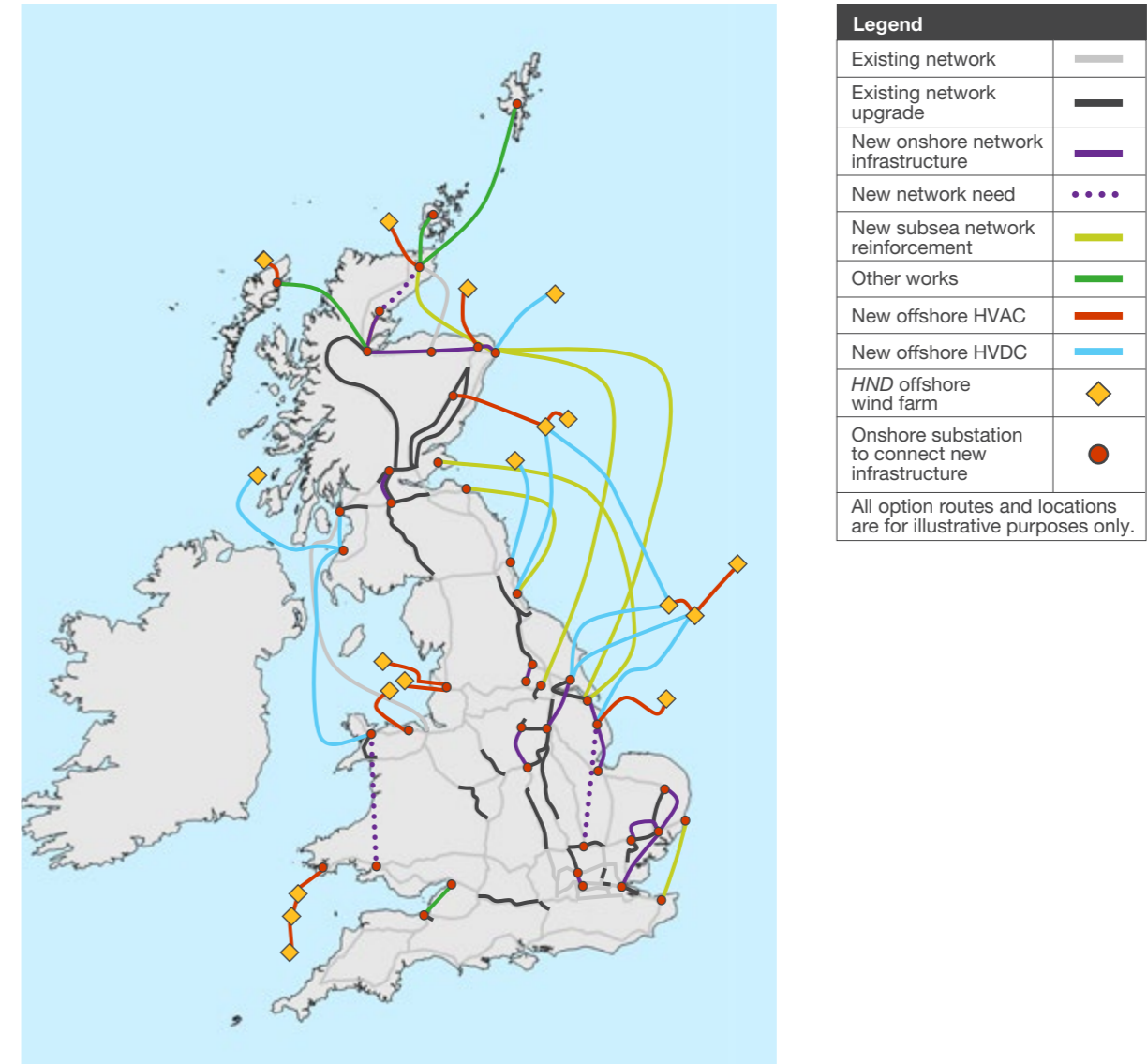


Figure 3: The full set of major network requirements recommended by the HND.

Please note: The map is illustrative and highlights an identified need to transmit volumes of energy from point A to point B and does NOT represent specific routes. The next steps involve more detailed network design which will include specific locations and designs for projects. These will be designed and consulted on in future by the organisations appointed to fulfil the needs identified.

A summary of the Holistic Network Design

Our recommended design offers significant benefits compared to an optimised radial design:



Economic and efficient³¹

The recommended design is forecast to provide a net saving of £5.5 billion to consumers through more efficient network development, leading to reduced operational costs when compared to the optimised radial design.

The recommended design has an additional investment cost of £7.6 billion in offshore network assets relative to the optimised radial design. However, this is offset by the improved network power flow capacity it provides which significantly lowers the costs associated with curtailing and re-dispatching generation by £13.1 billion.

The costs and scope of onshore boundary reinforcements are broadly comparable between the two designs. It is important to recognise that this is partly because there is a limit to the amount of boundary reinforcement that can be delivered in the lead up to 2030, which is due to the time taken to deliver large scale infrastructure projects, as well as other factors including supply chain capacity. This means that our assessment had a finite set of options to choose from. However, if these delivery constraints were removed and more network reinforcement options were available, the recommended design would reduce the requirement to invest in further onshore infrastructure. This is demonstrated through the significant reductions in constraint costs the recommended design provides compared to the radial alternative.



Deliverable and operable

The design is deliverable and operable, and provides the opportunity for wind farms to be able to connect by 2030. The longer, and more complex, links in the design are unlikely to be complete by 2030 in the absence of major acceleration in the supply chain. However, the design offers the potential to get generation connected by 2030, and increase capacity progressively, given timely allocation of responsibilities, delivery of the commitments in the *BESS* and a coordinated and concerted effort from all parties. Our analysis has not identified any significant operability challenges, although the DND will explore this further. The timings and required works for each connection will be determined as part of the connection contract update programme.³²

³¹ We have used standard cost-benefit analysis (CBA) assumptions within our economic analysis: The onshore assets are amortised over an assumed asset life of 40 years. The offshore asset capital expenditure (CAPEX) is assumed to be gradually written off over 25 years, but many benefits exist for 40 years.

³² More information on the connection contract update programme can be found in the What happens next section on page 60.

A summary of the Holistic Network Design



Environmental impact

The nature of the infrastructure required means the HND cannot be without impact. However, careful consideration has been given to the design to minimise cumulative environmental impacts.

The total length of cable corridors in the recommended design is slightly higher than in the radial design, as the radial design only considers infrastructure required to connect wind farm generation to the onshore network. The recommended design includes infrastructure to transfer power from north to south, not just from the point of generation to the onshore network. This infrastructure is required to transfer electricity from where it is generated to where it is needed. Without this infrastructure, zero carbon wind energy would be constrained off and typically higher carbon, fossil fuelled generation would be needed instead with additional energy security impacts. The coordinated design therefore saves 2 million tonnes of CO₂ between just 2030 and 2032.

In addition, the coordinated design reduces the total number of cables being laid to shore by up to a third due to the use of HVDC technology, reducing the impact on the seabed.

The design takes account of environmental constraints³³ and seeks to minimise the impact on sensitive habitats through the coordination of wind farm connections to shore. Cable route corridors can avoid many of the identified environmentally sensitive features, however this is not possible in all cases. Further consideration will need to be given to cable routing in the DND stage to minimise environmental and consenting risks. While the environmental mitigation hierarchy should be followed, it is likely that environmental compensation measures will be required, assuming no viable alternatives are identified in the DND stage. This might include measures at a regional or national level. However, in the first instance, measures to alleviate pressures on and protect sensitive habitats both within and outside Marine Protected Areas (MPAs) should be considered, and compensation seen as a last resort.

The environmental impacts of both onshore and offshore works are discussed further in the *HND* report.



Community impact of offshore cable routes

The design takes account of community constraints. It minimises the impact on local communities, for example, in relation to the volume of transmission network infrastructure in some areas, the cumulative impact associated with multiple connections, and onshore transmission reinforcements that are driven by the offshore network. There is also the potential for the route corridors to avoid many of the identified community constraints; specific route corridors will be defined as part of the DND.







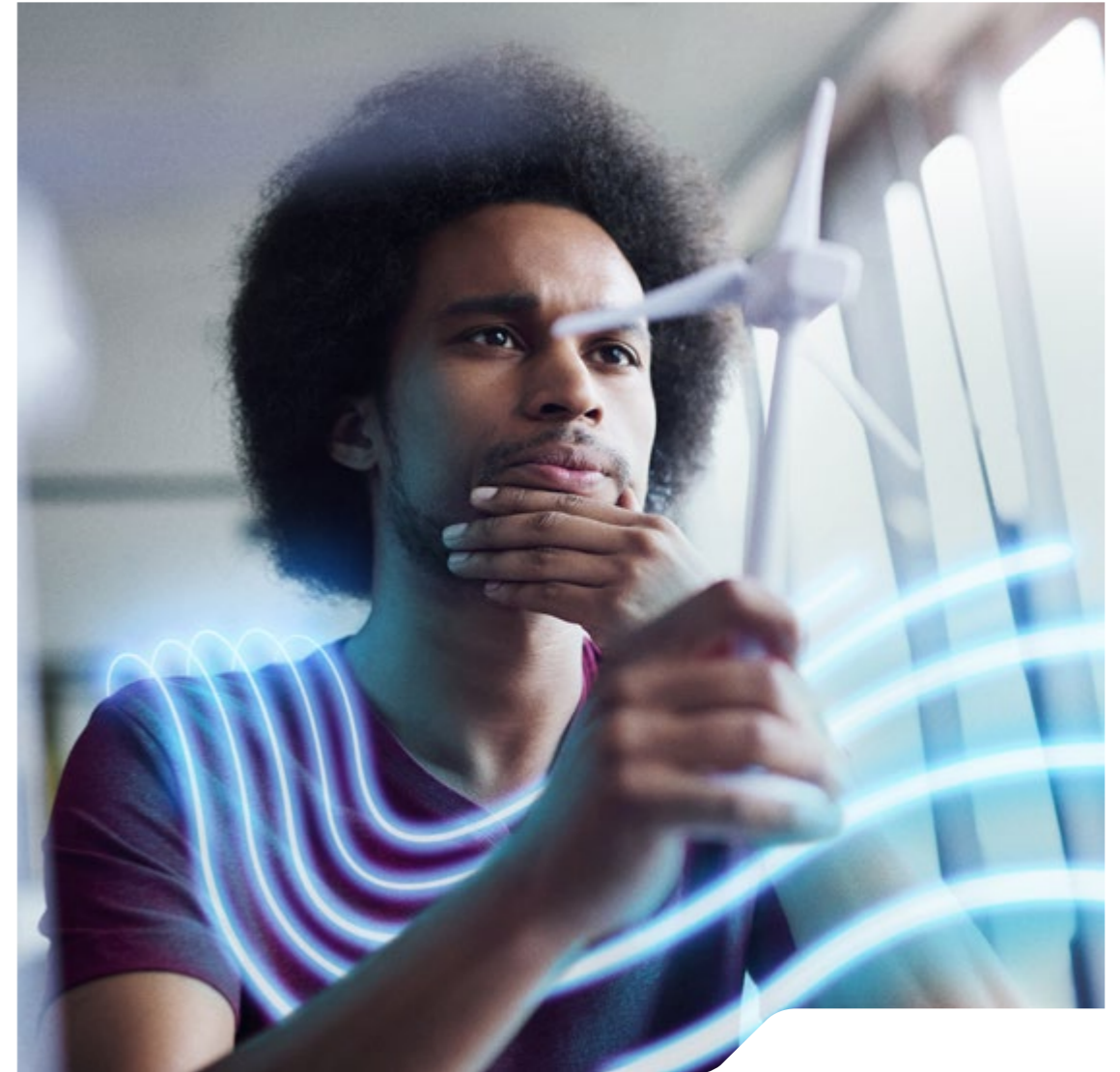
³³ Environmental constraints and community constraints are described in the next section.

A summary of the Holistic Network Design

Our approach to developing the design

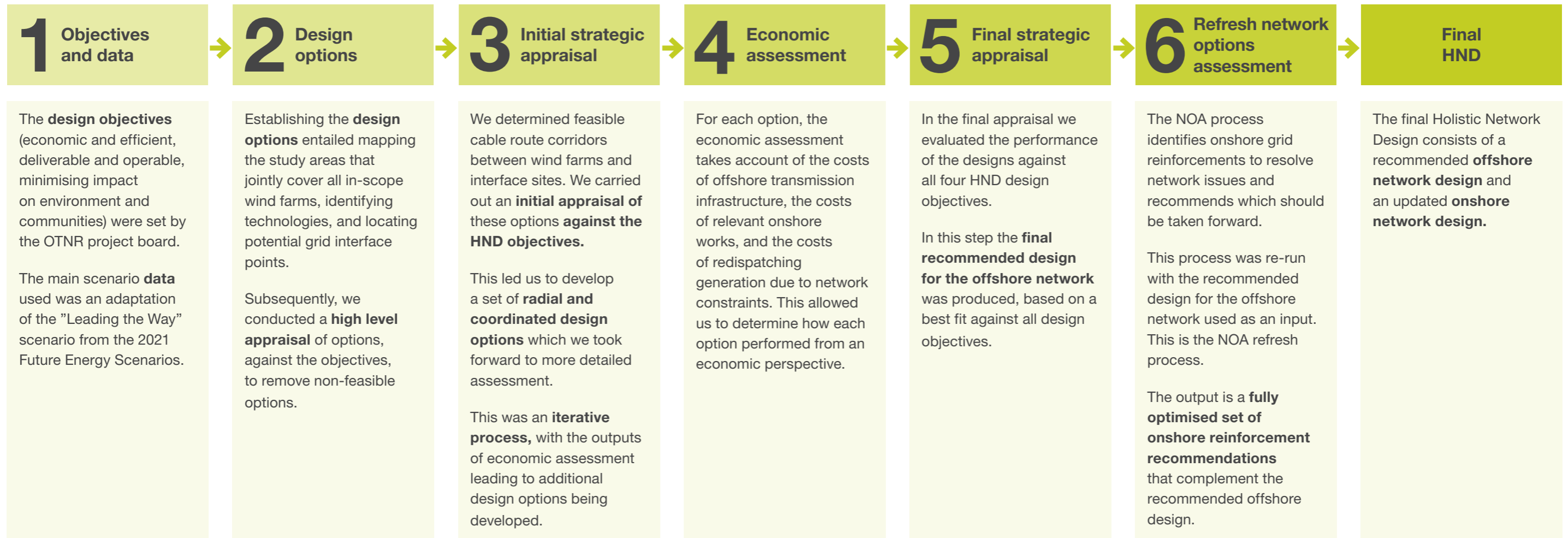
We have developed a design approach for the HND that is tailored to achieve the following design objectives.

The objective	Our approach
 <p>Is economic and efficient</p>	<p>We used economic assessment tools to determine the optimal economic design from a range of proposed design options.</p>
 <p>Is deliverable and operable</p>	<p>We applied a deliverability assessment framework that considered a range of factors including supply chain of technologies, construction timeframes, and consenting challenges.</p>
 <p>Considers impact on environment</p>	<p>We conducted assessments of environmental constraints using a range of geospatial data sources to determine the location and the sensitivity of environmental constraints. We did this in consultation with Statutory Nature Conservation Bodies (SNCBs) through the CDG Environmental subgroup.</p>
 <p>Considers impact on communities</p>	<p>We conducted assessments of community constraints using a range of geospatial data sources to determine the location and the sensitivity of community constraints.</p>



A summary of the Holistic Network Design

The HND design approach is based on six building blocks:



Stakeholder Engagement

Stakeholders were engaged throughout execution of the HND. We established a Central Design Group, consisting of representation from key stakeholders, including the onshore transmission owners (National Grid Electricity Transmission, SP Transmission, Scottish and Southern Electricity Networks - Transmission). This group was supplemented by four subgroups, where we received expert input and formal advice on specific elements of the design: (1) stakeholder and communications subgroup (2) commercial subgroup (3) environmental subgroup, (4) developer forum.

A summary of the Holistic Network Design

The first step in our process was to establish an input dataset and use it to inform a series of steps developing potential designs. This dataset included the offshore wind generation in scope for the HND, the Leading the Way scenario from the 2021 Future Energy Scenarios, a model of the transmission network for 2030, and environmental and community constraint data. We considered options for potential interface sites - the locations where we expect offshore cables to link to the onshore network - and assessed them against our design objectives. This process allowed us to narrow down our options and take account of the design objectives early in the process by considering the relative costs and environmental and community impacts of work at a range of locations. We then developed an optimised radial design, which consists of point-to-point connections between offshore wind farms and onshore interface points. The approach used takes into consideration all in scope wind generation, rather than considering each application individually as has previously been done. This provides a credible counterfactual against which to compare our recommended design which was developed in the next step.

In developing radial and coordinated design process, we considered various types of environmental and community constraints:

- Environmental constraints, including: special areas of conservation (SAC), special protection areas (SPA) (related to wild birds), sites of special scientific interest (SSSI), marine conservation zones (MCZ), sensitive habitats, reefs and sandbanks.
- Community constraints, including:
 - Onshore: major settlements and urban areas, heritage coasts, bathing areas, registered parks and gardens, scheduled monuments and listed buildings.
 - Offshore: shipwrecks, sailing areas, existing and planned offshore wind farms, fisheries, military areas, and oil and gas wells.

Both offshore and onshore constraints were analysed and divided into categories that signify the degree of constraint: black, red, amber, and green ([BRAG – click for more details](#)).

For onshore works, Transmission Owners assessed the environmental and community impacts in line with their respective project development process. Onshore projects are at various stages of development ranging from initial needs case agreed through to planning consents approved, so the level of detail within these assessments has varied depending on the stage of the project. They begin with an initial high-level assessment for early-stage options in the NOA process (such as avoiding new overhead lines in national parks) before completing full consideration for projects in the subsequent stages of development.

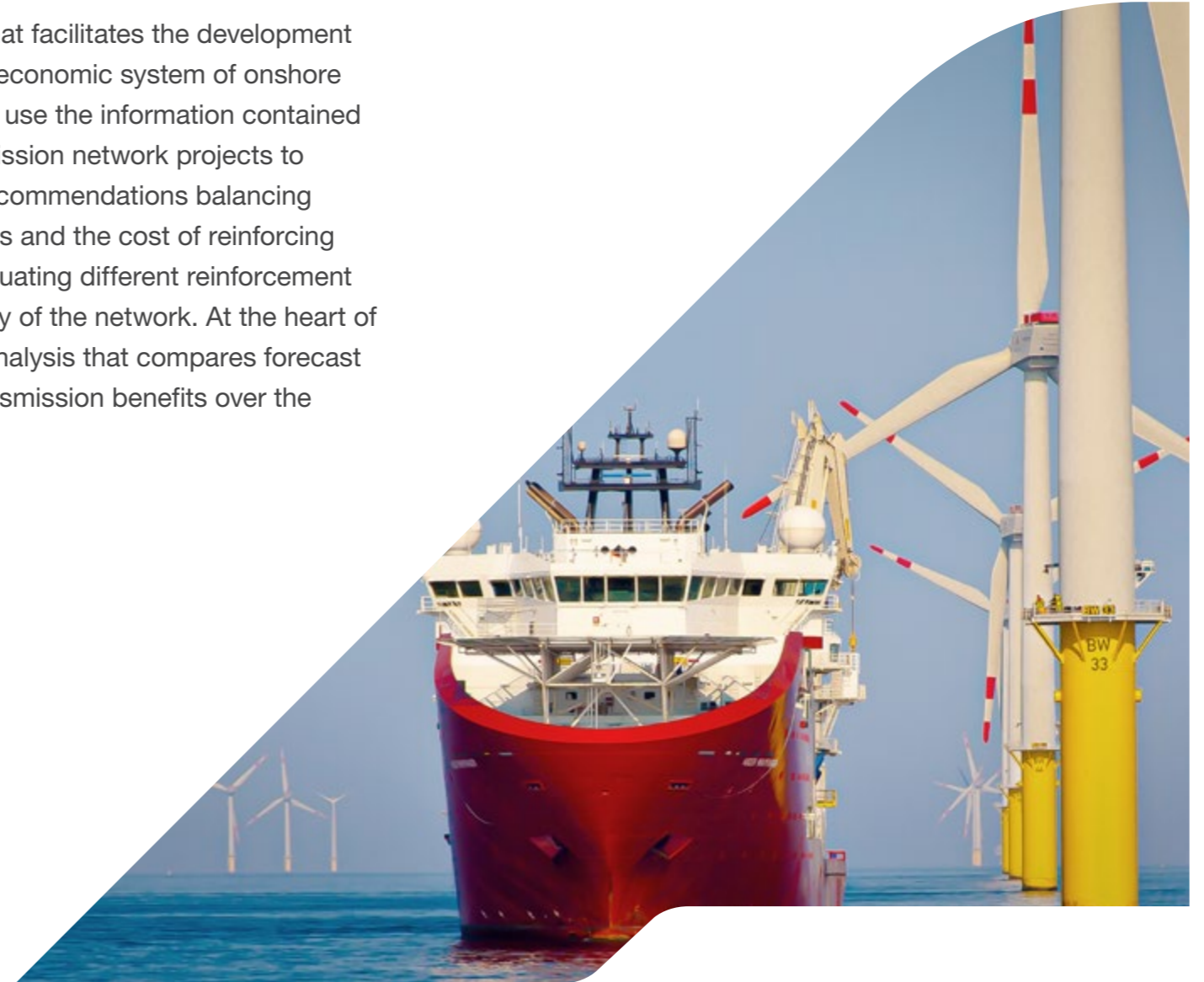


A summary of the Holistic Network Design

Throughout the design process we also carried out power system studies, which ensured that designs complied with industry codes and regulations and were designed with power system operability and flexibility in mind.

Both the radial and co-ordinated offshore network designs were evaluated by integrating them with the existing onshore and offshore networks and planned reinforcement options. This allowed us to determine the corresponding onshore network that is needed both to connect the offshore wind and transport the power generated around the country. In addition to the use of an economic optimisation tool, we utilised and built on the established *NOA* cost-benefit analysis methodology.

The *NOA* is an annual process that facilitates the development of an efficient, coordinated, and economic system of onshore electricity transmission. The TOs use the information contained in it to help decide which transmission network projects to progress. We make economic recommendations balancing the costs of managing constraints and the cost of reinforcing the network. This is done by evaluating different reinforcement options that increase the capacity of the network. At the heart of the evaluation is a cost-benefit analysis that compares forecast capital costs and monetised transmission benefits over the project's life.



A summary of the Holistic Network Design

Following the completion of the HND's offshore design, the locations of where the in scope developers will connect to the main transmission network were updated and the onshore requirements were reassessed. We are publishing the results of this exercise as part of this suite of documents as the *NOA 2021/22 Refresh* publication. This builds on the *NOA 2021/22* published in January 2022, which was developed without knowledge of the connection arrangements recommended by the HND. The *NOA* considers a multiyear horizon looking beyond 2030 to provide the optimal delivery dates for projects that it recommends. Only onshore projects that are required to meet the 2030 offshore wind ambitions are outlined in the *HND* report. However, the full suite of recommendations, including those beyond 2030, can be found in the *NOA 2021/22 Refresh* publication. A comprehensive list of onshore and offshore network recommendations within the *HND* report, including connections, enabling works and wider works can also be found in [Appendix 1](#).

Typically, the *NOA* process explicitly follows the previously published and approved *NOA Methodology*. This means that it applies different criteria than the offshore connection elements of the HND with the focus on technical and economic factors. However, to align with the offshore elements and ensure a consistent approach some adjustments to the *NOA* process have been made. Please see the *NOA 2021/22 Refresh* for more details.³⁵

The HND detailed document and the *NOA 2021/22 Refresh* publication provide further details on the different developmental stages of the options, the level of environmental and community impacts undertaken at each stage and identify the projects on which the TOs have undertaken environmental and social impact appraisals at least equivalent to those undertaken for the offshore projects.



³⁵ <https://www.nationalgrideso.com/document/262981/download>

The recommended design

North West Region	36
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System-wide view	53



The recommended design

We have recommended connection and offshore network designs for four offshore regions of Great Britain that contain the in scope offshore wind projects and provided an update on the fifth region where projects sit outside the HND:

1. North West

2. North Scotland

3. East Coast

4. South West

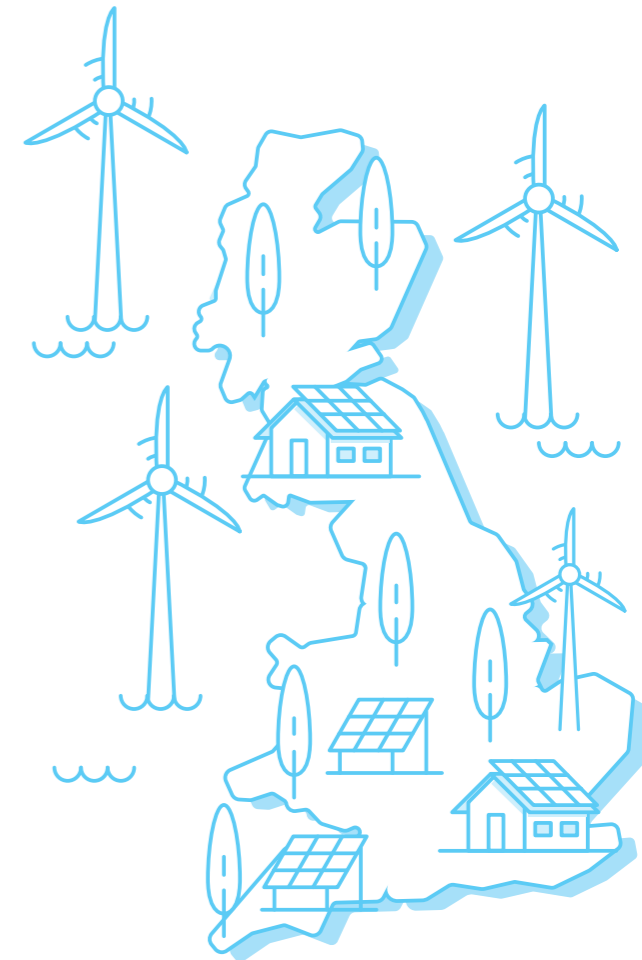
5. The South East and South Coast of England

We have also recommended key wider system reinforcements based on a system-wide view which we describe later in this section. Whilst some of these system-wide reinforcements sit neatly within one region, the majority solve wider network issues outside of these regions. We have therefore included a system-wide view to reflect this.

Regional offshore view

Offshore network designs are presented by region based on the opportunity to coordinate between different offshore wind farms within the HND.

The East Coast of England and Scotland were treated as a single offshore region due to the opportunity for coordination across the wind farms. Similarly, for the west coast, we have grouped the west coast of Scotland, the north west of England and north Wales together in the North West Region. The South East and South Coast of England are also grouped together. The North Coast of Scotland and the South West are presented in their own groupings. Our system-wide view, which follows this section, provides a comprehensive overview across Great Britain.



The recommended design

The designs do not include specific route corridors, which will be developed by the delivery body carrying out the DND for each part of the network. The recommended designs for the North West, East Coast and South West regions are described below alongside our optimal radial design option for comparison. For North Scotland, where a radial approach is recommended, the best-performing coordinated design is included for comparison.

In all of the regions we have considered onshore and offshore environmental and community constraints and these are indicated on the regional maps. While offshore constraints are clearly visible in the diagrams, not all onshore constraints are. This is either due to the area of the constraints being too small to see at the scale of the diagrams, or in the case of constraints near to the interface points, the constraint areas are covered by the substation icons. The *HND* report contains diagrams of a larger scale showing onshore constraints.

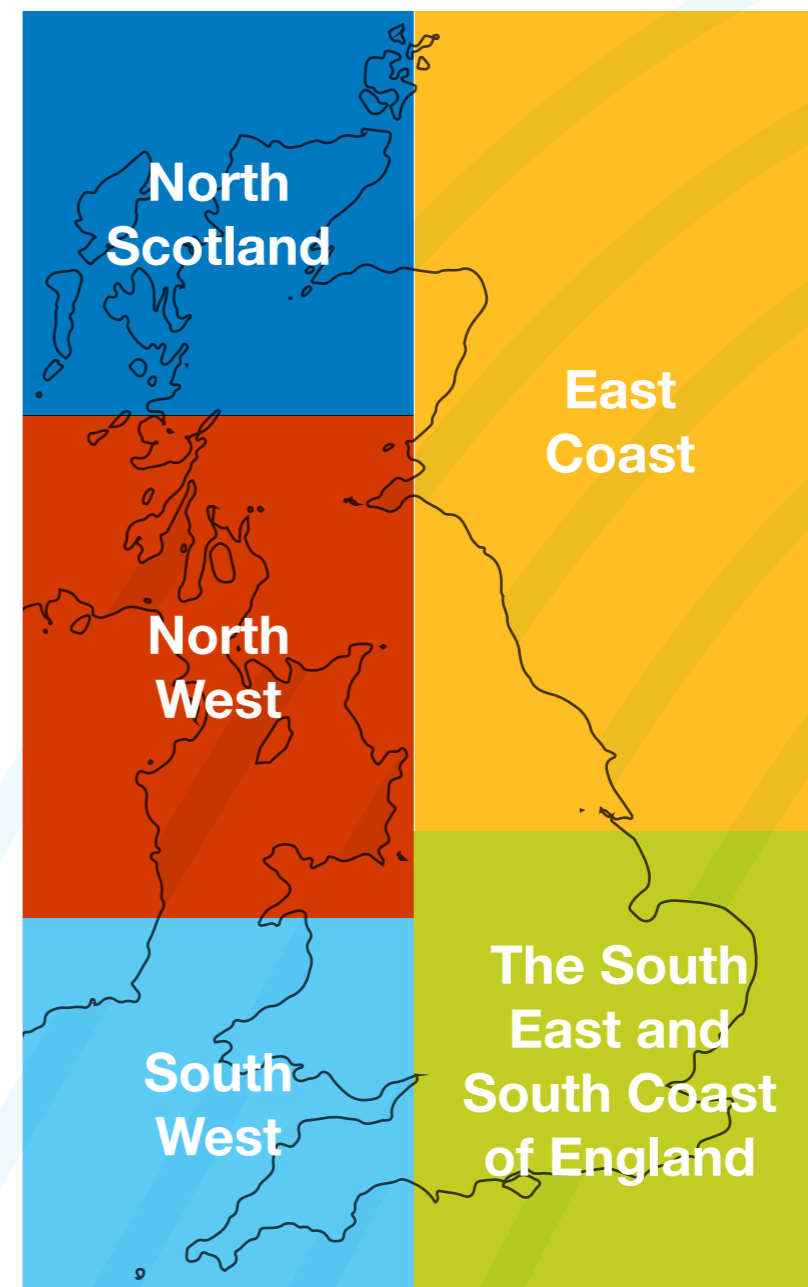
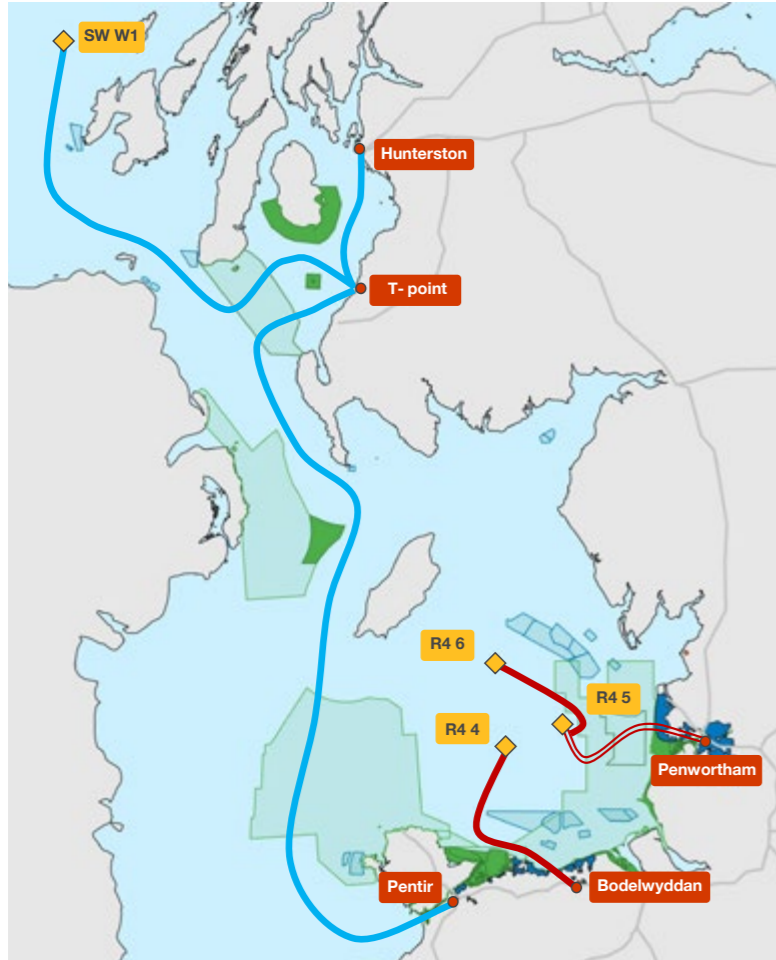


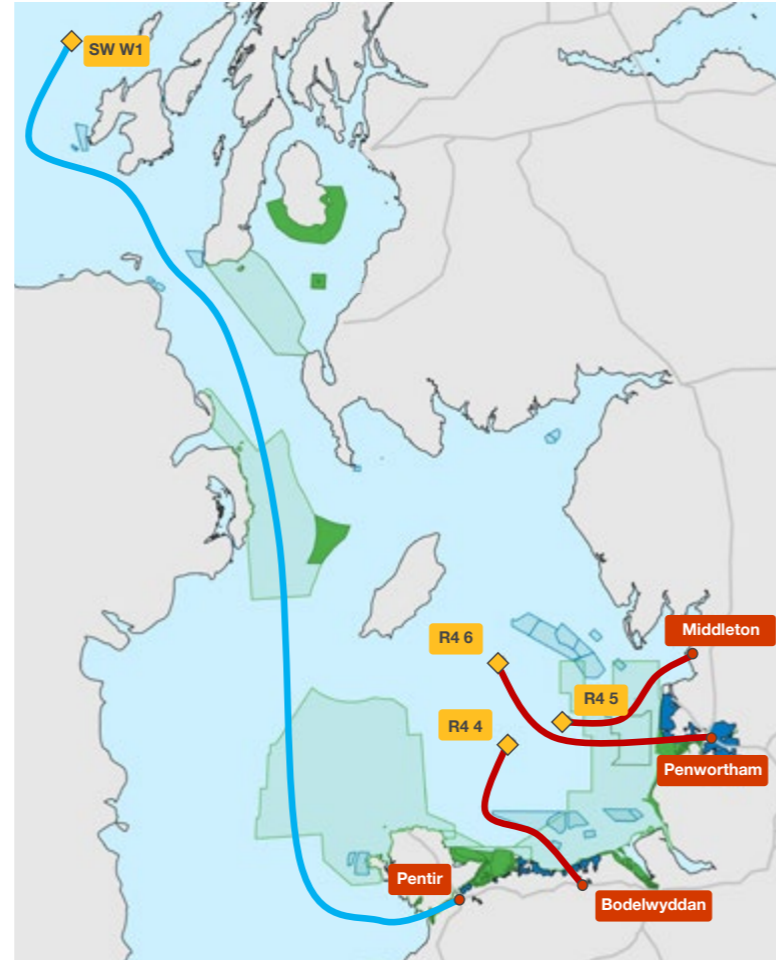
Figure 4: Overview of the regions

North West Region

Recommended design: Coordinated



Radial design



Legend	
HVDC	
HVAC	
Environmental constraint: avoidable	
Environmental constraint: unavoidable	
Community constraint	
Existing or planned wind farm	
In scope wind farm	
Onshore substation	
Existing network	
All option routes and locations are for illustrative purposes only.	

Number of generators:
Four

Combined offshore wind capacity:
5.5 GW

Design:
Wind farm in West Scotland connects to a T-point with connections into both Scotland and Wales. Irish Sea wind farms connected radially with two sharing a route corridor.

Figure 5: The recommended coordinated design and optimised radial design for the North West Region

North West Region

The recommended design

The recommended design in the North West Region is formed of a connection through offshore waters between Scotland and Wales and connections from the Irish Sea to the north west of England and north Wales. It includes an HVDC connection from wind farm SW_W1 to a T-point located in the vicinity of South Ayrshire, which further connects to Hunterston and Pentir. This delivers an offshore connection between Scotland and Wales, which bypasses onshore grid constraints and enables transmission of electricity from Scotland to the south, towards areas of higher electricity consumption. HVDC technology needs to be used for this due to the long cable length and large capacity.³⁶ Due to environmental and deliverability constraints, we have assumed that this cable route approaches Pentir from the south, although route corridors will be determined at the DND stage.

The links to Hunterston and Pentir provide a wider transmission system benefit by providing transmission circuit capacity between those points, avoiding the need for an additional north to south link. There is also potential for other projects to connect into the T-point. We would therefore envisage the possibility that the T-point to Hunterston and/or Hunterston-Pentir circuits could form part of the onshore transmission system and would be delivered and operated through the appropriate mechanisms for onshore transmission assets. The SW_W1 developer could therefore only be responsible for the link from SW_W1 to the T-point, with the other circuits being described as TO works within its connection agreement. However, as this situation is not specifically clarified within Ofgem's May 2022 *Minded-to Decision and further consultation on Pathway to 2030*, further analysis on the primary function of the assets will be needed to confirm this, as envisaged by Ofgem.



³⁶ With increasing cable length, the effective capacity of HVAC cables to transmit real power reduces due to increased reactive power. There is no such technical limitation for the use of longer HVDC cables.

North West Region



There is also a potential opportunity to integrate the planned LirIC interconnector from Scotland to Northern Ireland into the proposed design. The LirIC interconnector is currently planned to connect from Kilroot in Northern Ireland to Kilmarnock South in Scotland.³⁷ An improved economic, environmental and community outcome could potentially be achieved by connecting it into the T-point. However, further analysis will be required to determine whether this is deliverable.

The design further recommends collaboration between generation developers in the Irish Sea. For the R4_5 and R4_6 wind farms, we are recommending radial connections with a shared cable corridor, consistent with the developers' proposal for coordination. This reduces environmental and community impacts by sharing a cable corridor and landfall, without the need for an offshore switching station. Although the electrical design is radial, it brings many of the benefits of coordination such as reduced environmental impact but is expected to limit deliverability risks.

The R4_4 wind farm will be connected radially into Bodelwyddan in North Wales.

The works on the onshore transmission system include substation extensions at Hunterston, Pentir, Bodelwyddan and Penwortham. Works would also be required at other sites, including substation works, uprating of other circuits and new transmission circuits. It also requires the delivery of an HVDC T-point. More comprehensive onshore network recommendations within the *HND* can be found in [Appendix 1](#).





The DND stage will confirm whether Hunterston is the most appropriate connection site for the northern circuit connecting to the T-point.

³⁷ tin.v.com/intercon-projects/liric/

North West Region

Benefits of the recommended design

The recommended design for the North West Region has significant benefits compared to the radial design. On all four of the design objectives this design performs as well, if not better than, the alternative designs considered. It balances the design objectives successfully to provide an efficient holistic design.

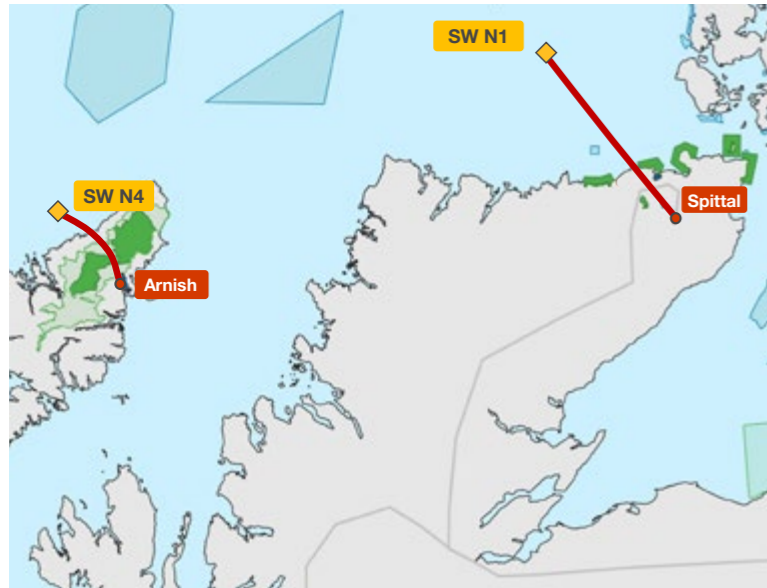
 <p>Economic and efficient</p>	<p>The design is economic and efficient, with lower overall costs than the radial design. The coordinated design has higher costs for connecting and operating the transmission network infrastructure needed to connect the wind farms. However, the design of the SW_W1 connection and T-point will provide a wider network benefit, delivering significant savings in constraint costs by transferring additional power from north to south and bypassing onshore boundary constraints.</p>
 <p>Deliverable and operable</p>	<p>The design is partly deliverable by 2030 under current regulatory and consenting frameworks. Although firm connections will not be available until later years in some cases without delivery of the commitments in the BESS, the design could be built using a phased approach. The design includes a significant volume of HVDC cables, and it will be challenging to deliver the full three-ended HVDC link by 2030. Additionally, some of the required reinforcement works currently have dates which extend beyond 2030. We are working with the relevant TOs to review the programme for these works in light of the commitments in the BESS. The timings and required works for each connection will be determined as part of the connection contract update programme. Our analysis has not identified any significant operability challenges, although the DND will explore this further.</p>
 <p>Environmental impact</p>	<p>The design seeks to minimise the impact on the environment. It is expected to be possible to define route corridors which avoid many important environmental constraints. Whilst it is not expected to be possible to avoid all environmental constraints, this design performs better than the alternative radial design by introducing a shared cable corridor to Penwortham and avoiding the Morecambe Bay SAC.</p>
 <p>Community impact</p>	<p>The design seeks to minimise local community impact. It is expected to be possible to define a route corridor that avoids key community sensitivities in the region. The recommended design for the Irish Sea provides community benefits over the radial design by reducing the number of cable corridors, which will reduce community impact from construction activities.</p>

Alternative designs

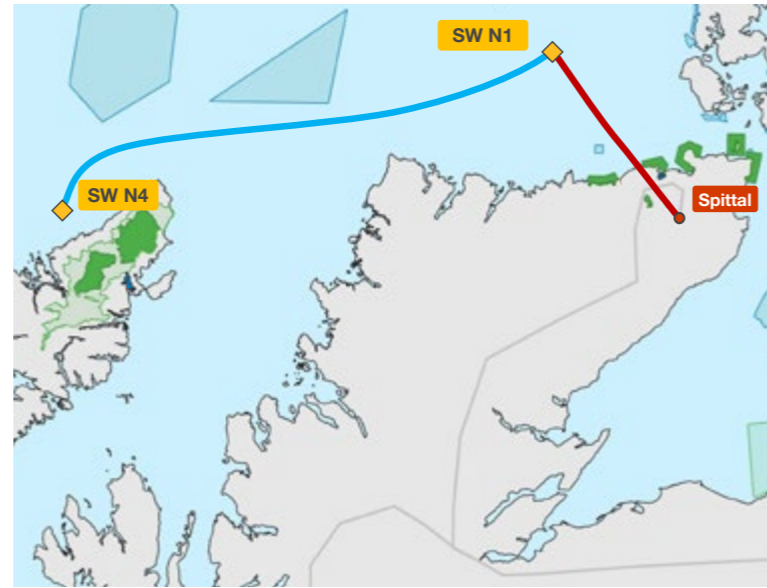
In addition to the recommended design, we investigated several alternatives as part of our appraisal, including a design that includes an additional HVDC connection to form a ring in the Irish Sea and a direct connection between wind farm SW_W1 and Wales. From an economic perspective, this alternative design does not perform as well as our recommended design. For the Irish Sea, an additional HVDC link would lead to additional asset costs (due to converter stations), which would not be outweighed by savings in constraint costs. A direct link from SW_W1 to Wales would not provide a wider transmission system benefit in the situation where the SW_W1 wind farm is not generating at full output. We also considered a coordinated solution where R4_5 and R4_6 shared an offshore platform and connection into Penwortham, however this performed less well than our recommended option from an economic perspective.

North Scotland Region

Recommended design: Radial



Coordinated design



Legend	
HVDC	
HVAC	
Environmental constraint: avoidable	
Environmental constraint: unavoidable	
Community constraint	
Existing or planned wind farm	
In scope wind farm	
Onshore substation	
Existing network	
All option routes and locations are for illustrative purposes only.	

Figure 6: The recommended radial design and the coordinated design considered for the North Scotland Region

Number of generators:
Two

Combined offshore wind capacity:
3 GW

Design:
Radial connections

North Scotland Region

Recommended design

The recommended design in the North Scotland Region uses only radial HVAC connections, with no coordination between wind farms. In this region, a coordinated design performs less well against the HND objectives. This is due to the distance between the wind farms in scope, which means that a coordinated design would require an HVDC link between wind farms, with significantly higher transmission network infrastructure costs than a simpler radial design.

Because SW_N4 is connecting to Arnish on the Western Isles, an HVDC link will need to be established from the Western Isles to the Great Britain mainland, forming part of SSEN Transmission's network. The nature of this link depends on whether SSEN Transmission's proposed 600 MW link from Arnish to Beaulieu, which is planned to be completed in 2027, goes ahead. This is subject to regulatory approval and a sufficient volume of onshore generation on the Western Isles. If the 600 MW link does not go ahead, a 1.8 GW HVDC link

from Arnish to Beaulieu could be constructed. If the 600 MW link goes ahead, SSEN Transmission would construct a separate 1.8 GW link from the Western Isles to the mainland, which would connect to a different mainland substation as it is not feasible to construct two separate links from Arnish to Beaulieu. Our analysis within the HND assumes that connecting SW_N4 to Arnish would require a new 1.8 GW link from Arnish to Beaulieu. This link would also provide some headroom for additional generation to connect in the future.





The onshore works required for SW_N1 to connect at the new Spittal site include establishing a new 400 kV double busbar arrangement and a connection to the existing Spittal 275 kV substation. For a connection at Arnish in addition to the new HVDC link from Arnish to Beaulieu, a new substation site will be required at Arnish. More comprehensive onshore network recommendations within the *HND* can be found in [Appendix 1](#).



North Scotland Region

Benefits of the recommended design

The radial design for the North Scotland Region has benefits compared to the coordinated design. On all four of the design objectives this design performs as well, if not better than, the alternative designs considered. It balances the design objectives successfully to provide an efficient holistic design.

 <p>Economic and efficient</p>	<p>The radial design is economic and efficient compared to the coordinated design. The coordinated design would have significantly higher infrastructure costs, as it would include an HVDC link with associated offshore converter stations between SW_N4 and SW_N1, and slightly higher constraint costs due to effectively connecting the SW_N4 generation further north.</p>
 <p>Deliverable and operable</p>	<p>The design is deliverable and operable. The HVAC offshore connections and works at the interface point substations are deliverable by 2030. We intend to work with the TOs to accelerate works which are required elsewhere on the network to enable the connections by 2030 in light of the commitments in the BESS. The timings and required works for each connection will be determined as part of the connection contract update process. Our analysis has not identified any significant operability challenges, although the DND will explore this further.</p>
 <p>Environmental impact</p>	<p>The design seeks to minimise the impact on the environment, as it is expected to be possible to define route corridors that avoid several onshore and offshore areas of environmental significance on the Isle of Lewis and the Great Britain mainland, such as the North Caithness Cliffs SPA and MPA, the Caithness Lochs SPA, and the Lewis Peatlands SAC.</p>
 <p>Community impact</p>	<p>The design seeks to minimise local community impact, as it is expected to be possible to define route corridors that avoid heritage assets and urban areas within the route corridors.</p>

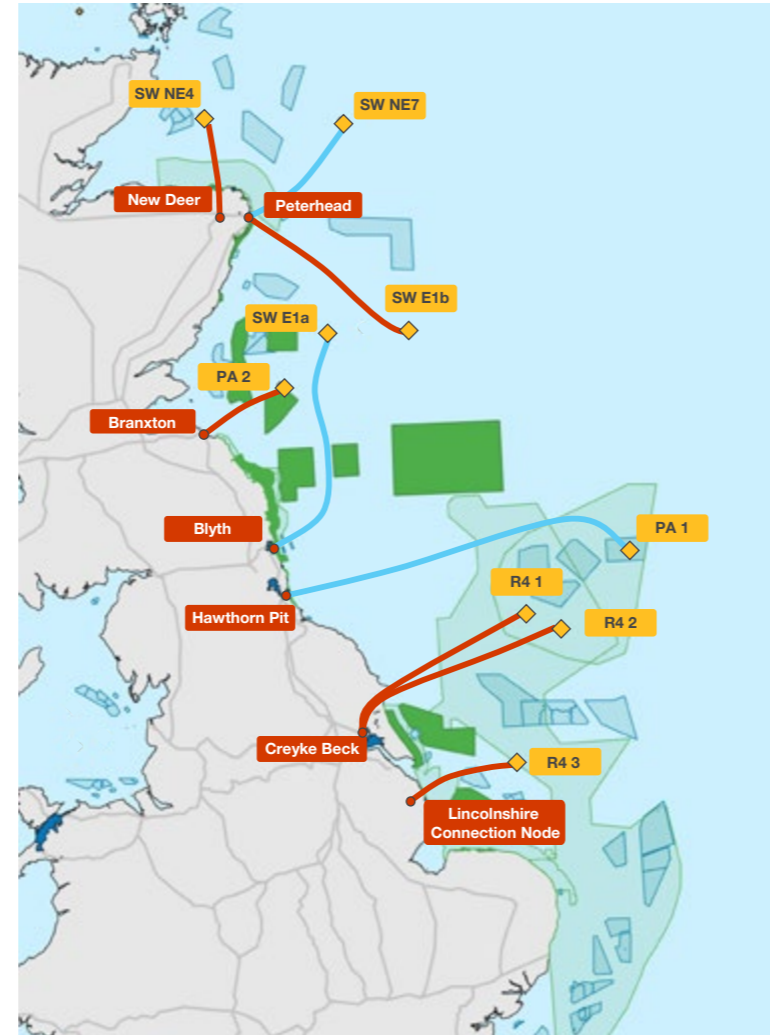
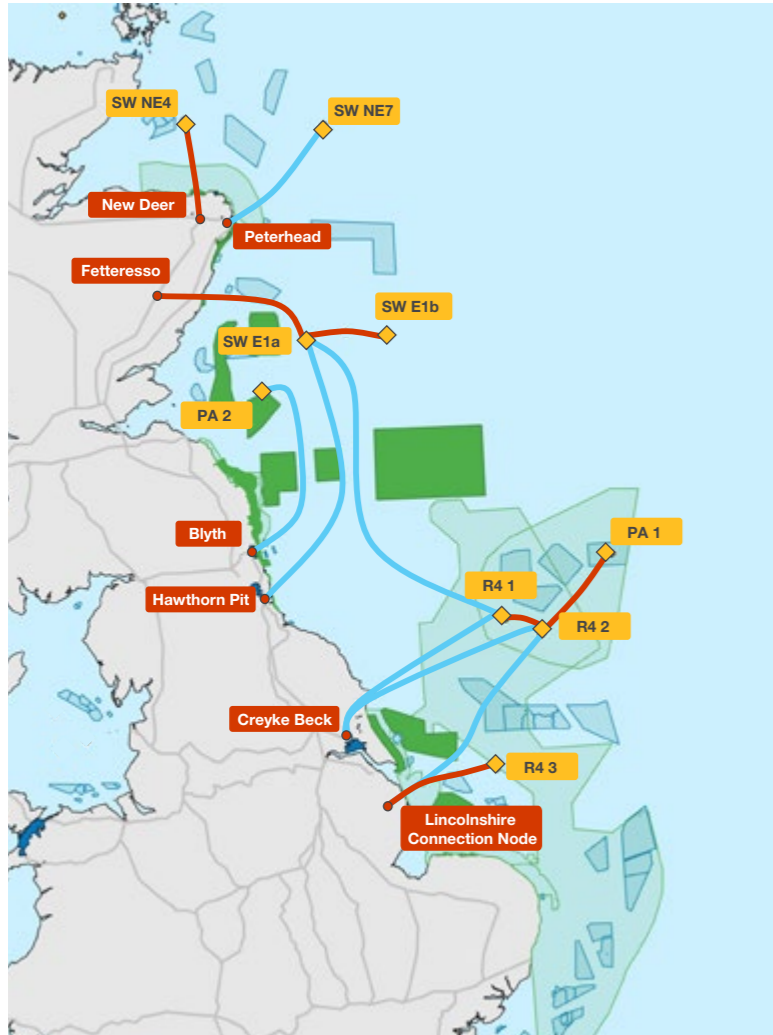
Alternative designs

Due to the large distance between the two in scope wind farms in this region, coordinated design options such as an offshore HVDC link between the two in scope wind farms performed worse against the HND Objectives. Other coordinated connections with wind farms in other regions were also ruled out due to technical feasibility or because they performed worse than the radial design against the four HND objectives. In addition to the recommended radial design and the coordinated design, we investigated an alternative radial design where both wind farms connect to the Dounreay interface point just south of the SW_N1 wind farm using HVAC cables. This design is not recommended as it is not future proof to additional Western Isles onshore and offshore generation.

East Coast Region - east of England and east of Scotland

Recommended design: Coordinated

Radial design



Legend	
HVDC	
HVAC	
Environmental constraint: avoidable	
Environmental constraint: unavoidable	
Community constraint	
Existing or planned wind farm	
In scope wind farm	
Onshore substation	
Existing network	
All option routes and locations are for illustrative purposes only.	

Number of generators:
Nine

Combined offshore wind capacity:
13.3 GW

Design:
Combination of radial (4) and coordinated (5) connections. Offshore network connects wind farms and provides additional capacity between Scotland and England.

Figure 7: The recommended coordinated design and optimised radial design for the East Coast Region

East Coast Region - east of England and east of Scotland

Recommended design

In the East Coast Region there is clear value in transferring power through the offshore network from the Eastern ScotWind zone to the south via the offshore wind developments off the east coast of England, resulting in a design with substantial coordination. The value is provided by avoiding costs that would be incurred due to curtailing and then re-dispatching generation because of insufficient network capacity to transport power to where it will be consumed. The four Eastern HVDC links being developed by the TOs and already recommended in the *Network Options Assessment 2021/22* are required in addition to the coordinated offshore network, but the north to south links proposed in this design offset requirements for further additional links.

The offshore network design on the east coast therefore provides significant economic benefit with no greater community impact than the optimised radial design, as the number of landfall locations remains the same as the optimised radial design. It does, however, introduce additional environmental impacts due to the number of cables in the Dogger Bank SAC, which is difficult to avoid due to the location of the wind farms. At the DND stage, further consideration can be given to cable routing and equipment siting to avoid or minimise impact.

Compared to the optimised radial design, the recommended design also introduces additional complexity due to the four additional HVDC links, which are in addition to those already being developed by the TOs, increasing supply chain and delivery risk. Due to the complexity of the coordinated design and requirements for onshore works, the full east coast design is unlikely to be deliverable by 2030. A staged build approach could be adopted to allow the generation to connect by 2030. There are also significant onshore works required, some of which cannot be delivered by 2030 under current planning and regulatory frameworks and are reliant on delivery of the *BESS* commitments to facilitate connections by 2030. Despite these considerations we still believe that our recommended design is the best overall solution.

We note that additional ScotWind generation is due to connect into the northern part of this region. This will be fully considered shortly and it is envisaged that this will lead to further opportunities for coordination. We envisage that a modular approach to offshore platform design will aid deliverability and make the design more expandable. This should be considered further by those undertaking the DND stage.



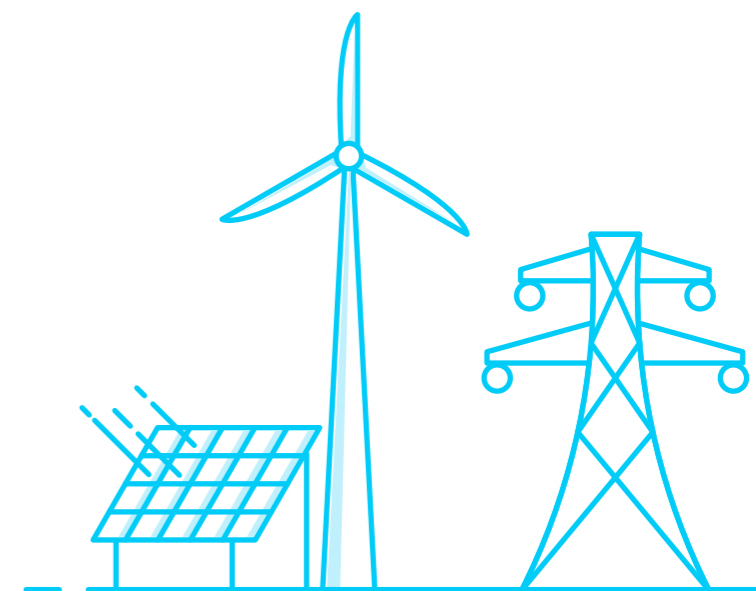
East Coast Region - east of England and east of Scotland

Ofgem's May 2022 *Minded-to Decision and further consultation on Pathway to 2030* confirms that the existing generator build and Offshore Transmission Owner (OFTO) build models will be available to developers where the HND indicates a radial solution. For the coordinated parts of the east coast design, it will be necessary to classify each element as onshore or offshore transmission, depending on its primary function within the network. Ofgem envisages that generators would design and build the offshore transmission network infrastructure, although this is subject to consultation. The assets categorised as onshore transmission will be delivered and operated through the appropriate mechanisms for onshore transmission assets.

Although the recommended design has a greater total cable corridor route length, it benefits from fewer cables coming to shore than the radial design due to the increased use of HVDC technology.

This benefit is enhanced if the HVDC cables coming to shore in the recommended design can be laid as bundled pairs, significantly reducing the size of the cable corridor and therefore footprint on the seabed compared to an HVAC design.

The recommended design does not include any new connections from offshore wind farms into East Anglia beyond those currently planned. Although the location performed well from an economic point of view, environmental constraints mean that it is unlikely to be feasible in the timescales the HND is considering to find a route that is acceptable from an environmental or technical perspective beyond those already in place and in development.



East Coast Region - east of England and east of Scotland

For the four wind farms that are recommended to connect radially, a coordinated solution did not deliver sufficient benefit against the optimised radial design when all four HND objectives were considered on an equal basis. Four wind farms are connected radially - SW_NE4 to New Deer, SW_NE7 to Peterhead, PA_2 to Blyth, R4_3 to Lincolnshire Connection Node. An alternative connection location further inland is still under consideration for R4_3, as a new circuit is planned to be built for the Lincolnshire Connection Node but this would not be available until 2031. The radial part of the design comprises two HVDC links (SW_NE7 and PA_2) and two HVAC links (SW_NE4 and R4_3).

The Lincolnshire Connection Node is a new site that is planned to be developed on the Lincolnshire coast. The NOA has previously identified a requirement for a new circuit to reinforce this part of the network. Developing a substation on this new circuit provides the opportunity to connect multiple offshore customers at this location, coordinating connections in this region and mitigating the development of a high number of cable routes to connection points further inland. The design proposed in the HND would expand this already planned new site to accommodate the connection of R4_3.

A key driver that makes the recommended design more economic and efficient is the coordinated offshore network, which connects Fetteresso in Scotland to Hawthorn Pit, Creyke Beck and the Lincolnshire Connection Node in England, whilst also connecting wind farms SW_E1a, SW_E1b, R4_1, R4_2 and PA_1. This part of the design includes four HVAC links, three point-to-point HVDC links, and a three-ended HVDC circuit.


Onshore works are required at interface sites and at other sites. At the onshore substations, the required works include extending substations to accommodate new connections and establishing a new double busbar substation at Peterhead. The new sites already planned at Creyke Beck and Lincolnshire Connection Node need to be expanded. Various other works are also required including works at other substation sites, reconductoring and uprating various circuits, the use of various power control technology and new transmission circuits. More comprehensive onshore network recommendations within the *HND* can be found in [Appendix 1](#).



East Coast Region - east of England and east of Scotland

Benefits of the recommended design

The recommended design for the East Coast Region has significant benefits compared to the radial design. On all four of the design objectives this design performs as well, if not better than, the alternative designs considered. It balances the design objectives successfully to provide an efficient holistic design.

 <p>Economic and efficient</p>	<p>The design is economic and efficient, as it provides significant savings in constraint costs compared to the radial design, due to the delivery of additional links offshore between Scotland and England. It also provides operational redundancy³⁹ compared with the radial design. These impacts outweigh the additional investments for the offshore transmission network infrastructure compared to the radial design.</p>
 <p>Deliverable and operable</p>	<p>The design is deliverable and operable and provides the opportunity for in scope wind farms to be able to connect by 2030 under the current regulatory and planning frameworks. The longer, and more complex, HVDC links in the design are unlikely to be complete by 2030 in the absence of major acceleration in the supply chain. However, the design offers the potential to get generation connected by 2030, and increase capacity progressively, given timely allocation of responsibilities, delivery of the commitments in the BESS and a coordinated and concerted effort from all parties. The Lincolnshire Connection Node requires a new onshore circuit which is currently not anticipated to be delivered until 2031; an alternative site further inland remains under consideration as a connection point for R4_3. The timings and required works for each connection will be determined as part of the connection contract update process. Our analysis has not identified any significant new operability challenges, although the DND will explore this further.</p>
 <p>Environmental impact</p>	<p>The design seeks to minimise the impact on the environment by avoiding areas of significant constraint where possible, although not all environmentally sensitive areas can be avoided. The north-south links in the design provide additional power flow capabilities without increasing the number of onshore connection points, and offset future requirements for reinforcement.</p>
 <p>Community impact</p>	<p>The design seeks to minimise local community impact where possible, by avoiding further connections into East Anglia in the HND beyond those already planned. Careful planning at the DND stage should enable community impacts elsewhere to be minimised.</p>

Alternative designs

In addition to the recommended and radial designs, we investigated an alternative coordinated design, which uses fewer onshore interface points than the recommended design. However, due to the need for a longer HVDC connection and increased complexity, it is less economic and less deliverable than the recommended design.

Both Branxton and Blyth were considered as options for the connection of PA_2. We have recommended a connection to Blyth within the recommended design. Although connecting PA_2 into Branxton would lead to lower capital costs, when considered as part of the recommended design it would lead to a significant increase in constraint costs and therefore an increase in total costs. A connection into Blyth also avoids environmental constraints and other planned offshore connections at Branxton and is consistent with development work carried out to date. More detail on alternative options considered is provided within the HND report.

³⁹ Redundancy in this context means in case a connection fails, another connection is able to fully or partially transmit power. Without redundancy, a connection failure would result in losing the ability to transmit power.

Case study

Connection of wind farm R4_3 to Lincolnshire Connection Node:

We take a balanced approach in designing for multiple, and at times conflicting objectives. This is illustrated in a case study on our approach to connecting the in scope wind farms situated off the east coast of England.

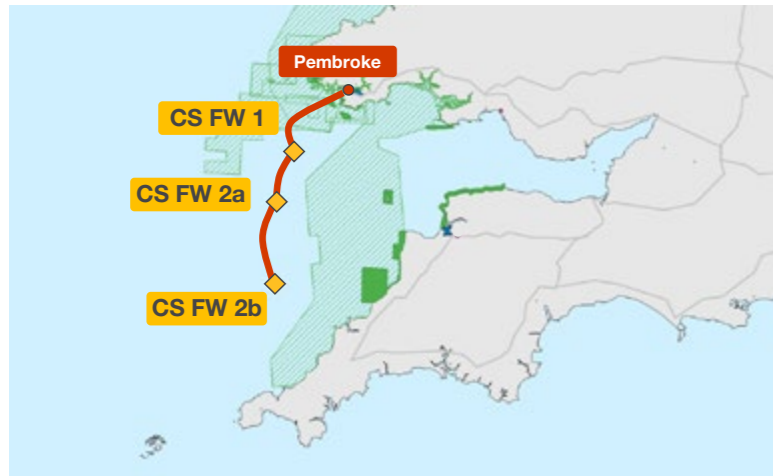
Recommended design	In the recommended design, wind farm R4_3 connects to the Lincolnshire Connection Node.
Variation	One of the options considered for connecting wind farm R4_3 was a connection to Norwich Main substation. This option performed well from an economic perspective, as it would enable other wind farms in the region to connect further south, reducing constraint costs.
Comparison with recommended design	Due to the technical, environmental and community impacts of adding this connection on top of those already in place and planned, the variation with a connection to Norwich Main substation or other sites on the north coast of East Anglia were not selected for the HND as a part of the recommended design. Particular challenges relevant to the HND include the likelihood that the environmental constraints at Cromer Shoals MCZ and Haisborough, Hammond and Winterton SAC could not be avoided without taking an alternative route, which has previously been dismissed due to technical and cable safety concerns. There are a number of offshore wind farms already connected or planned to connect into East Anglia and the cumulative impact of an additional connection at this time was considered.
Reason for disregarding	For the reasons set out above, an additional connection into Norwich Main is considered high risk of being undeliverable in the timescales required in the HND. As a result, Norwich Main is not considered to be a suitable connection site in the HND, even though it performs better from an economic perspective. Further connections to Norwich Main are therefore not recommended at this time.



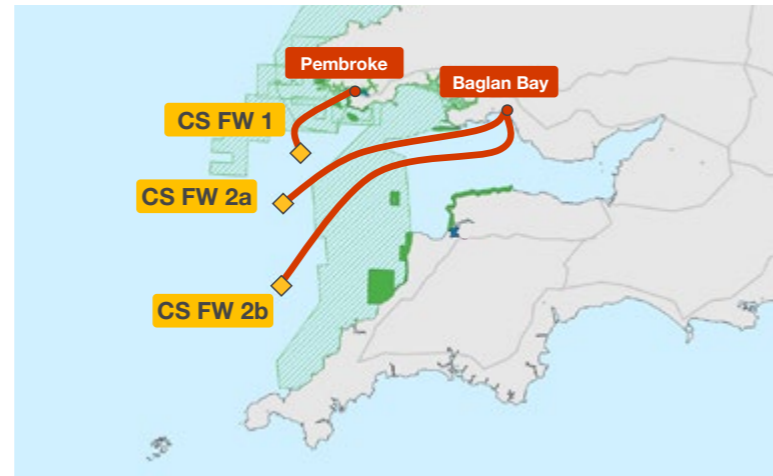
South West Region

Recommended design: Coordinated subject to Celtic Sea leasing round outcomes

Coordinated



Radial design



Legend	
HVDC	
HVAC	
Environmental constraint: avoidable	
Environmental constraint: unavoidable	
Community constraint	
In scope wind farm	
Onshore substation	
Existing network	
All option routes and locations are for illustrative purposes only.	

Figure 8: The recommended coordinated design and optimised radial design for the South West Region

Number of generators:

Three
(assumed projects and locations)

Combined offshore wind capacity:

1 GW

Design:

Coordinated connection to Pembroke.

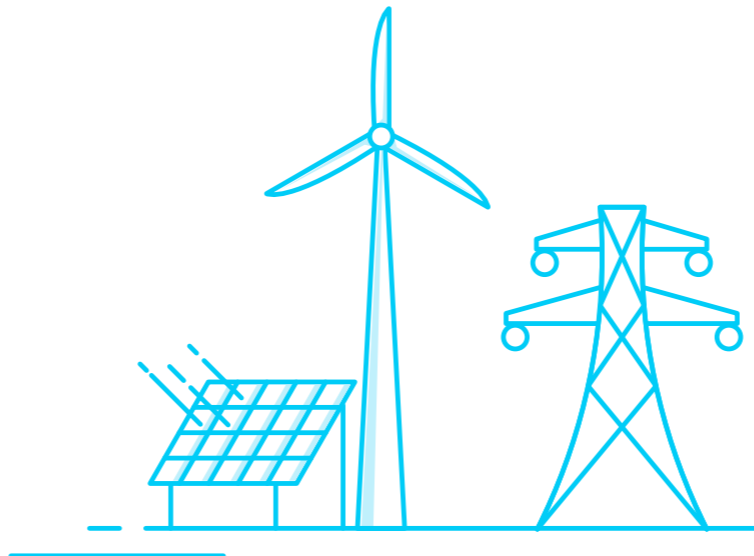
South West Region

The recommended design (subject to Celtic Sea leasing round outcomes)

In the South West Region, the locations and capacities of the in scope wind farms are not yet known and will depend on the outcome of The Crown Estate's upcoming seabed leasing round in the Celtic Sea, which currently expects to see rights awarded by the end of 2023.⁴⁰ To allow us to develop an indicative design in advance of the leasing round we have made assumptions on the capacity and locations of the wind farms. The design provides a proposal for how 1 GW of offshore wind could be connected in the Celtic Sea, but no fixed design recommendations are made at this stage.⁴¹

Our indicative recommendation is to connect all three assumed wind farms through a coordinated HVAC link to Pembroke. Our analysis has identified significant onshore and offshore constraints around the Pembroke site; careful consideration will need to be given to future developments in this location. When more detail is known on the capacity and location of seabed leases in the Celtic Sea, we will further consider how to develop the network in the South West Region.

The works on the onshore transmission system associated with the design include the substation to accommodate new connections at Pembroke. Further onshore works include upgrading circuits and installing flow control devices to manage power flow. More comprehensive onshore network recommendations within the *HND* report can be found in [Appendix 1](#).






⁴⁰ thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/energy/floating-offshore-wind/

⁴¹ Note the results of the South West Region are largely given for information and interest, and it is our intention to not give a firm recommendation on the best overall solution until a more accurate view of the wind farms in the area can be agreed upon and studied in a future process.

South West Region

Benefits of the recommended design

The recommended design for the South West Region has significant benefits compared to the radial design. On all four of the design objectives this design performs as well, if not better than, the alternative designs considered. It balances the design objectives successfully to provide an efficient holistic design.

 <p>Economic and efficient</p>	<p>The design is economic and efficient, and offers savings compared to other coordinated designs considered.</p>
 <p>Deliverable and operable</p>	<p>The design is deliverable by 2030. The design does not trigger requirements for any new transmission circuits that are not already being considered by the TOs; all the works required for this option are deliverable by 2030. Our analysis has not identified any significant operability challenges, although the DND will explore this further.</p>
 <p>Environmental impact</p>	<p>The design seeks to minimise the impact on the environment as it results in fewer landing points and is expected to result in fewer crossings of environmentally constrained areas compared to the optimised radial design. Our analysis has identified significant onshore and offshore constraints around the Pembroke site; careful consideration will need to be given to future developments in this location.</p>
 <p>Community impact</p>	<p>The design seeks to minimise local community impact as there is potential to define a route which avoids urban areas and other community and heritage features. There are some national parks and trails that cannot be fully avoided: mitigation measures will be considered as part of the DND stage. The coordinated design would lead to fewer interface points than the radial design.</p>

Alternative designs

In addition to the recommended design, we investigated several alternatives, including a design with the coordinated HVAC link to Pembroke but with a HVDC link from the middle wind farm (CS_FW_2a) to Alverdiscott. This alternative design does not perform as well as our recommended design, primarily as it would result in additional capital costs which would be greater than the associated savings in constraint costs resulting from additional capacity between South Wales and the South West Peninsula.



South East and South Coast of England Region

The South East and South Coast Region does not contain any offshore wind directly covered by the HND due to the well-developed nature of the majority of the projects in this area.

The Department for Business, Energy and Industrial Strategy (BEIS) has now announced four initial pathfinder projects. These are well-advanced projects that are leading the way in utilising the regulatory and policy changes being developed through the OTNR to increase transmission network coordination and deliver the OTNR's objectives.⁴² Two of these projects are in this region:

- Equinor's proposal for an integrated transmission system for the Sheringham Shoal and Dudgeon Extensions in Norfolk.
- Orsted's proposal for Boudica, to co-locate a 200MW battery as part of the grid connection in Norwich, of Hornsea 3 offshore wind farm.

National Grid Electricity Transmission (Sea Link), National Grid Ventures (Nautilus and EuroLink interconnectors) and the two offshore wind farms North Falls and Five Estuaries have

published an update on their work together to explore the potential for offshore coordination as part of the OTNR Early Opportunities workstream too.

Also, as set out in relation to the East Coast Region, the recommended design does not include any new connections from offshore wind farms into East Anglia beyond those currently planned. Although the connecting of offshore wind off the east coast into Norwich performs well from an economic point of view, environmental constraints mean that it is unlikely to be feasible in the timescales the HND is considering to find a route that is acceptable from an environmental or technical perspective beyond those already in place and in development. The case study in the East Coast Region on the connection of wind farm R4_3 to the Lincolnshire Connection Node describes this in more detail.



⁴² <https://www.gov.uk/government/groups/offshore-transmission-network-review>

System-wide view

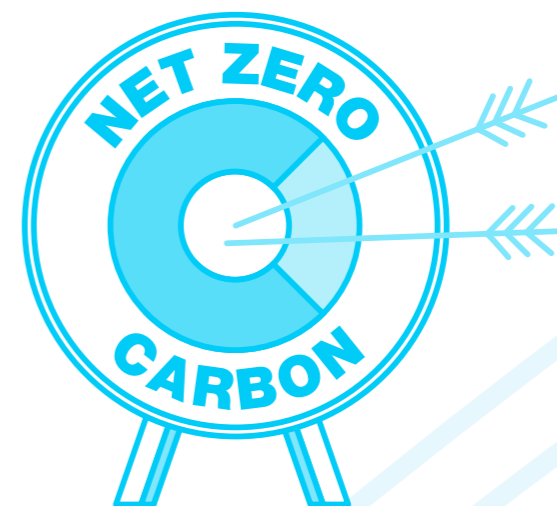
The current onshore transmission system has around 25,000 km of high voltage overhead lines to transmit power across the country and into our homes. Whilst this network meets our needs for today, as we look to the future, and the ambitious targets set by the UK Government, we need to make upgrades to ensure we have a power system capable of delivering on the UK's 2030 offshore wind ambition and our net zero targets.

Alongside the development of regional offshore connections options, our assessment examined a full set of offshore and onshore network options to produce one HND, ensuring that power produced by offshore wind farms can be transported from where it is generated to where it is needed to power cities, towns and homes. By analysing projected year-round electricity demand and generation conditions to 2030 and beyond, we have identified

economic, efficient, deliverable network upgrades, which consider both environmental and community impacts, facilitate the UK Government's ambition for 50 GW of offshore wind by 2030 and set the network up well to meet net zero by 2045 in Scotland and 2050 across the whole of Great Britain.

To create an onshore electricity transmission network fit for the future we use the NOA process. This recommends where, when, and whether to invest in network upgrades across the Great Britain transmission system. It weighs up the benefit of investing in upgrading or building new transmission infrastructure against the costs of curtailing generation that would otherwise be incurred due to power transfer capability limitations in the existing network. The NOA ensures that assets are built at the right time, maximising their lifetime benefit, and ensures that the

recommendations we make result in a network for the future that provides the most value to consumers. Whilst the NOA recommends the most economic and efficient network upgrades for the whole of Great Britain it is not intended to address network compliance. Additional onshore reinforcements may be identified for network compliance, which is an integral part of designing a secure, operable transmission system capable of facilitating net zero.



System-wide view

The 2030 onshore transmission network will look very different to the one we see today. To meet the 2030 ambitions and facilitate the delivery of the offshore wind in scope of the HND, 94 reinforcement projects totalling £21.7 billion are required to be delivered by the end of the decade. These range from very small upgrades to large new transmission infrastructure such as new onshore routes or subsea cables with the sole purpose of transporting electricity from where it is produced to where there is demand for it. This investment is driven by the increasing level of renewable generation connecting to the system, often in places that have historically seen no requirement for onshore transmission network.

Of the 94 reinforcements required by 2030, many must be delivered earlier to maximise consumer benefit. The NOA process

provides this additional insight via an optimal date; ensuring that reinforcements are recommended to be delivered when they are needed and that the costs of building them outweigh the costs of managing power flows around the network without them in place. A full list of the 94 options required to meet 2030 targets and their optimal delivery dates can be found in [Appendix 1](#).

Almost 90 per cent of the reinforcements are expected to be delivered and in place by 2030. However, we have identified 11 reinforcements that are required for 2030 but will not be delivered in time under the current regulatory and consenting processes. Accelerating these projects will require the UK Government intervention suggested in the April 2022 *BESS* and equivalent activities in Scotland.



System-wide view

Slightly different approaches have been taken to the assessment of the onshore reinforcements and the regional offshore network designs against the four design objectives due to the different levels of maturity of the processes. The majority of the onshore reinforcements have consistently been identified through the NOA process as delivering the most value to consumers through their ability to help reduce the cost of network constraints and the HND reaffirms this. Those in this category have been assessed against the four design objectives in their development as the TOs consider the environmental, social, cost and deliverability impacts of the options during their option development processes. A higher level of assessment has been carried out on new network needs that are required for 2030, which are in the very early stage of their development. The TOs will further develop these reinforcements (including consideration of offshore and onshore options) plus others in the very early

development stage. As part of that they will carry out more detailed analysis in these four design objective areas.

Planning the development of the transmission network does not stop in 2030 and the *NOA 2021/22 Refresh* publication has stated the need for the continual development and coordination of network reinforcements as we transition to net zero. Looking beyond 2030, the *NOA 2021/22 Refresh* has signalled a requirement for a further 17 onshore reinforcement options at a cost exceeding £6 billion. These reinforcements, alongside new proposals, will be evaluated to provide a coordinated view beyond 2030 in our HND follow up process.

Figure 9 illustrates the upgrades to the existing transmission system in dark grey, new onshore transmission reinforcements and subsea cables previously recommended in NOA in purple and light green respectively. New network needs are shown as dotted

purple lines and the coordinated offshore network in red and blue, representing the type of technology proposed.

Please note the map is illustrative and highlights an identified need to transmit volumes of energy from point A to point B and does NOT represent specific routes. The next steps involve more detailed network design which will include specific locations and designs for projects. These will be designed and consulted on in future by the organisations appointed to fulfil the needs identified.

More detail on the onshore transmission system upgrades required to meet our 2030 ambitions can be found in the *HND*, its comprehensive [annex](#) on onshore and offshore network recommendations and the *NOA 2021/22 Refresh* publication. For more detail on the onshore requirements up to and beyond 2030, please see our *NOA 2021/22 Refresh* publication.⁴³

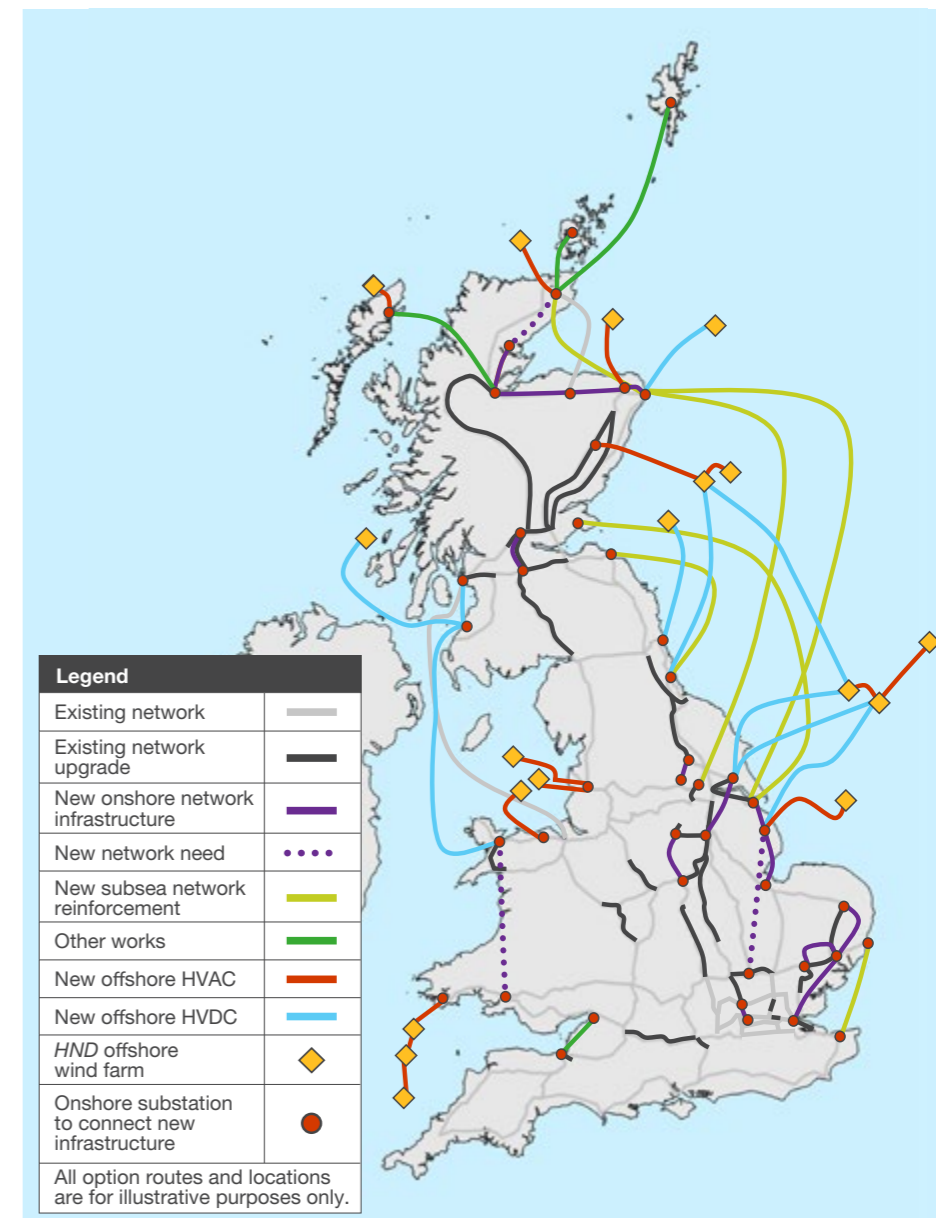
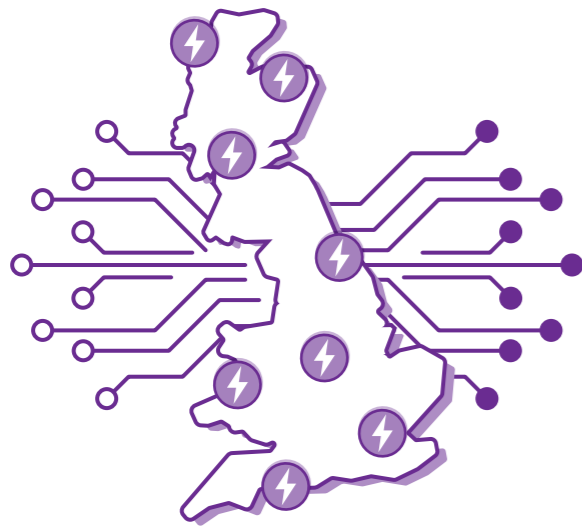


Figure 9: Illustration of key wider network reinforcements

⁴³ nationalgrideso.com/research-publications/network-options-assessment-noa

Changes to industry codes, standards and licences

We have developed initial views on the key barriers and enablers for successful implementation of the HND plus the potential changes required to the relevant industry codes, standards, and licences. These views are informed by Ofgem’s *Consultation on our Minded-to Decision on Anticipatory Investment and Implementation of Policy Changes* related to the Early Opportunities workstream⁴⁴ and Ofgem’s *Minded-to Decision and further consultation on Pathway to 2030* related to offshore delivery models.⁴⁵ They are also subject to further refinement as we continue to develop our own thinking, including via engagement with relevant and interested stakeholders.



Connection contract update programme

Ofgem’s minded-to decision on offshore delivery models and our HND recommendations now need to be brought together and translated into connection contract updates for in scope developers. This is to identify:

- The works to be delivered by each party.
- The works each party is dependent upon prior to their connection.
- The delivery date of those works.
- Any other required information, such as any access restrictions related to those works.

In addition, there are risks and uncertainties that need to be managed via the connection contracts. We are currently working on a connection contract update programme with the aim to provide updated connection contracts to in scope developers in the autumn, and to commence tripartite discussions with those developers and the relevant TO(s) in the summer. These timescales are subject to further clarity being provided, such as which party is delivering which component of the offshore transmission system and may result in connection contract updates extending beyond the autumn. We will work with Ofgem and developers to agree how coordinated elements of the HND will be delivered so that connection contracts can be updated as soon as practicable.

The exception to the above timescales relates to developers within the Celtic Sea. For those developers we will update connection contracts after the conclusion of the follow up HND process⁴⁶ and/or once leases for the region have been awarded. As we have previously communicated, at an appropriate time we also plan to terminate connection contracts with ScotWind developers that did not receive a seabed lease.

⁴⁴ www.ofgem.gov.uk/publications/offshore-coordination-early-opportunities-consultation-our-minded-decision-anticipatory-investment-and-implementation-policy-changes

⁴⁵ ofgem.gov.uk/publications/minded-decision-and-further-consultation-pathway-2030

⁴⁶ The follow up HND process is further discussed on page 61.

Changes to industry codes, standards and licences

Code, standard and licence change recommendations

Our initial view and recommendations are that changes will be required across a number of codes, standards and licence obligations to enable the HND and Ofgem's minded-to offshore delivery model. These include:

- **System Operator-Transmission Owner Code** changes to introduce new concepts such as offshore TOs for non-radial connections and offshore transmission interface sites.
- **Security and Quality of Supply Standard (SQSS)** changes to increase the limit on the infeed risk of HVDC circuits to allow higher capacities to be transported on each circuit and also how some of the HVDC network configurations in the HND are treated, such as bipoles. This will build on the changes consulted on and set out in our SQSS review.⁴⁷
- **Grid Code** changes require further consideration and will be needed to help ensure that where the offshore network is built in a modular way the different parts of the network can operate effectively together and in line with the SQSS.
- **Access Rights** will need further engagement and assessment to understand whether established queue-based principles, where an earlier contract start date can mean fewer or less onerous access rights restrictions, are relevant for the non-radial components of the offshore transmission system. We do not anticipate any changes being required in respect of access rights on the onshore transmission system, or on the radial components of the offshore transmission system.
- **Network Charging** changes will be needed to reflect the network configurations in the HND.
- **User Commitment** changes are likely to be required to define anticipatory investment as a concept and to extend user commitment arrangements.⁴⁸
- **Queue Management** changes related to the offshore delivery model are expected to be incorporated into the code modification that is already planned on the broader queue management principles.

It is important that the network components within the HND are classified as offshore transmission or onshore transmission as soon as possible and also whether offshore transmission is radial or non-radial. This will be an important distinction as there may be different impacts on codes, standards and/or connection contracts depending on whether a particular network component is classified as radial or non-radial offshore transmission or onshore transmission. We look forward to supporting Ofgem with technical information to help inform their decision-making process on asset classification.

Further information on each of these topics and others can be found in the *Industry Code, Standard and Licence Recommendation report*. We would welcome your feedback on its content. The report sets out information on how you will be able to engage with potential changes to codes and standards.

⁴⁷ nationalgrideso.com/calendar/nets-sqss-review

⁴⁸ Customers are required under User Commitment arrangements to financially secure spend in relation to their connection contract.

Working with stakeholders to develop the Holistic Network Design

Stakeholder input, review, and feedback: what have we worked with stakeholders on?

We could not have delivered the HND publication package without the input, feedback, challenge and review from stakeholders throughout its development.

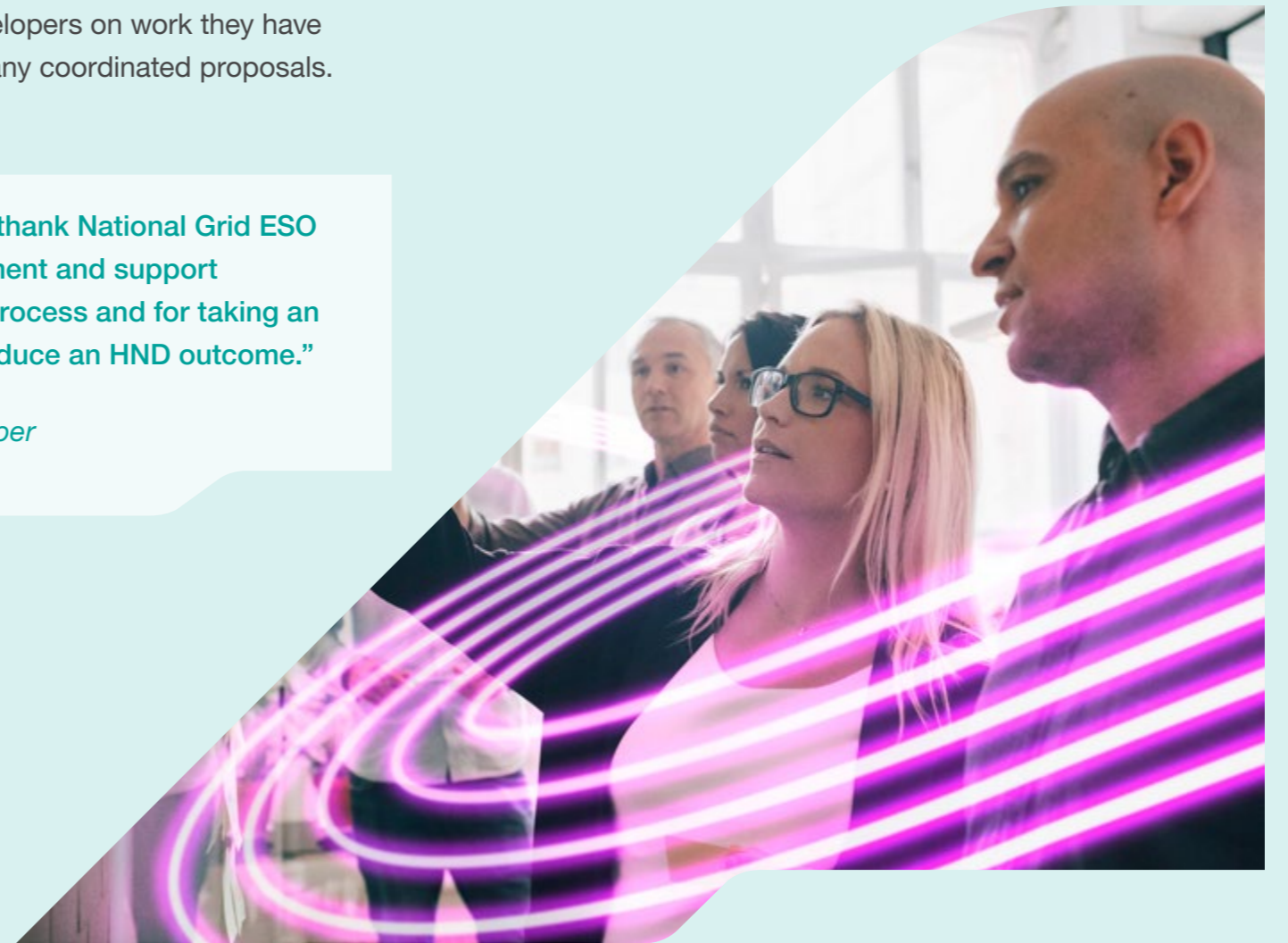
We engaged and worked in collaboration with stakeholders on the following areas when developing the HND:

- Projects in scope: selection and decision.
- Offshore unit costs.
- HND Methodology.
- Environmental and community constraints.
- Interface site shortlisting and constraints at sites.
- Draft recommended design.

- Potential changes required to industry frameworks to enable the recommended design to be delivered.
- Input from offshore developers on work they have completed to date and any coordinated proposals.
- TO project options.

“ We would like to thank National Grid ESO for their engagement and support throughout this process and for taking an active role to produce an HND outcome.”

- Offshore developer



Working with stakeholders to develop the Holistic Network Design

Feedback window themes - May 2022

On 29 April 2022 we opened a two week feedback window on the draft recommended design and received **41 responses**.

The themes can be summarised as follows:

- Detailed environmental constraints, which can be taken forward into the DND, were provided and will be packaged up to be used in the DNDs.
- Supply chain and how this is set up to deliver the recommended design.
- Framing of recommendations and the importance of setting the next stage of the process up for success.
- The need for clarification on the next steps for implementation including the delivery model.
- Variation of and further considerations on recommended designs were requested.
- The importance of not closing off options for future coordination, with the remaining ScotWind developers to be factored into the follow up process.

- The need for a smooth handover into the DND following the publication of the *HND* report.
- The need for the commitments outlined within the *BESS* to be delivered to ensure the design is deliverable by 2030.

Feedback received at each stage of the formation of the HND has been summarised within the *Stakeholder Approach, Engagement and Feedback report* and where information has been non-confidential, we have also added feedback and responses in more detail.

“The BRAG scoring of each of the options do not differ in respect of Scottish interests and therefore we are supportive of the overall consideration of a design, which enables the GB energy system to operate most reliably”

- Environmental stakeholder

“Industry needs to accelerate delivery of projects, collaborate and coordinate across the industry and provide certainty to developers and the supply chain to enable reaching this target. The HND is an opportunity to deliver on these principles and is fundamental to achieving the UK and Scottish governments’ 2030 target, and ultimately net zero”

- Transmission Owner



What happens next

The publication of this report marks a first, significant step towards a more centralised and strategic approach to transmission network planning. It lays the foundations for a plan to facilitate delivery of the UK Government's ambition for 50 GW of offshore wind by 2030, with substantial benefit to consumers and a reduction in the impact on the environment and communities, compared to the status quo.

Both we and our stakeholders understand substantial work needs to continue at pace to deliver this plan. We will drive progress where this is within our remit, under the overarching direction from the OTNR:

- We are currently working on a connection contract update programme with the aim to provide updated connection contracts to in scope developers in the autumn, and to commence tripartite discussions with those developers and the relevant TO(s) in the summer. These timescales are subject to further clarity being provided, such as which party is delivering which component of the offshore transmission system and may result in connection contract updates extending beyond the autumn.

- The information provided in the HND will inform the DND, which will set out the next level of detail for the required network assets. It is at this stage of the process that route corridors and technology choices are chosen, and statutory consultation is carried out. The DND will be progressed by the party responsible for delivering each asset. Onshore transmission will be delivered via the usual onshore arrangements (via the incumbent TO under their price control arrangements, or subject to onshore competition). For offshore this was indicated in the recent minded-to decision from Ofgem on offshore delivery models. Ofgem has stated they will work with the ESO and developers to agree how any non-radial offshore transmission system will be delivered once the HND is finalised.

- There are many remaining uncertainties related to the design and delivery model in the context of codes and standards. We are therefore proposing a period of further analysis and stakeholder engagement prior to formal code and standard modifications. As such, we welcome feedback and are planning to further engage with industry stakeholders throughout summer 2022 with the aim of formally raising any necessary code and standard modifications in autumn 2022, subject to an assessment of urgency and priority. We will work with industry stakeholders, including via the OTNR Expert Advisory Group code and standard subgroup on when code and standard changes are necessary and the content of the code and standard changes.



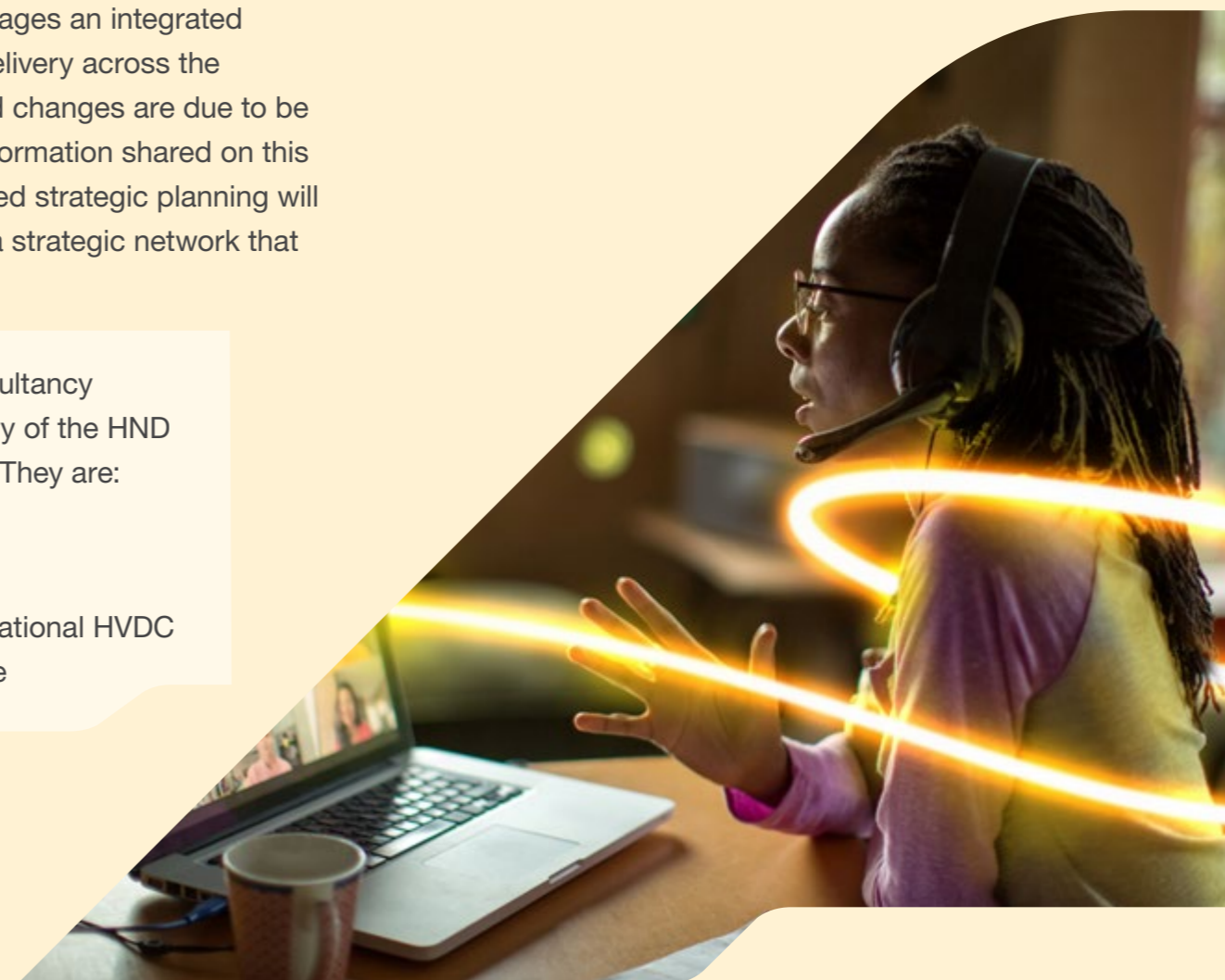
What happens next

- Further information on our plans for our code and standard modification programme engagement throughout summer 2022 will be made available in due course.
- We are also currently developing the HND follow up process, which aims to provide in scope developers with recommendations in Q1 2023. We will start this process following this publication in July 2022. This will include the remaining ScotWind leaseholders and any capacity made available through the ScotWind clearing process. It is also expected to include approximately 4 GW of Celtic Sea capacity. The details of the follow up process, including confirmation of scope, a more detailed timeline and other key aspects, such as the methodology to be used for the process, will be communicated in the summer. We will work closely with the TOs and developers involved to support further progress towards net zero targets.
- This HND and the follow up design process are initial and significant steps towards centralised strategic network planning. The HND follow up design is planned for delivery in the first quarter of 2023, which will include iterations towards

the Centralised Strategic Network Plan (CSNP) proposed by Ofgem in their Electricity Transmission Network Planning Review (ETNPR).⁴⁹ The CSNP envisages an integrated approach to network design and delivery across the onshore and offshore networks and changes are due to be implemented by 2024 with more information shared on this process in summer 2022. Centralised strategic planning will be an important change to deliver a strategic network that enables net zero by 2050.

We would like to thank our consultancy partners who have made delivery of the HND and these documents possible. They are:

- Imperial College London
- RPS
- Guidehouse
- Atkins
- WSP
- The National HVDC Centre



⁴⁹ <https://www.ofgem.gov.uk/publications/consultation-initial-findings-our-electricity-transmission-network-planning-review>

Continuing the conversation

Email us with your views on offshore coordination or any of our future of energy documents at box.OffshoreCoord@nationalgridESO.com and one of our team member will get in touch.

For further information on the project and current and past events please visit: www.nationalgrideso.com/future-energy/projects/offshore-coordination-project

Write to us at:

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Faraday House
Warwick Technology Park
Gallows Hill Warwick
CV34 6DA



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⁵⁰ These reports are: Holistic Network Design Report, Industry Code, Standard and Licence Recommendation Report and Stakeholder Approach, Engagement and Feedback Report.

⁵¹ assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1059676/otnr-central-design-group-network-design-tor.pdf - dd. 01 March 2022.



Department for
Business, Energy
& Industrial Strategy

Rt Hon Graham Stuart MP
Minister of State for Energy and Climate

Department for Business, Energy &
Industrial Strategy
1 Victoria Street
London
SW1H 0ET

16 January 2023

To East Anglian communities and interested groups,

Thank you for your continued engagement on the topic of energy infrastructure development in East Anglia. This letter outlines work underway to incentivise the coordination of infrastructure in the region as well as upcoming consultations on relevant proposals, which I am sure you will wish to engage with.

Delivering our ambition of secure, home-grown energy for the country, including 50GW of offshore wind by 2030, will inevitably require more network infrastructure, both onshore and offshore, than today. I am committed to finding ambitious solutions within this energy transformation, minimising negative impacts on communities while building a cheaper, greener and more secure energy system for Britain. I am sure that you recognise that almost all of our heating and transport needs are currently met by fossil fuels, many of them imported, and we need to move away from that situation permanently. A green, electrified system will require more electricity generation, and more transmission, distribution and storage.

Many people have written to their MP asking for a review to be launched regarding the planned electricity transmission infrastructure in East Anglia. In most cases, offshore wind developers in the region already have connection contracts in place with National Grid Electricity System Operator (ESO) and the Government will not, and cannot, force changes to these contracts; any attempt to mandate changes to connection contracts at this stage would be open to legal challenge by developers. Therefore, I do not think a review is the best approach. However, I recognise the concerns, and agree that we need to find ways of improving the situation.

Communities and MPs have also raised concerns relating to the East Anglia Green transmission project. National Grid Electricity Transmission (NGET) is developing this project and will provide opportunities for communities to share their views on the project in 2023. NGET has also published information on the wider consideration of offshore alternatives.

We are working on a range of policy enablers to ensure a coordinated approach is the starting presumption for projects yet formally to enter the planning system. Our proposed changes to National Policy Statements (which set out the expectations against which planning proposals are tested) will strengthen emphasis on the coordination of transmission infrastructure and include the need to demonstrate a reduction in environmental and community impacts through coordination. Communities will be able to respond to the consultation on these changes in early 2023. Following the consultation, the revised documents will also need to be approved by Parliament, ensuring full democratic accountability both locally and nationally.

In recognition of the significant volume of infrastructure planned for development in East Anglia, my Department is working closely with developers to encourage voluntary coordination of connections for projects that already have grid connections. This could reduce

landing points in East Anglia, and we have already seen progress. National Grid Ventures has confirmed it is investigating an alternative brownfield connection point for their Nautilus multi-purpose Interconnector, on the Isle of Grain in Kent, as an alternative to Friston, Suffolk.

To provide financial support for the additional work needed to pursue new coordinated solutions, on 12th December I launched the Offshore Coordination Support Scheme. This is an open competition grant scheme with up to £100m available, targeting well advanced offshore wind and certain offshore energy assets (such as interconnectors) in Great Britain. It will provide funding to successful applicants to develop feasible coordinated designs for their transmission infrastructure, which could reduce connection infrastructure. We are engaging with developers in East Anglia who we hope will apply. The scheme will close for applications in February 2023, with funding allocated by the middle of 2023.

Such potential coordination could reduce, remove or alter landing points in East Anglia, impacting the original assessments of some projects. Given this, the Electricity System Operator (ESO) is exploring how it could undertake a study into the implications of co-ordination on the network, onshore and offshore, in and around East Anglia. This study would be independently conducted by the ESO. It is important to note that this would follow on from the conclusion of the OCSS grant scheme.

I encourage communities to continue to engage with developers on their plans through the consultation processes. A list of open and upcoming consultations is listed below:

- Eurolink¹ Multi-Purpose Interconnector and the Sealink² Bootstrap finished their initial consultations on the 18th December. They will seek to consult again in 2023.
- North Falls Offshore Wind Farm finished its initial consultation on 9th December but will consult again on the project in the first quarter of 2023.³
- Five Estuaries wind farm will also consult in the first quarter of 2023.⁴
- East Anglia Green infrastructure project will consult again in 2023.⁵

While steps are being taken to coordinate and reduce infrastructure where possible, new infrastructure will be needed. Communities that host network infrastructure are playing a vital role in enabling a cheaper, cleaner and self-sufficient energy supply for Britain and it is only right that they benefit from this. A consultation on gov.uk is planned in the first quarter of 2023 on community benefits for communities hosting onshore transmission network infrastructure.

Last month I met with East Anglian MPs and separately with developers of projects in the region, to understand community concerns and encourage efforts to reduce infrastructure. I will be meeting with both groups again on this matter early in 2023.

Applications for all these projects will be considered on their merits, applying the law and policy and the independent report of the examining authority at the appropriate time. It is a fundamental feature of this planning process for nationally significant infrastructure that the final decision on whether to grant consent or not is taken by a Government Minister based only on relevant and publicly-available planning evidence. Given my intention to engage actively with local MPs, developers, and other interested parties on all of the issues here, I

¹ <https://www.nationalgrid.com/national-grid-ventures/eurolink>

² <https://www.nationalgrid.com/electricity-transmission/network-and-infrastructure/infrastructure-projects/sealink/document-library>

³ <https://www.northfallsoffshore.com/consultation/>

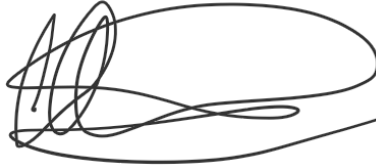
⁴ <https://fiveestuaries.co.uk/consultation/>

⁵ <https://www.nationalgrid.com/electricity-transmission/network-and-infrastructure/infrastructure-projects/east-anglia-green-programme-and-next-steps>

should make clear that I will not be the decision-taking Minister for these forthcoming planning applications in East Anglia.

I wish to reassure you that your representations are being heard and considered and as we move forward there remains an open and fair planning process for each project, enabling communities to share their views and for projects to be evaluated impartially.

Yours faithfully,

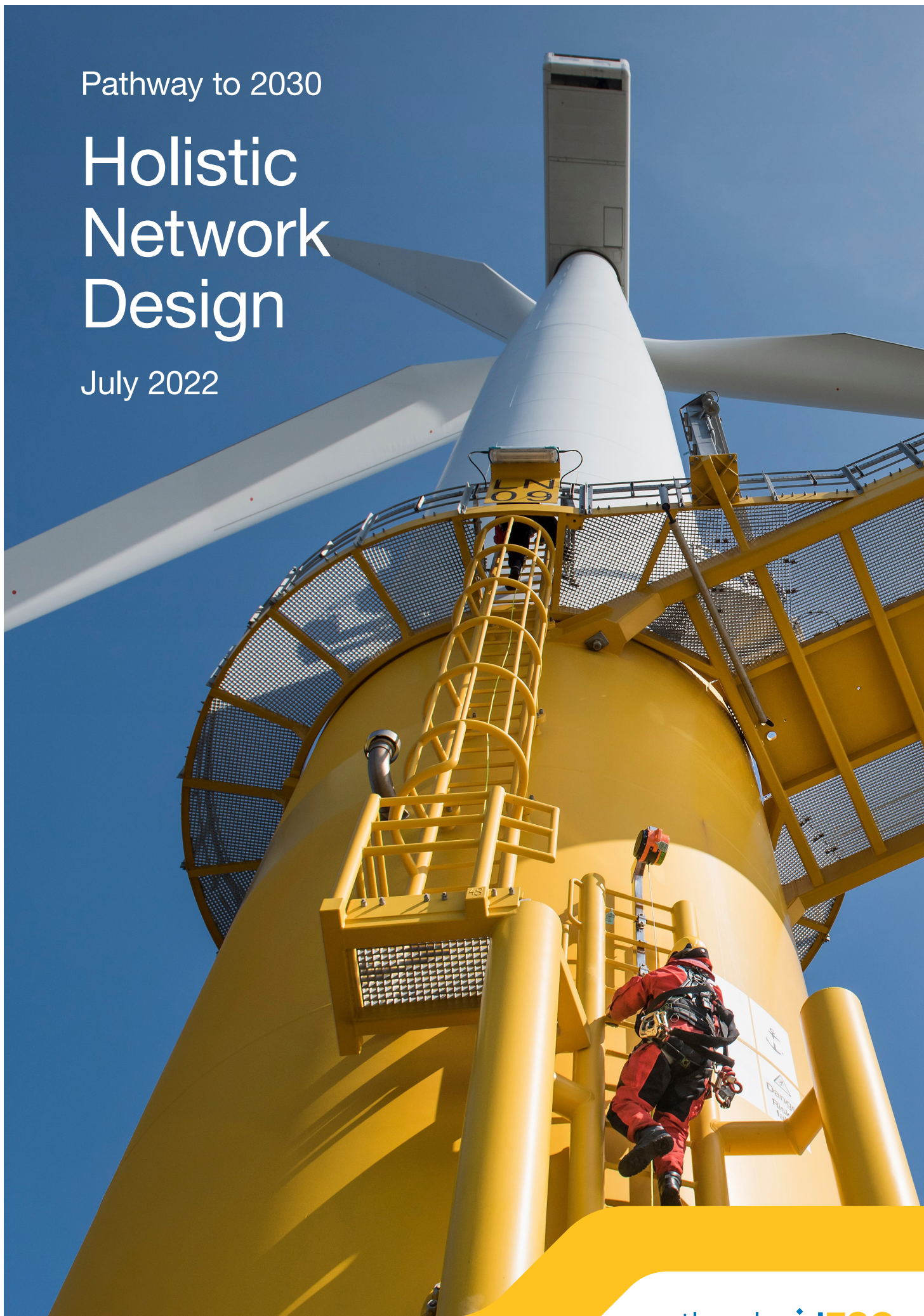
A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke at the bottom.

Rt Hon Graham Stuart MP
Minister of State for Energy and Climate

Pathway to 2030

Holistic Network Design

July 2022



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Document guide

Purpose

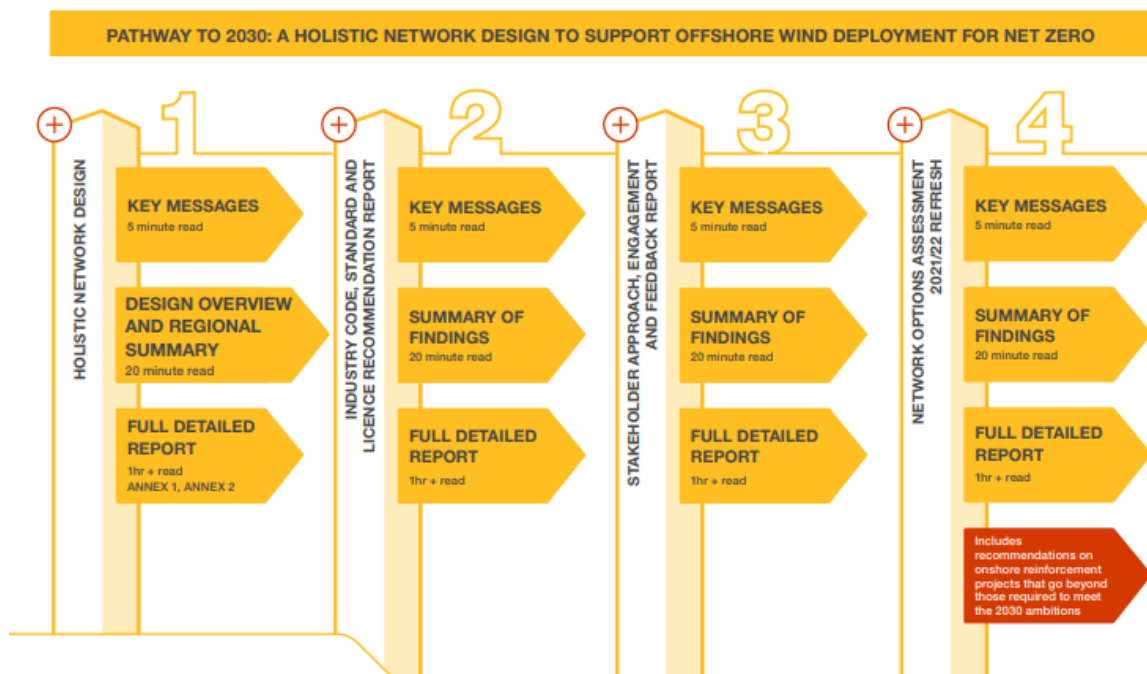
This document (the *Holistic Network Design* or *HND*) sets out the network requirements to facilitate the connection of the 23 GW of in scope offshore wind projects. When combined with existing offshore wind projects and those already further advanced in their development, the HND should enable the connection of 50 GW of offshore wind in Great Britain by 2030. This is a detailed document aimed at those who have a specific interest in the HND: a high-level summary can be found in the *Pathway to 2030* document.

The HND includes the offshore transmission network, the onshore works essential to facilitate each connection and the network needed to transport the electricity around the country. It also includes two Appendices: 1) Comprehensive List of Onshore and Offshore Network Recommendations, including connections, enabling works and wider works and 2) Environment and Community Appraisal Summary.

The design seeks to balance the needs of consumers, developers, communities, and the environment. The delivery of a coordinated offshore network will enable zero carbon generation to connect in an efficient way, supporting the government’s 50 GW ambition whilst minimising the impact on consumers and communities.

This document forms part of the HND suite of documents. The structure of these documents is shown in the diagram below. The documents also provide stakeholders a comprehensive view of the methodology used to develop the design, the recommended changes in industry standards, codes, and licence conditions required to achieve the design and the stakeholder feedback that we have considered in the design process.

Figure 1 – HND suite of documents



Note that the methodology document was published in February 2022 and can be found on our website¹.

A glossary² also explains the more technical terms used across the suite of documents.

¹ <https://www.nationalgrideso.com/document/239466/download>

² <https://www.nationalgrideso.com/document/262701/download>

Navigating this document

The main body of this document is split into seven main sections:

1. Executive Summary – this section provides context and sets out the key messages.
2. Introduction – this section explains the network design objectives and which projects are in scope.
3. Methodology– this section provides a brief explanation of the methodology we used to develop the design.
4. Network design guidelines and network overview– this section describes the network design guidelines and provides an overview of the recommended network design.
5. Regional overview– this section describes the recommended design and other variations considered for each region, and provides a system-wide view for onshore works.
6. Overall conclusions and next steps – this section summarises the contents of the report and provides an overview of the next steps in progressing the design.
7. Optimised radial design- this section explains the optimised radial design for each region.

1. Executive Summary

1.1 Context

The Department for Business, Energy and Industrial Strategy (BEIS) launched the Offshore Transmission Network Review (OTNR) in July 2020. It is playing a key part in enabling the vital role offshore wind has in meeting the UK Government's target for net zero. The objective of the OTNR is to "ensure that the transmission connections for offshore wind generation are delivered in the most appropriate way, considering the increased ambition for offshore wind to achieve net zero. This will be done with a view to finding the appropriate balance between environmental, social and economic costs".

Three workstreams were created in the OTNR to address offshore wind projects at different stages of development, namely Early Opportunities, Pathway to 2030 and Enduring Regime.

The Holistic Network Design (HND) is part of the Pathway to 2030 workstream and goes hand in hand with the Office of Gas and Electricity Market's (Ofgem) Minded-to Decision on the delivery model for the offshore network. Offshore wind projects in scope for the Pathway to 2030 workstream are at a fairly early stage of development and primarily those that secured seabed leases through The Crown Estate's Offshore Wind Leasing Round 4 and Crown Estate Scotland's ScotWind Leasing Round. It also includes assumed projects in the Celtic Sea and a small number of additional projects due to connect at a similar time and/or location as others in scope.

For the first time, the HND enables delivery of a network that simultaneously handles the connection of offshore windfarms to shore as well as transporting the power to where it will be used. Led by the Electricity System Operator (ESO), in close consultation with the onshore Transmission Owners (TOs) through the Central Design Group (CDG), the HND has looked holistically across four objectives when considering the connection arrangements for offshore wind farms:

- Cost to consumers.
- Deliverability and operability.
- Impact on the environment.
- Impact on local communities.

The HND recommends the optimal transmission network based on these four design objectives to both connect the offshore wind farms to the transmission network and transport their power to where it is needed. Offshore wind generation will play a key part in the transition to net zero, and additional network infrastructure is needed for it to connect. The HND has been developed to provide a sufficient level of detail to enable a Detailed Network Design (DND), which will make decisions about specific network assets.

The HND contains recommendations on the potential location of infrastructure, including offshore cable route corridors and the locations of new substations, as well as technology choices for the offshore network. At the same time, the HND does not limit the ability of parties undertaking the DND to exercise their engineering judgement or discharge their detailed planning obligations.

The HND seeks to balance the needs of consumers, developers, communities, and the environment. For the 2030 ambitions to be achieved, the ESO, Government, Ofgem and TOs will work innovatively and collectively to deliver the level of ambition set out in the HND, and as committed to in the British Energy Security Strategy (BESS) and equivalent activities in Scotland. This includes:

- Significantly reducing the time taken from development to construction of strategic infrastructure projects, including expediting the consenting and regulatory approval processes.
- A regulatory framework to allow for strategic and anticipatory investment within the Pathway to 2030 workstream.
- The designation of transmission network infrastructure required for 2030 as strategic³.

³ The definition of strategic investment in this context will be outlined in Ofgem's ETNPR consultation decision document July 2022

- Commitments from the TOs to accelerate delivery of their reinforcement projects once detail of the changes set out in the *BESS* are confirmed, with the aim of delivering all necessary infrastructure by 2030.
- Supply chain availability to deliver the recommended network.
- The consideration of mitigation and strategic environmental compensation where needed.

1.2 Key Messages

Our recommended design is a combination of radial and coordinated connections. Of the 18 wind farms in scope, nine connect with a radial connection and nine use coordinated connections. Two of the radial connections in the Irish Sea use a shared cable corridor, but with separate cables and offshore infrastructure.

When compared to an optimised radial design, the HND is expected to lead to overall net consumer savings of approximately £5.5 billion. The recommended design leads to an additional £7.6 billion of capital costs due to the additional offshore infrastructure, but this is outweighed by the £13.1 billion savings in constraint costs that are expected to result from the additional network capacity this infrastructure provides⁴. These costs relate to connecting the 23 GW of offshore wind which is in scope of the HND.

A coordinated offshore network will reduce the requirement for curtailment of wind generation due to network constraints. This will lead to a reduction in cumulative CO₂ emissions from gas powered generation between 2030 and 2032 by 2 million tonnes of CO₂ – equivalent to grounding all UK domestic flights for a year - through the facilitation of the flow of cleaner, greener energy, more of the time, displacing and reducing our reliance on fossil fuel generation.

The recommended design reduces the total number of cables being laid to shore by up to a third due to the use of HVDC technology, reducing the impact on the seabed. Interconnections are included in the recommended design to provide north to south routes on the east and west coast. These are needed because they minimise network constraints, enabling more zero carbon wind energy to be utilised and offset the need for less environmentally friendly energy generation. They also reduce the need for future infrastructure which would be needed to achieve the same emission reductions and do this while minimising environmental impact through designing the offshore network in a coordinated way. The total length of cable route corridors in the recommended design is therefore slightly more than in the radial design.

The recommendations within this report cover 23 GW of new offshore wind generation. Where we are aware of future offshore generation due to connect in each region, we have sought to ensure that our recommendations are future proof. A follow up exercise to the HND will commence following the publication of this document and will provide in scope developers with our HND follow up process recommendations in Q1 2023.

The HND also requires significant investment in our existing onshore system to transport electricity to where it will be used. It recommends 94 reinforcements totalling £21.7 billion, to be delivered by the end of the decade.

- 11 reinforcements require acceleration in their delivery to meet 2030 targets, these options would be reliant on the commitments outlined in the *BESS*.
- Many of the remaining 83 projects will need to be delivered before 2030 to smooth the requirements on the supply chain and allow coordination of access to the main transmission network during construction.

Whilst preparing the recommendations within this document, we have sought input from a wide range of stakeholders, including offshore wind developers, TOs and environmental stakeholders. Where possible, we have sought to make changes in response to the feedback we have received.

⁴ All cost savings are calculated over a 40-year asset life period, starting in 2030, using 2021 prices, unless otherwise stated.

1.2.1 The HND builds upon previous recommendations

The HND is made up of a number of individual recommendations for the development of the onshore and offshore networks. These recommendations are expressed in terms of a need to be able to transmit power from one point to another, whether that is offshore, onshore or a combination of the two.

Each of these recommendations needs to be considered carefully, designed in detail, and developed subject to the applicable planning and consenting processes.

Many of the HND's recommendations have been highlighted previously through our NOA process, where their description, driver and status are reassessed and published annually. New proposals for reinforcing the transmission system start with an initial assessment of early options submitted into the NOA. Following recommendations to 'proceed' these projects are progressed and developed in more detail by the TOs. Some of these projects are now sufficiently advanced in development to have been shared with affected stakeholders and local communities.

When considering the development of the transmission system, smaller, incremental reinforcements utilising existing assets are considered first. This begins with reduced and no build options such as commercial arrangements to manage flows on the network, followed by increasing the capability of existing assets. Once these options are exhausted, new reinforcement options must be considered. These include the construction of new transmission assets, or longer subsea cables to provide power transfer capability over greater distances

Figure 2 - Shows those recommendations that have been identified as necessary previously.

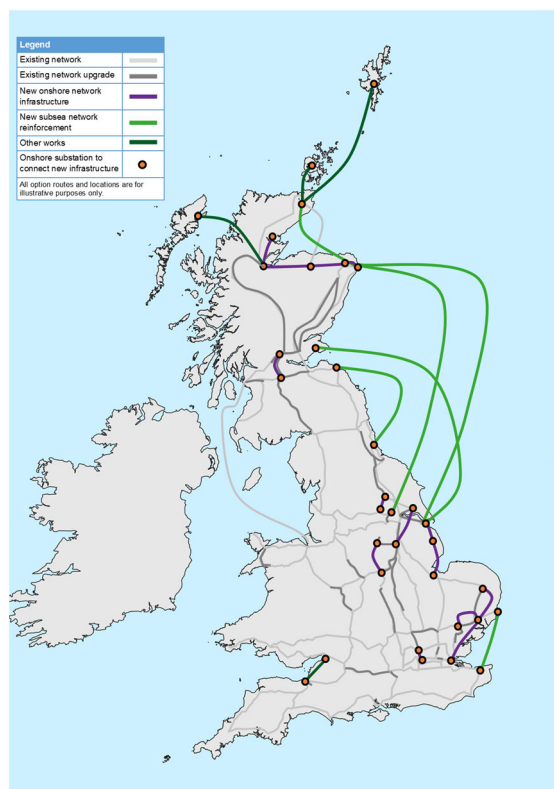


Figure 2 illustrates the previously identified and known development requirements for the onshore transmission system, highlighting upgrades to existing assets in dark grey with proposed new onshore transmission assets in purple and new subsea network reinforcements in light green.

1.2.2 New network needs identified through the HND

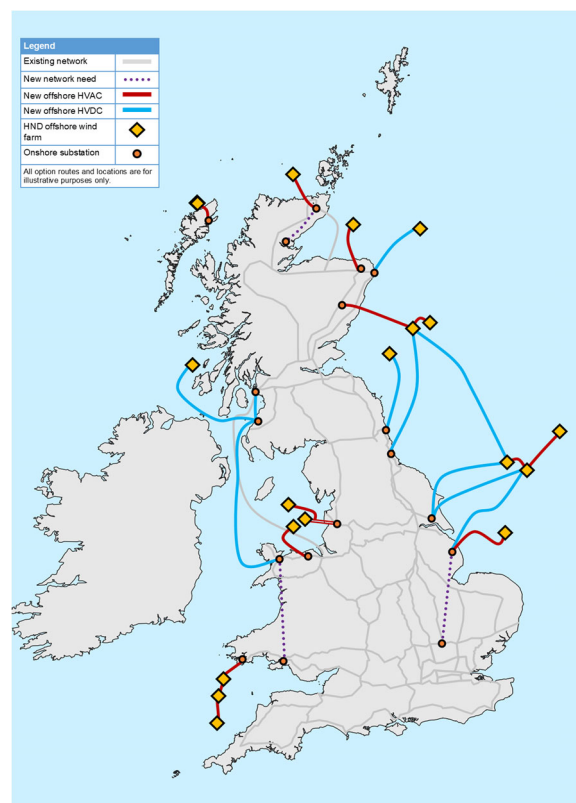
Through the HND process we have developed a recommended offshore network design. This design provides a greater level of coordination between offshore wind farms, optimising the number of landing points. In addition, we have recommended that some offshore wind farms connect further south than would have otherwise been considered through our usual connections approach. This coordination results in different power flows on the onshore network, driving some new network needs.

These new network needs are illustrated in *Figure 3*. The HND has identified new needs for network located offshore, as well as three new requirements located onshore, which build on the existing network and on previously planned development. These new network needs have not been previously published, unlike the other planned network reinforcements, which have been regularly assessed and documented in our NOA process.

These new onshore network needs are still in the early stages of development and were assessed in the HND via the *NOA 2021/22 Refresh*, which has recommended the continued development of options with similar capabilities. As these options have been shown to provide significant benefit, further detailed design assessments will need to be undertaken by the Transmission Owner to ensure a solution which balances the needs of the electricity system, environment and cost to energy consumers is taken forward. This will include exploring many different route options, including onshore, offshore or a combination of both. The selected option will then be taken forward to public consultation by the relevant TO as part of detailed design and consenting.

For more details on these new network needs and the wider transmission system requirements for 2030 see the *System-wide view section 5.5*.

Figure 3 - Shows the new network needs identified through the HND.



1.3 Minimising impact

The nature of the infrastructure required means the HND cannot be without impact. However, careful consideration has been given to the design to minimise cumulative environmental impacts.

The recommended design reduces the total number of cables being laid to shore by up to a third (in the best case) due to the use of HVDC technology. However, the total length of cable in the recommended design is greater (4%) than the optimised radial design. This is due to the additional cable needed to provide north to south routes on the East and West Coast. These cable routes are beneficial because they minimise network constraints and reduce the need for future infrastructure, by designing the offshore network in a coordinated way.

The design takes account of environmental constraints and seeks to minimise the impact on sensitive habitats through the coordination of wind farm connections to shore. Cable route corridors can avoid many of the identified environmentally sensitive features, however this is not possible in all cases. Further consideration will need to be given to cable routing in the DND stage to minimise environmental and consenting risks. While the environmental mitigation hierarchy should be followed, it is likely that environmental compensation measures will be required,

assuming no viable alternatives are identified in the DND stage. This might include measures at a regional or national level. However, in the first instance measures to alleviate pressures on and protect sensitive habitats both within and outside Marine Protected Areas (MPAs) should be considered, and compensation seen as a last resort.

1.4 Next steps

The HND will be followed by a DND and consenting process that will develop the HND recommendations further to determine technology choices, transmission routes, and the locations of substations and converter stations. The DND and consenting process will be conducted by the party responsible for developing each asset. It is during this process that statutory consultations and relevant environmental assessments take place.

We are also currently developing the HND follow up process, which aims to provide in scope developers with recommendations in Q1 2023. We will start this process following this publication in July 2022. This will include the remaining ScotWind leaseholders, and any capacity made available through the ScotWind clearing process. It is also expected to include approximately 4 GW of Celtic Sea capacity.

The details of the follow up process, including confirmation of scope, a more detailed timeline, and other key aspects, such as the methodology to be used for the process, will be communicated in the summer.

2. Introduction

Offshore wind has been identified as a critical technology in achieving net zero greenhouse gas emissions by 2050. To help realise this target, a step change in both the speed and scale of deployment of offshore wind is required. One of the challenges to delivering the ambition for offshore wind deployment in the timescales required will be making sure that the offshore and onshore transmission networks enable this growth in a way that is efficient for consumers and takes account of the impacts on coastal communities and the environment.

The current approach to designing and building offshore transmission was developed when the offshore wind sector was in its early stages of development, and industry expectations for offshore generation were significantly lower. The current approach places the project developers in control of building the offshore transmission assets to bring the energy onshore and has led to individual connections from each project to the onshore network. While this approach has served the industry well and matured the offshore wind industry in Great Britain, it may not be the most efficient approach for connecting the much greater capacity of offshore wind that the government has committed to.

In the context of increasingly ambitious targets for offshore wind, constructing individual point to point connections for each offshore wind farm could become a major barrier to delivery given the considerable environmental and local impacts, particularly from the associated onshore infrastructure required to connect to the National Electricity Transmission System (NETS). Offshore wind is expected to play an important role in delivering net-zero emissions by 2050, and it is right that the framework for delivering offshore transmission connections is reviewed in the context of our increased ambition.

To address these challenges, The Department for Business, Energy and Industrial Strategy (BEIS) launched an Offshore Transmission Network Review (OTNR). The OTNR will review the way the offshore transmission network is designed and delivered, consistent with the ambition to deliver net zero emissions by 2050.

As part of the OTNR, we launched the Offshore Coordination Project in March 2020. The first phase of the project progressed at pace to assess the costs and benefits of a coordinated offshore transmission network that facilitates windfarm connections to the onshore transmission network compared to the current radial (point-to-point) approach for connecting windfarms to the onshore transmission network. Phase 1 also assessed the technical and procedural considerations to achieve coordination.

Following completion of Phase 1, BEIS and Ofgem asked the ESO to carry out further work as part of the OTNR. We are working closely with the OTNR project partners (The Crown Estate, Crown Estate Scotland, The Department for Environment, Food and Rural Affairs (Defra), Marine Scotland, The Marine Management Organisation, The Department for Levelling Up, Housing and Communities, Ofgem, The Welsh Government) and wider stakeholders to realise the economic, local and environmental benefits of a coordinated approach as identified in Phase 1. Our current work involves delivering the ESO led activities of the OTNR across three workstreams and time horizons:

- Early Opportunities – working with developers of projects that are fairly well advanced in their development, the TOs and other stakeholders to assess the costs, benefits and various implications of projects that have put themselves forward to explore early coordination. Also, identifying and progressing required changes to industry codes, standards and processes.
- Pathway to 2030 – developing an Holistic Network Design (HND) for a coordinated onshore and offshore network to support delivery of the government's 2030 ambition and assessing and progressing the required changes to relevant industry codes and standards.
- Enduring Regime – engaging with the Enduring Regime workstream of the OTNR, contributing to the discussion and development of relevant areas. This will be further shaped by the conclusions of the September 2021 BEIS consultation on the Enduring Regime and Multi-Purpose Interconnectors.

This document forms part of the Pathway to 2030 workstream.





The terms of reference (ToR) for the HND were agreed with the OTNR partners and set out that the HND should ensure an economic, efficient, operable, sustainable and coordinated National Electricity Transmission System (NETS) (onshore and offshore) required to connect offshore wind. This should support Government offshore wind targets of 40 GW by 2030 for Great Britain, including 11 GW by 2030 for Scotland, as well as net-zero by 2050 for Great Britain and by 2045 for Scotland. In the British Energy Security Strategy (BESS)⁵, published April 2022, the UK Government increased its ambition for offshore wind to 50 GW by 2030. The HND considers four network design objectives as set out below.

2.1 Network design objectives

In collaboration with OTNR project partners, we defined a range of network design objectives that should be considered on equal footing while developing the design. These objectives ensure that the design is holistic in considering the impact of the design on the environment and communities and delivers value for consumers.

Table 1 provides an overview of the four objectives that have been considered throughout the design:

Table 1 - Network design objectives

Objective	Description
 Economic and efficient costs	The network design should be economic and efficient
 Deliverability and operability	The network design should be deliverable by 2030 and the resulting system should be safe, reliable and operable
 Environmental impact	Environmental impacts should be avoided, minimised or mitigated by the network design, and best practice environmental management incorporated in the network design
 Local community impact	Local community impacts should be avoided, minimised, or mitigated by the network design

⁵ <https://www.gov.uk/government/publications/british-energy-security-strategy>
July 2022

2.2 Projects in Scope

In August 2021, we identified the projects in scope for the HND in accordance with the Terms of Reference⁶ of the HND as agreed under OTNR governance. The total volume of offshore wind generation was aligned with the FES 2021 Leading the Way scenario. This total is made up of offshore wind generation in regions across Great Britain.

In some situations, the generation capacities included within the HND, connection applications and inferred from published seabed lease outcomes do not match. The generation capacities used within the HND were sourced from connection application and offer data.

We have included the following generation:

- A total of 8 GW of projects successful in The Crown Estate Offshore Wind Leasing Round 4 (referred to as R4_X within this report, with X representing numbers used to refer to individual projects).
- A total of 11 GW of projects successful in the ScotWind leasing round, with capacity located in each of the leasing zones (referred to as SW_X, with the letters W (west), N (north), E (east) and NE (northeast) denoting the respective leasing zones).
- Assumptions on 1 GW floating wind from the upcoming Celtic Sea leasing round (notional projects referred to as CS_FW_X). For the purposes of the analysis within the HND we assumed three projects which a combined capacity of 1 GW. We expect to revisit this analysis in further design work when specific projects within the Celtic Sea are confirmed.
- 3 GW of other sites that are located near to Round 4 and ScotWind sites, to test whether there are opportunities for coordination (referred to as PA_X).

Please note that the design is our best view based on the information available at the time. The design may change as the network develops through the Detailed Network Design and other project development stages.

Following the publication of this document, we will start work on a follow up process to include additional generation into the next iteration of the HND. Although we recognise that additional synergies could potentially have been achieved by considering more generation in a single exercise, this would have delayed giving certainty to developers who could have had certainty at this earlier stage without having to wait for the conclusion of a follow up process. The follow up process is expected to include the remaining ScotWind leaseholders, any additional capacity awarded through the ScotWind clearing process and approximately 4 GW of Celtic Sea capacity (replacing the 1 GW of notional projects considered in this iteration). It will provide in scope developers with recommendations in Q1 2023. However, we have sought to ensure that the decisions made within the HND do not lead to inefficient outcomes for generation due to connect in the future.

The full list of projects and their capacities considered in the HND is shown in *table 2*. In some cases (SW_NE4, SW_NE7, SW_E1a) this does not represent the full capacity of the project, and the remaining capacity will be considered in the follow up process.

⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1059676/otnr-central-design-group-network-design-tor.pdf

Table 2 - Full list of projects and capacities

Project name	Location	Capacity (MW)
R4_1	North Sea – East of England	1500
R4_2	North Sea – East of England	1500
R4_3	North Sea – East of England	1500
R4_4	Irish Sea	1500
R4_5	Irish Sea	480
R4_6	Irish Sea	1500
PA_1	North Sea – East of England	1320
PA_2	North Sea – East Scotland	1800
SW_W1	West Coast of Scotland	2000
SW_N1	North Coast of Scotland	2250
SW_N4	North Coast of Scotland	740
SW_NE4	North Sea – North East Scotland	1500
SW_NE7	North Sea – North East Scotland	1500
SW_E1a	North Sea – East Scotland	1500
SW_E1b	North Sea – East Scotland	1200
CS_FW_1	Celtic Sea	300
CS_FW_2a	Celtic Sea	300
CS_FW_2b	Celtic Sea	400

2.3 ScotWind projects in scope

Prior to the outcome of the ScotWind leasing round, we were undertaking network design and study work based on an assumed capacity informed by the Marine Scotland Sectoral Plan. However, as the ScotWind leasing outcome resulted in a significantly greater capacity than expected, we needed to align the ScotWind volume within the HND to a subset of the ScotWind projects. This would maintain consistency with the 2021 Leading the Way FES scenario and our Terms of Reference.

We worked with OTNR project partners and other key stakeholders to review the leasing round outcome to understand how we should act upon the ScotWind results in the HND. The assessment used is summarised in *Table 3*. *Option 1* was selected based on the overriding priority to reach a conclusion as early as possible and maintain a July 2022 publication date.

Table 3 – ScotWind Approach

Option	New Work	Pros	Cons
1. Minor capacity and spatial changes to the PT2030 generation background by: a) reviewing information from the ScotWind leasing round and Sectoral Marine Plan; & b) assessing existing connection application/offer information, as confirmed with successful applicants	Revision of planning datasets Refinement of network design options with a potential need for a small number of new proposals	Allows design to proceed in line with plan Needs of non-ScotWind developers can be met	Perceived short- term winners and losers from ScotWind HND perceived to be out of date Follow up exercise required to ensure ScotWind connections are managed appropriately
2. Significant capacity and/or spatial changes to the PT2030 generation background by: a) reviewing information from the ScotWind leasing round and Sectoral Marine Plan: & b) consulting with successful applicants on their connection requirements	Engagement and information gathering with developers Major revision of planning datasets Need for a significant number of new design proposals including technical, spatial and environmental assessments	Improved view of ScotWind applicants' plans	A further delay relative to the original January date (3 to 5 months) No established process for assimilating new information Perceived short- term winners and losers from ScotWind Disadvantages non-ScotWind developers HND out of date once FES2022 published

Option	New Work	Pros	Cons
3. Reconstruct PT2030 generation and supply scenarios to accommodate up to 25 GW of ScotWind generation by a) reviewing information from the ScotWind leasing round & Sectoral Marine Plan; b) consulting with successful applicants on their connection requirements; & c) reassessing the broader generation and supply background	Engagement and information gathering with developers and broader stakeholder group Major revision of planning datasets Need for a significant number of new design proposals including technical, spatial and environmental assessments	Improved view of ScotWind applicants' plans Potential to reconsider how targets are applied in ToR and ensure strategic options are explored	Longer Delay (4 to 6 months) Disadvantages non-ScotWind developers No guaranteed improvement for ScotWind developers

We therefore needed to make some capacity and spatial changes to the generation background which had been taken from *FES 2021*. This involved reviewing information from the ScotWind leasing round and Marine Scotland Sectoral Plan and assessing existing connection application and offer information.

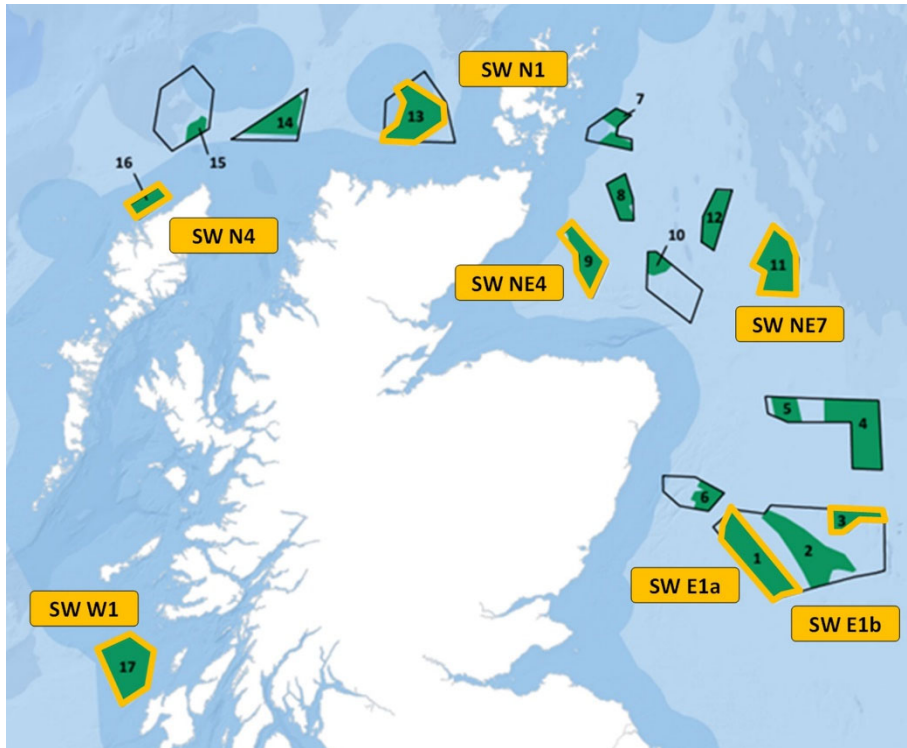
We ensured that some capacity was included in each of the ScotWind major zones, to allow us to assess the value of coordination between zones. We ordered capacities in line with contract signature dates, as confirmed through post-announcement communication⁷. The method we followed in allocating projects was:

1. Include projects that align with the Scotwind leasing announcement (i.e. use the spatial information provided in the ScotWind announcements to produce a list of applicable projects by reference to connection applications and agreements)
2. Order capacities in-line with connection application and offer information as confirmed through our post-announcement engagement
3. Ensure capacity is included in each zone
4. Where there's an excess, consider staging
5. Add sensitivities to address key strategic questions

The outcome of this process is that we included 11 GW of ScotWind capacity within the HND and brought our total of offshore wind capacity in the HND to 50 GW, of which 17 GW will be located in Scottish waters.

⁷ <https://www.nationalgrideso.com/document/239686/download>

Figure 4 ScotWind Results⁸



The projects that are included are not necessarily the projects that will progress the most quickly, and our assumptions do not indicate preference for certain projects over others. The remaining projects will be included in a follow up design exercise, which will use learnings from the HND.

⁸ <https://www.crownstatescotland.com/resources/documents/scotwind-map-of-option-areas-170122>
16 July 2022

3. Methodology overview

3.1 Objective

The objective of the Holistic Network Design (HND) is to provide an economic, efficient, sustainable, and coordinated National Electricity Transmission System (NETS) that supports the delivery of Great Britain's 2030 offshore wind ambitions. The approach for producing the HND needs to consider and compare multiple onshore and offshore design options including future generation and demand scenarios, the existing NETS, and total capital and operational costs. Significant coordination and data transfer between each step in the design is required to deliver a holistic design.

This section of the report provides an overview of the design methodology. The design methodology is a standalone document that is available for readers who would like further detail on the design approach⁹.

This methodology was developed based on the Offshore Transmission Network Review (OTNR) HND terms of reference (ToR). The HND ToR were agreed with the OTNR partners and set out that the HND should ensure an economic, efficient, operable, sustainable, and coordinated NETS (onshore and offshore) required to connect offshore wind. This should support Government offshore wind targets of 40 GW by 2030 for Great Britain, including 11 GW by 2030 for Scotland, as well as net-zero by 2050 for Great Britain and by 2045 for Scotland. In the British Energy Security Strategy (BESS)¹⁰, published April 2022, the UK Government increased its ambition for offshore wind to 50 GW by 2030.

The methodology was designed to ensure that all objectives were considered on equal footing.

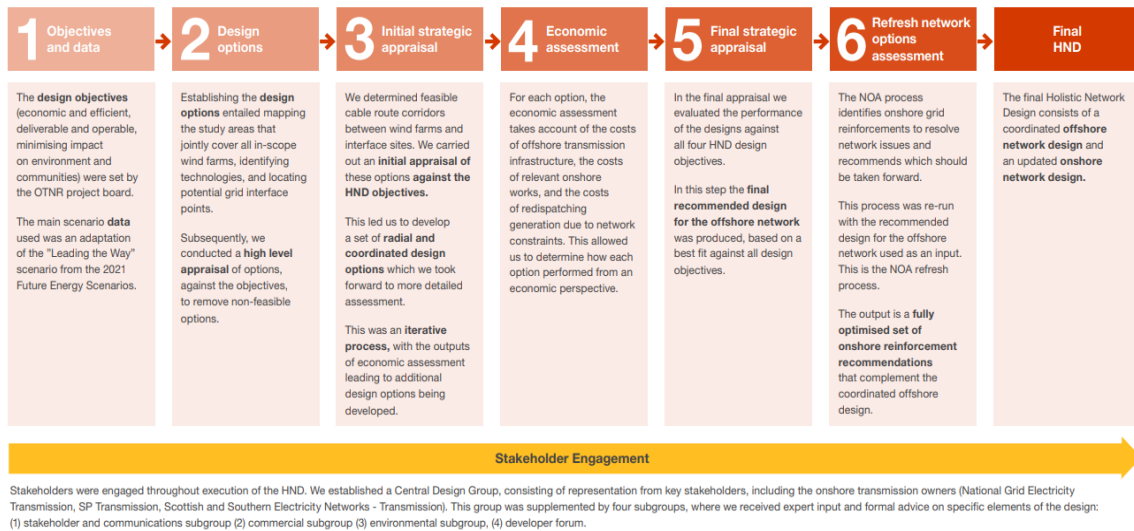
- To ensure the design is economic and efficient, we used an economic optimiser to determine the optimal economic design from a range of proposed design options. The economic optimiser takes into account network costs, market conditions, and system benefits to determine the optimal design considering economic factors.
- To ensure the design is deliverable and operable, we developed a deliverability assessment framework that considered a range of factors including supply chain of technologies, construction timeframes, and consenting challenges. The framework has been used to ensure that any designs used in the economic optimiser are deliverable and operable.
- To ensure the design considers environmental impact, we conducted assessments of environmental constraints using a range of Geographical Information System (GIS) data sources to determine the location and the severity of environmental constraints. Any proposed designs that would cause severe environmental impacts were not provided as inputs to the economic optimiser.
- To ensure the design considers community impact, we conducted assessments of community constraints using a range of GIS data sources to determine the location and the severity of community constraints. Any proposed designs that would cause severe community impacts were not provided as inputs to the economic optimiser.

We have developed a structured design approach that considers these design objectives. The design process, shown in *Figure 5*, consists of six key building blocks, that are required to produce the final HND.

⁹ <https://www.nationalgrideso.com/document/239466/download>

¹⁰ <https://www.gov.uk/government/publications/british-energy-security-strategy>

Figure 5 - Methodology building blocks



3.2 Establishment of HND data set

Once the design objectives had been agreed, the next step in developing the HND was to establish the scope of the study and the background data sets required, taking account of the non-exhaustive list of inputs for the HND specified within the Central Design Group (CDG) terms of reference.

Determining the data sets included establishing the offshore generation in scope and developing a suitable generation background on which the NETS could be studied. The HND uses the 2021 Future Energy Scenario (FES) Leading the Way as the basis of the background for which studies and analysis are completed. The FES scenarios underpin the ESO's network planning process and provide a robust and justifiable data set on which to base our economic and power system analysis.

The 2021 Leading the Way scenario has been modified for the purposes of the HND to align this scenario with the wind generation in scope for the HND. This scenario includes offshore wind of approximately 50 GW by 2030. The FES 2022 scenarios were not finalised in time to be included in the HND analysis.

The full set of generation included in the baseline assumptions is commercially sensitive and therefore not provided in this report.

3.2.1 Onshore network topology

Our starting point was a model of the transmission network for 2030, assuming that all essential works for connections would progress as planned. This included four separate offshore Eastern HVDC links between Scotland and England, which had already been found optimal by the Network Options Assessment (NOA) process previously.

All reinforcement options described in *NOA 2021/22* for which the TOs had stated an Earliest In Service Date (EISD) of up to and including 2033, excluding those determined as essential for connections, were made available to the economic optimisation process. The optimisation tool assumed that any reinforcements which were "optimal", i.e., whose economic benefit exceeded their cost, could be built by 2030. To realise the benefits of our holistic approach we are working closely with the TOs to identify and highlight which onshore reinforcements require acceleration in their delivery to facilitate 2030 targets.

To emphasise our ambition to accelerate the delivery of onshore works, we have introduced a new term for the *NOA 2021/22 Refresh*: Required in Service Dates (RISDs). RISDs only apply to reinforcement options that the TOs have determined have an EISD of later than 2030. Achieving these RISDs may require changes to planning, consenting and regulatory processes.

EISDs are provided by the TOs utilising their expertise and knowledge of delivering capital projects under the existing planning, consents, and regulatory processes. Accelerating the delivery of a project beyond an EISD would require government intervention in the form of legislative changes, as suggested in the recent publication of the British Energy Security Strategy (*BESS*), and Office of Gas and Electricity Markets (Ofgem) intervention in regulatory processes. Other factors may also impact the expected delivery dates of a project and it is anticipated that relevant industries and suppliers will also need to scale up to support the 2030 ambition. The inclusion of RISDs in the *NOA 2021/22 Refresh* serves to differentiate what is currently achievable from what could be achieved with greater change and intervention. Delivering onshore reinforcements on their RISDs will allow earlier network reinforcement and drive greater consumer benefit.

3.2.2 Environmental and community data

To address the environmental and community design objectives, the design process used Geographical Information System (GIS) data from a range of sources to assess the impact of various options on the environment and communities. Further detail on the environmental and community assessment within the HND can be found in Appendix 2.

To develop the HND, the following datasets were gathered:

- GIS maps;
- Environmental constraint data;
- Community constraint data;
- Technical constraint data;
- Generation maps and associated data;
- Future energy scenarios;
- NOA 2021/22 onshore reinforcements and boundary capabilities;
- Electricity market data;
- Forecast network demand;
- Forecast interconnector flows;
- Onshore and offshore asset cost data; and
- NETS interface points.

3.3 Interface points and design options

After the scope of the study and the background data sets were finalised, offshore designs and potential interface points for the connection of in scope generators connecting to the NETS were identified. An interface point is the point at which the onshore and offshore transmission network connect. Typically, within the HND this is at a substation located onshore.

A number of design options, including transmission technology, offshore interconnection (in the coordinated designs) and potential interface points, were identified. A high-level appraisal was used to remove unfeasible options while maintaining as many options as possible for further analysis. The feasibility of options was considered from an environment, community, and deliverability perspective.

The HND scope and datasets were assembled on a Great Britain wide basis. However, to facilitate data management and work planning, the potential interface points and design options were identified on a regional basis. Potential connection locations were considered at a high-level in a workshop with the three onshore TOs in terms of deliverability and environmental and community impacts. A shortlist of potential options was then produced for each region.

Radial design options were developed first by considering the potential interface points and network design guidelines described in Section 4. Subsequently, we developed coordinated design options that considered the same potential interface points and network design guidelines.

Each of the radial and coordinated design options were shared with the TOs to determine the feasibility of the design considering their requirements for onshore network reinforcement. The onshore TOs provided us with cost data for each option. Where designs were considered unfeasible from a TO perspective, these were removed from further assessments.

Our environmental advisors provided indicative routes for each option, based on a desktop evaluation of environmental, community and technical constraints. These were used to calculate the cost of each option, but do not mandate the choice of a particular route. Routing will form part of the Detailed Network Design (DND) process, and we will provide the information obtained to date to those carrying out the DND for each part of the network.

The design options included consideration of the environmental and community constraints. Environmental constraints are areas which are sensitive to cabling, as identified by the relevant authorities. Definitions of each type of environmental constraint are included in the glossary¹¹. Community constraints are built-up areas or areas which would be negatively impacted by cabling or infrastructure associated with the network.

3.4 Initial Strategic Options Appraisal

The objective of the initial strategic options appraisal process for the HND is to enable the consideration of the potential design options against four design objectives on an equal footing.

A Black, Red, Amber, Green (BRAG) assessment was conducted to assess the options in line with the design objectives. Black scoring indicated that the option did not align with the design objectives and therefore could not be considered for further assessment. The assessment considered mitigation measures that could be implemented to improve the alignment of the option with the design objectives. We did not assign a monetary value to the non-economic objectives.

Following the assessment of the option against the four design criteria, each option was assigned an overall BRAG rating based on considering the assessment across all four objectives.

We carried out high-level appraisal of these options, looking at how each would perform against each of the four HND objectives on an equal footing, and gave each option an overall rating.

We chose the best performing options, identified the essential works for the options and calculated detailed costs using TO information for onshore assets and cost assumptions for offshore assets, and put them into the economic optimiser shown in *Figure 6*. More details about the economic optimiser can be found in the full methodology report¹².

3.5 Economic assessment

To determine which option is preferable from an economic perspective, it is necessary to consider the following costs:

- Capital costs of the investments required to reinforce the onshore network.
- Capital costs of the offshore network, including the costs of any associated onshore works.
- Costs of dispatching generation to meet demand.
- Costs of re-dispatching generation due to network constraints (including compensating renewable generation for lost subsidies when it is unable to generate due to network constraints, and the cost of bringing on other generation to make up for the shortfall).

All costs within this document are in present value terms using 2021/22 as the price base. We have used standard Cost-benefit Analysis (CBA) assumptions. Within these assumptions, the onshore assets are amortised over an assumed asset life of 40 years. The offshore asset capex is assumed to be amortised over 25 years, but any benefits exist for 40 years.

We used an economic optimiser to test the value of our design options. The optimiser's objective is to minimise the total cost (sum of the costs above), taking account of the following constraints:

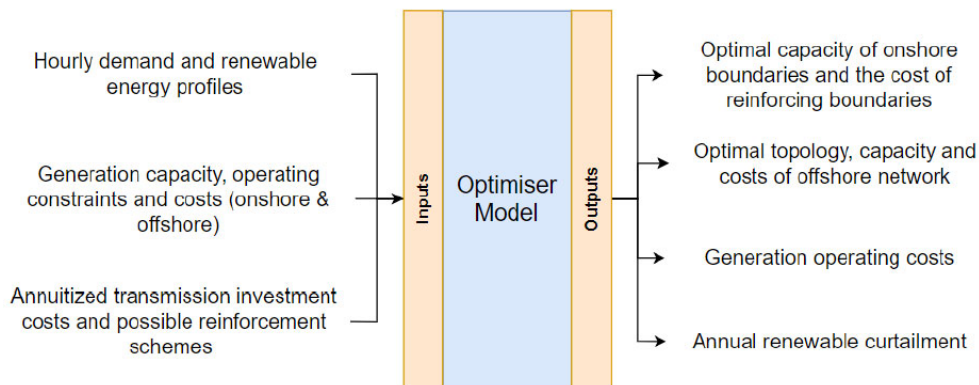
- Power transfer capability across boundaries.
- Generation must equal demand.
- Each offshore wind farm must have an appropriate capacity substation to connect to.

¹¹ <https://www.nationalgrideso.com/document/262701/download>

¹² <https://www.nationalgrideso.com/electricity-transmission/document/239466/download>

Overall, the aim of using the optimiser is to determine the lowest cost design option.

Figure 6 - Below summarises the inputs and outputs of the optimiser model



The optimiser determines the optimal offshore and onshore topology from an economic perspective. It chooses between all offshore options, considering the essential works for such connections (including some NOA reinforcements) in the overall cost assessment. For onshore works it considers all the NOA reinforcements as submitted to *NOA 2021/22* up to (and including) an Earliest In-Service Date (EISD) of 2033.

The essential works are considered fixed if that option is chosen, and their cost is included within the option assessment. The optimiser provides a list of ‘optimal’ onshore reinforcements for 2030, with the final onshore design being determined through the *NOA 2021/22 Refresh* process as described below. The optimiser considers a single-year snapshot, whereas the *NOA 2021/22 Refresh* optimises over a multi-year horizon, as well as considering new options beyond 2030 submitted by the TOs.

The hourly demand and renewable energy profiles used in the model match the modified Future Energy Scenarios data set as described above. The economic optimiser makes assumptions about how generation would be re-dispatched in the most economical way where there are transmission constraints. A slightly simplified version of the NOA dataset is used in this process. This allows us to calculate the constraint costs that would be incurred for each set of options.

In order to estimate the cost of connecting each wind farm to each onshore substation, our environmental advisors provided assumptions about the route which would be taken. This enabled the ESO to calculate the distance and make assumptions of technology type and thus the costs. Note that routing and technology choices described within this report are only indicative and will be confirmed by the party delivering the infrastructure within the Detailed Network Design (DND) stage.

The capital and operating costs of new offshore infrastructure are based on component unit costs derived from data provided by equipment suppliers. The input cost assumptions have been provided to in scope developers and OTNR stakeholders.

Possible onshore transmission reinforcement schemes and their costs are provided by the onshore TOs.

It is worth noting that the cost differentials quoted are based on high-level cost assumptions. The costs of each part of the design are expected to change as the design is developed in more detail during the DND stage.

In the optimiser, we have not monetised environmental and community impacts. Furthermore, we have not included any estimate of the costs of coordination between developers, or any impacts on the ability of developers to finance their projects. However, we have only recommended coordinated solutions where there is significant benefit compared to a radial solution, when considering the four network design objectives on an equal footing.

The optimiser was first used to determine the optimised radial design. The results from this radial optimisation provided insights regarding the system behaviours that were encountered. These insights highlighted where there was benefit in building additional infrastructure to connect generation to a different region of the country.

Considering the learning from assessing the radial designs using the optimiser, the coordinated designs were provided as inputs to the optimiser. Initial optimisations of the coordinated designs provided an improved understanding of how these designs performed from an economic perspective. This improved understanding enabled the creation of variations on the designs that provided improved economic results. These variations were assessed in the optimiser to determine a final set of preferred options.

The outputs from the economic assessment process were a set of radial and coordinated design options that would be assessed further in the detailed appraisal process.

3.6 Final Strategic Options Appraisal

Following the economic assessment of options, a shortlist of preferred radial and coordinated design options were progressed to a final strategic options appraisal. The final strategic options appraisal assessed how the options perform against the design objectives: 1) economic and efficient costs, 2) deliverable and operable, 3) minimal environmental impact, and 4) minimal community impact.

The options were assessed on a regional basis. We considered several radial and coordinated options within each region against the four network design objectives.

The options were subsequently written up into Options Appraisal Summary Tables (OASTs), which presented design options for each region and described how each option performed against the four network design objectives. These documents set out a preferred radial and coordinated design, and an overall recommended design, for each region.

To ensure that our recommended design was comprehensive and reflective of stakeholder views, the OASTs were shared with offshore wind developers, TOs and other OTNR stakeholders for their feedback.

Feedback from the above stakeholders resulted in a few minor additional studies being carried out to determine whether suggested variations to the design were more aligned with the four network design objectives. For some regions, the additional studies resulted in an updated recommended design, therefore these were adopted. An example of the changes made was moving to a southerly approach to Pentir in the North West Region. Some feedback received did not result in changes to the design recommendations, however it will be considered at the DND stage or in future iterations of the HND. Stakeholders who provided feedback were informed of how their feedback was considered to ensure a common understanding of next steps. The detailed process for engaging with stakeholders throughout the design process is captured in the dedicated *Stakeholder Approach, Engagement and Feedback* report.

The options appraisal process and stakeholder feedback determined the recommended offshore network design for the HND. The HND specifies the interface sites, onshore works, and offshore network interconnection, but does not mandate a particular choice of route, use of particular technology or exact locations of required substations. These additional design details will be developed as part of the Detailed Network Design process, which builds on the high-level HND.

The onshore network design was indicatively determined during the development of the recommended offshore network and finalised through the Network Options Assessment (NOA) Refresh process, which used the recommended offshore network design as an input to determine the final onshore network design.

To ensure operability of the recommended design, we assessed the dynamic performance of an appropriately representative part of the design. The East Coast Region was modelled, and its operation simulated. The simulation model used detailed representations of the expected electrical equipment and control systems. The settings used were aligned with the latest Grid Code requirements, but a number of assumptions and simplifications had to be made about information that is not yet known. As development progresses it is expected that further analysis will be required.

A range of onerous operating conditions that could reasonably be expected were tested to ensure the system stayed stable and operational parameters stayed within acceptable NETS Security and Quality of Supply Standards (SQSS) limits.

The testing has found some challenges such as offshore voltage control and short-term overload conditions, but we are confident that these can be resolved with future planned solutions. The analysis suggests that the offshore designs are operable considering dynamic studies, but care will need to be taken during the detailed design stage and procurement to ensure that the control and protection settings are coordinated and specified correctly. Extensive further study and development will be required through the detailed design up to delivery.

3.7 NOA Refresh

The Network Options Assessment (NOA) is a key annual ESO publication. It recommends the major onshore projects that are needed to deliver a transmission system that is fit for purpose to meet Great Britain's net zero and green ambitions, whilst balancing the costs to end consumers. The NOA process is therefore closely aligned with the HND in its objectives and plays a fundamental role in the delivery of a HND, and hence needs to be considered as part of this process.

The recommendations of *NOA 2021/22* provide the optimal level of onshore reinforcement against the FES 2021 without considering offshore coordination. This provides a robust starting point for the HND analysis. All reinforcement options submitted by the TOs and the ESO for *NOA 2021/22* have been considered within the optimisation process that has determined the recommended offshore network design.

Following the finalisation of the offshore design, the onshore reinforcements required to facilitate economic and efficient transfer of power needed to be re-evaluated. This has been carried out by refreshing the *NOA 2021/22* assessment with the offshore network design embedded within the study background. This is referred to as the *NOA 2021/22 Refresh* and informs the TOs which onshore options to develop further.

The inputs to the background for the *NOA 2021/22 Refresh* were the HND recommended offshore design, which was identified in the strategic options appraisal, and a modified version of the FES 2021 Leading the Way scenario (as referred to in the establishment of HND data set section earlier in this report). The recommended offshore network design has changed the location of offshore connection points, thus impacting energy flows around the country. This has an impact on the onshore network reinforcements and hence is reassessed through the NOA process.

Typically, the NOA process follows the previously published and approved NOA methodology. However, to align with the HND and ensure a consistent approach, some adjustments are necessary for the *NOA 2021/22 Refresh*. To facilitate this the *NOA 2021/22 Refresh* follows the existing methodology where practicable but differs in two main ways. Firstly, a single scenario was used for the analysis to align the background with that used to develop the recommended offshore design. Secondly, essential options, determined through the HND connection assessment, were fixed in the background as these reinforcements are fundamentally necessary to connect 50GW to the system by 2030 in a compliant manner. More details on the methodology applied for the NOA refresh can be found in the *NOA 2021/22 Refresh* report. Furthermore, the full *NOA Methodology* can be found on our website¹³.

3.7.1 Environmental and community assessment of onshore works

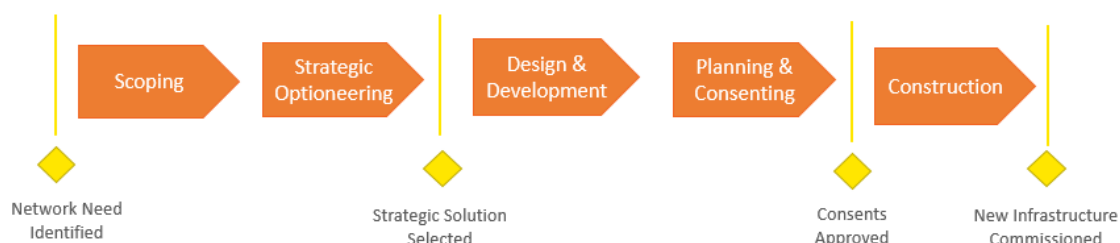
The Environmental and community impact of the onshore works is considered within the HND methodology. The essential onshore works at the interface point sites are included in the strategic appraisal undertaken for the offshore network design.

The onshore reinforcement options are assessed by the TOs. The methodology used by the TOs to appraise options is well established and has been subject to scrutiny through numerous examinations by planning authorities on prior projects. It is broadly similar to the process we used in the appraisal of the radial and coordinated offshore network options, using high-level environmental and socio-economic constraints, which are considered alongside technical factors

¹³<https://www.nationalgrideso.com/research-publications/network-options-assessment-noa/methodology>

(including capability, operability and deliverability) and cost. *Figure 7* below sets out the multiphase investment process which the TOs broadly follow. This starts with establishing the agreed network need, then selection of a strategic solution, followed by detailed network design and obtaining consent before construction.

Figure 7 - Multiphase investment process



The level of detail included in the assessment by the TOs of community and environmental impacts is dependent on the maturity of the onshore reinforcement project (*Table 4*). This ranges from initial desktop studies to detailed environmental and community assessment considerations. The different environmental and community assessments carried out at each stage of the project inform the strategic option selection and detailed design for the reinforcement works and aim to minimise overall environmental and community impacts.

Table 4 - Project phases

Project Phase	Description of Project Phase
Scoping	Identification of broad Needs Case and consideration of a number of design and reinforcement options to solve boundary constraint issues.
Strategic Optioneering	The Needs Case is firm; a number of design options are developed so that a preferred design solution can be identified.
Design Development and Consenting	Design of the preferred solution into greater levels of detail and preparing for the planning process, including public consultation and stakeholder engagement.
Planning/Consenting	Continuing with public consultation and adjusting the design as required all the way through the planning application process.
Construction	Planning consent has been granted and the solution is under construction.

3.8 Validating the optimiser outputs with the NOA economic analysis

We used the economic optimiser in choosing both the optimal radial and coordinated designs. However, the optimiser is currently limited to a single year (2030). Therefore, we have also used BID3¹⁴ (the economic analysis tool used in the NOA) to simulate both the optimal radial and coordinated designs from the optimiser for the years beyond 2030. The results from BID3 show that the recommended design is the preferred solution, and this recommended design was used as an input to the *NOA 2021/22 Refresh* process. The economic analysis within the *NOA 2021/22 Refresh* also uses the BID3 tool to assess the expected constraints on each boundary, looking at the years beyond 2030.

As BID3 looks at a wider time horizon, we used it to more accurately calculate the differentials in constraint costs which are quoted throughout this report.

¹⁴ <https://www.nationalgrid.com/sites/default/files/documents/Long-term%20Market%20and%20Network%20Constraint%20Modelling.pdf>

4. Network design guidelines and network overview

Our designs are made up of multiple pieces of equipment, which link together to form a network. The equipment performs one of two broad functions, either to form a junction point for the network at a substation or to provide the long links between substations. Any offshore design will need platforms to carry substation equipment and will use cables to provide the links between them. Our design includes High Voltage Alternating Current (HVAC) and High Voltage Direct Current (HVDC) assets that are proven technology.

Before developing the coordinated offshore designs, we established a set of electrical design guidelines, which we tested with our internal Offshore Coordination Engineering Advisory Group. This group was formed to inform and provide technical challenge and guidance into the offshore transmission planning, coordination and operation elements of the Offshore Coordination Project. It consisted of ESO experts on technical codes, assurance, and connections. The guidelines provide direction on several technical considerations in the design such as technology selection, cable ratings, cable voltages and network redundancy.

A separate code change report is published as part of the Holistic Network Design (HND) package, and code changes will go through the standard processes.

4.1 Assets considered

HVAC assets:

- **Subsea Alternating Current (AC) cables:** Of voltage level up to 275 kV and commercially available from multiple suppliers. They can achieve up to 500 MW of power transfer in a single 3-phase bundle. Higher power transfers can be achieved by using multiple cable bundles laid in parallel, for example a 1.5 GW AC connection could be designed using three parallel 500 MW AC cables. This takes up significant space as the cable bundles need to be spaced apart, potentially increasing environmental impacts.
- **Offshore AC substations of compact gas-insulated switchgear (GIS) design:** Its functionality should allow circuit selection, maintenance access and fault disconnection. These are commonly used onshore and have also been constructed offshore. Considering the current level of experience of suppliers this is expected to be feasible.
- **Onshore AC substations:** Part of the offshore transmission system needed to interface with the existing onshore network and provide the necessary switching and isolation facilities. These are commonly used and commercially available.
- **HVAC circuit breakers:** Of a conventional design and commercially available.
- **Reactive power compensation:** The power transmission capacity of AC submarine cables is limited by capacitive charging currents. To counteract this, reactive power compensation must be added. For short cables less than 100 km this can be kept to the ends of the cable, but longer cables require additional mid-point compensation. Reactive compensation installation onshore is common but less so offshore and extra platforms to host reactive power compensation may be needed on long offshore routes. Multiple suppliers of reactive compensation are available.

HVDC assets:

- **Subsea Direct Current (DC) cables with a voltage level up to 525 kV:** The HVDC circuits need a pair of HVDC cables, a positive and a negative cable. In most instances the pair of cables can be bundled and laid together, which minimises seabed disruption. For some HVDC circuits, larger than 1.8 GW, the cables need to be separated and an extra metallic return conductor (which can be co-axially added to the outer sheath of the power cables), so that a fault will not disconnect the whole HVDC circuit. Due to limitations on the availability of large capacity cables, the largest HVDC circuit used in the designs is 2 GW. A small number of suppliers are available.
- **Offshore DC converters:** Built onto an offshore platform with AC interface at 275 kV for meshed offshore network or AC interface at 66 kV for direct windfarm interface. Dependant on

size and security needs, the converters may be of bipole or symmetric monopole design. A small number of suppliers are available.

- **Onshore DC converters:** To interface with the onshore transmission network. The type needs to be consistent with that used at the other end. A small number of suppliers are available.
- **HVDC isolators:** To allow offline disconnection of DC cable sections following fault or for maintenance. The design does not include HVDC circuit breakers, as we do not believe the technology will be mature enough to use until at least 2035. As a result of using isolators instead of circuit breakers, if there is a fault in a multi-terminal DC link, all ends will go offline.

4.1.1 Technology selection considerations

AC cable circuits will be used as much as possible due to their lower cost. However, for long lengths that would require impractical amounts of reactive compensation or where power flow control is required, HVDC will be used. We have assumed within our economic analysis that AC cable circuits longer than 100 km require midpoint reactive compensation, and cable circuits longer than 200 km should be DC. However, the recommendations of technology type made within the HND do not mandate that this particular technology must be built; the party carrying out the DND will make the final choice of technology type.

Due to technology readiness, live offshore circuit switching will be facilitated by means of conventional AC circuit breakers. HVDC circuit breakers will be not assumed mature for the 2030 designs.

Multi-ended HVDC configurations will be considered, and offline switching will be built-in, such as is already being put into service for the Caithness-Moray system.

HVDC bipole systems with metallic return (which may be built into the power cable sheathing), cable separation and sufficient pole separation will be considered as two separate transmission circuits. This will require a change to the definition of a HVDC converter within the SQSS.

It is recognised that supply chain limitations may impede delivery, particularly with HVDC converters and cables. The designs have not been constrained by supply chain limitations on the basis that all the equipment in the designs proposed should be available from more than one vendor, and the recommended design does not pose a significantly greater challenge than the optimised radial design.

Although, we have made assumptions about the numbers of cables required for each technology type, this does not mandate a particular choice at the DND stage but provides an input to our economic optimisation process.

4.1.2 Cable rating and voltage considerations

275 kV AC cables have been recommended in order to reduce the total number of cables. While still uncommon compared to 220 kV, they are expected to be available within the required timescales, and we are aware of developers who are planning to use them. Suitable reactive compensation will be required to compensate for cable capacitance.

The upper practical limit of HVDC circuit voltage considered for 2030 is 525 kV using XLPE cables.

The maximum HVDC bipole rating considered available for 2030 is 2 GW. This is consistent with European development expectations and is primarily limited by cable ratings.

Symmetrical monopole HVDC circuits will be limited to a rating of 1.8 GW.

4.1.3 Other design considerations

Under intact conditions 100% of the Transmission Entry Capacity (TEC) will be able to reach shore. For any credible single offshore outage, at least 50% of the TEC will be able to reach shore. This principle is applied to both the radial and coordinated designs and for the projects which are large enough to require multiple cables.

Offshore, the AC cables should be in a bundled group containing all three phases to permit laying in a single operation and minimise seabed usage. Longer distances may require an additional

parallel cable to account for reactive power losses. Onshore the cables can be laid in single phase configuration.

To minimise the amount of switchgear required and to limit the number of available onshore connections bays required, multiple cables may be banked together.

Infeed loss risk will be considered at 1.8 GW, as suggested by the OTNR Phase 1 report. This will require a change to the SQSS.

Infeed loss risk considerations offshore mean that offshore busbar arrangements will extend to double busbars where required to secure against breaker and bar faults.

Some of the complex offshore nodes will require multiple platforms close together to accommodate the HVDC converters, AC switchgear, cable entries and necessary equipment.

Operational control of the offshore systems will require automation, including power flow optimisation to minimise network constraints and post-fault response to onshore and offshore system events.

4.2 Stakeholder engagement

The following section describes, at high-level, how stakeholders were involved in the design process. We have also produced a dedicated *Stakeholder Approach, Engagement and Feedback* report to provide further detail on the stakeholder engagement approach and feedback received during the design process.

The development of a coordinated onshore and offshore NETS impacts a wide range of stakeholders; therefore, stakeholder engagement was critical to the successful delivery of the HND and recorded throughout its development. The stakeholder engagement approach aligns with the HND ToR, that specifies which stakeholders should be engaged throughout the design process.

Although we have led the HND, several partners and stakeholders were engaged at regular touchpoints. The CDG, consisting of representation from key stakeholders including the onshore TOs, was established to support the development of the HND and ensure that stakeholder views are considered in the design. The Department for Business, Energy and Industrial Strategy (BEIS), Ofgem, and the Scottish and Welsh Governments sat on the group as observers. The specific roles of the ESO, CDG, and CDG subgroups are described below.

We have, in consultation with the CDG, delivered a design recommendation that ensures an economic, efficient, operable, sustainable, and coordinated offshore and onshore NETS. The design includes the connections and associated strategic onshore infrastructure necessary to connect offshore generation in order to facilitate the pace and certainty required to deliver the 2030 offshore wind targets and the 2045 and 2050 net zero targets.

The CDG acted as a vehicle for the ESO to consult with TOs on the HND, and to consult with stakeholder groups as the HND was developed. The CDG members met on a periodic basis to discuss key design options and considerations. Four CDG subgroups, that align with the stakeholder engagement requirements set out in the HND ToR, were established to focus on various objectives of the design. The CDG subgroups provided a focused forum to receive expert input and formal advice on specific elements of the design.

4.3 Choice of regions

Network designs are presented in this section of the report by region. Regions were defined based on the opportunity to coordinate between different offshore wind farms within the HND. We have carried out a holistic exercise, which looks across the whole of Great Britain and seeks to deliver the best overall outcome for consumers, communities, and the environment.

We have recommended connection and offshore network designs for four offshore regions of Great Britain that contain the in scope offshore wind projects:

- North West
- North Scotland
- East Coast
- South West

We have also recommended key wider system reinforcements based on a system-wide view, which we describe in the system-wide view section. Whilst some of these system-wide reinforcements sit neatly within one region, the majority solve wider network issues outside of these regions. We have therefore included a system wide view to reflect this.

Wales has been considered in two separate parts, due to the concentration of generation assets at either end of the country: North Wales is included within the North West Region (as there are opportunities for coordination between Irish Sea wind farms), and South Wales is included within the South West Region as there are opportunities for coordination between Celtic Sea wind farms.

Scotland has been considered as part of three separate regions: West Scotland forms part of the North-West Region due to opportunities for coordination with Irish Sea wind farms, North Scotland is treated as its own region due to limited opportunities for coordination with other regions, and the East Coast of Scotland is considered alongside the East Coast of England.

England has been considered as part of three of these regions: North-West (due to coordination opportunities within the Irish Sea), South West (due to coordination opportunities within the Celtic Sea), and the East Coast (due to coordination opportunities within the North Sea).

The South East and South Coast Region does not contain any offshore wind directly covered by the HND due to the well-developed nature of the majority of the projects in this area. The Department for Business, Energy and Industrial Strategy (BEIS) has now announced four initial pathfinder projects. These are well-advanced projects that are leading the way in utilising the regulatory and policy changes being developed through the OTNR to increase transmission network coordination and deliver the OTNR's objectives¹⁵. Two of these projects are in this region:

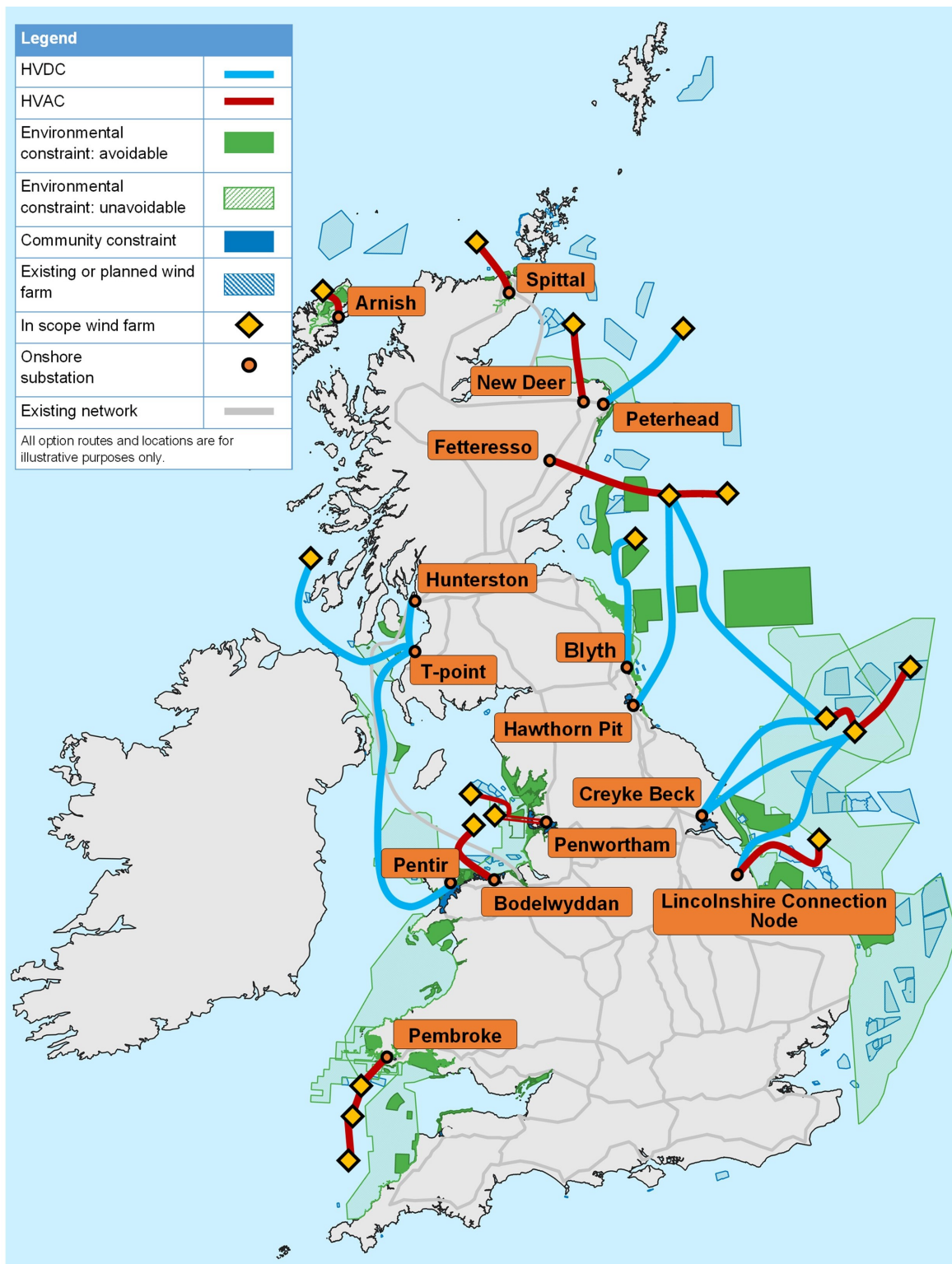
- Equinor's proposal for an integrated transmission system for the Sheringham Shoal and Dudgeon Extensions in Norfolk.
- Orsted's proposal for Boudica, to co-locate a 200MW battery as part of the grid connection in Norwich, Norfolk of Hornsea 3 offshore wind farm.

National Grid Electricity Transmission (Sea Link), National Grid Ventures (Nautilus and EuroLink interconnectors) and the two offshore wind farms North Falls and Five Estuaries have published an update on their work together to explore the potential for offshore coordination as part of the OTNR Early Opportunities workstream too.

¹⁵ [link to BEIS press release/OTNR GOV.UK](https://www.gov.uk/government/news/beis-announces-four-offshore-pathfinder-projects)

4.4 Offshore network design

The recommended offshore network design is shown in Figure 8



The HND connects 23 GW of offshore wind capacity to the Great Britain transmission network. When combined with existing offshore wind projects and those already further advanced in their development, the HND should enable the connection of 50 GW of offshore wind in Great Britain by 2030.

The recommended offshore network design connects all 18 in scope offshore wind farms to the onshore network, using 15 different landing points to shore. It includes some regions of strong coordination, and some regions where radial connections are favourable. It establishes new offshore connections between different onshore regions, particularly between west Scotland and north Wales, as well as between east Scotland and the east of England.

In the North West Region, the wind farm in West Scotland connects to a T-point with connections into both Scotland and Wales. The Irish Sea wind farms are connected radially with two sharing a route corridor.

In the North Scotland Region, the recommended design connects the two wind farms radially.

In the East Coast Region, the recommended design is a combination of radial and coordinated connections. The coordinated part of the design provides an offshore network which delivers additional network capacity between Scotland and England, as well as connecting five wind farms.

In the South West Region, the indicative recommended design is a coordinated connection into South Wales, although this is subject to change when the outcome of The Crown Estate's Celtic Sea leasing round is known.

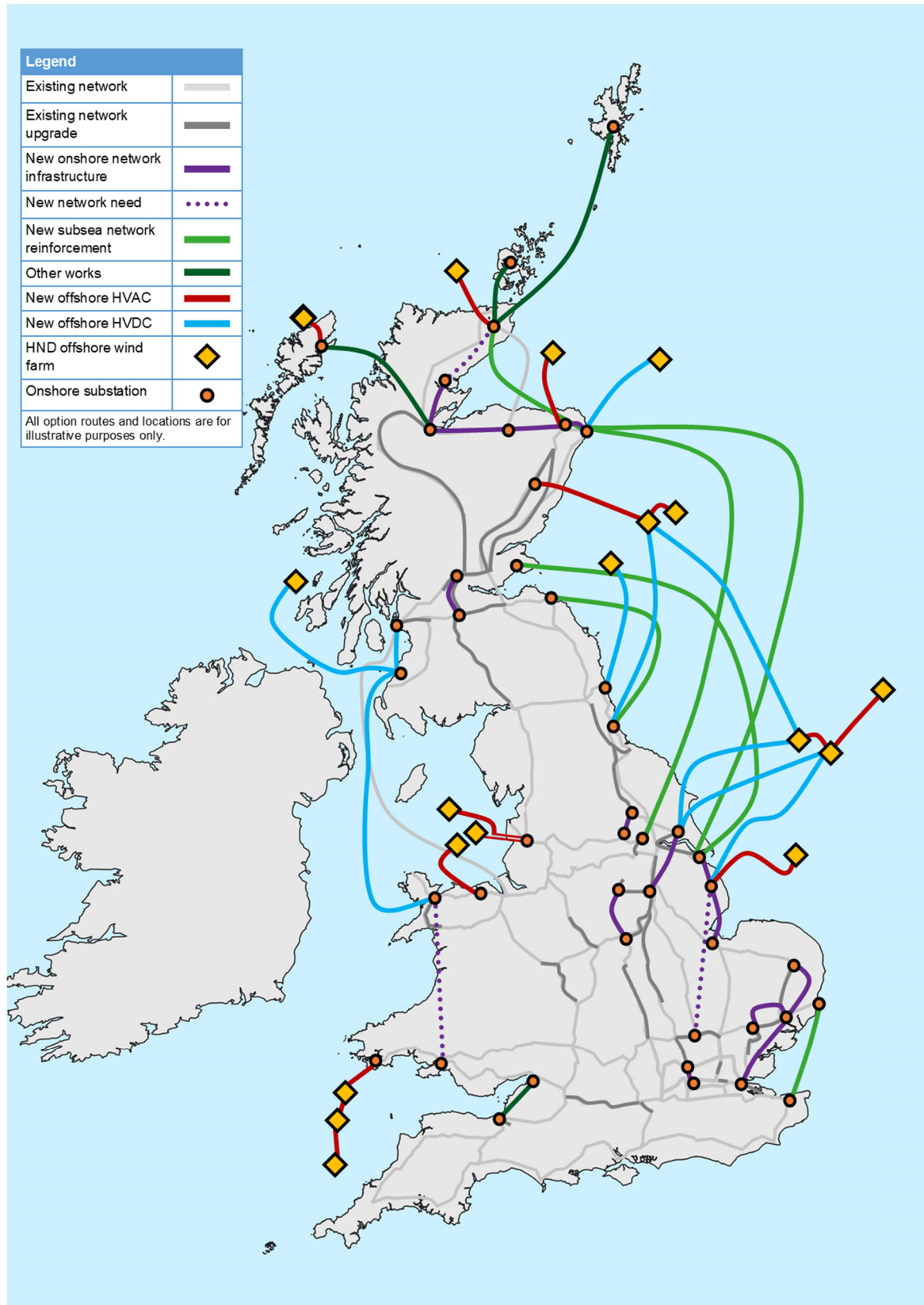
Please note that the design is our best view based on the information available at the time. This and all the maps in this document are illustrative. They highlight an identified need to transmit volumes of energy from point A to point B and do NOT represent specific routes. The next steps involve more detailed network design, which will include specific locations and designs for projects, and as a result the design may change. The detailed network designs will be designed and consulted on in future by the organisations appointed to fulfil the needs identified.

4.5 Onshore network

The major projects required for 2030 to enable the transfer of high volumes of renewable generation to where it will be used across the country is illustrated in *Figure 9*. These reinforcements include upgrades to the existing transmission system in dark grey, new onshore transmission reinforcements and subsea cables previously recommended in NOA in purple and green respectively. New network needs are shown as dotted purple lines and the coordinated offshore network in red and blue representing the type of technology proposed.

This, and all the maps in this document, are illustrative. They highlight an identified need to transmit volumes of energy from point A to point B and do NOT represent specific routes. The next steps involve more detailed network design which will include specific locations and designs for projects and as a result, designs may change. These will be designed and consulted on in future by the organisations appointed to fulfil the needs identified.

Figure 9 - Full HND including major onshore and offshore recommendations



The HND identifies and clearly distinguishes onshore transmission projects that are required to facilitate the 2030 ambitions to allow the power to be transported to where it is needed. It identifies 11 onshore transmission projects that are required for 2030 but where a business as usual approach would result in delivery after 2030.

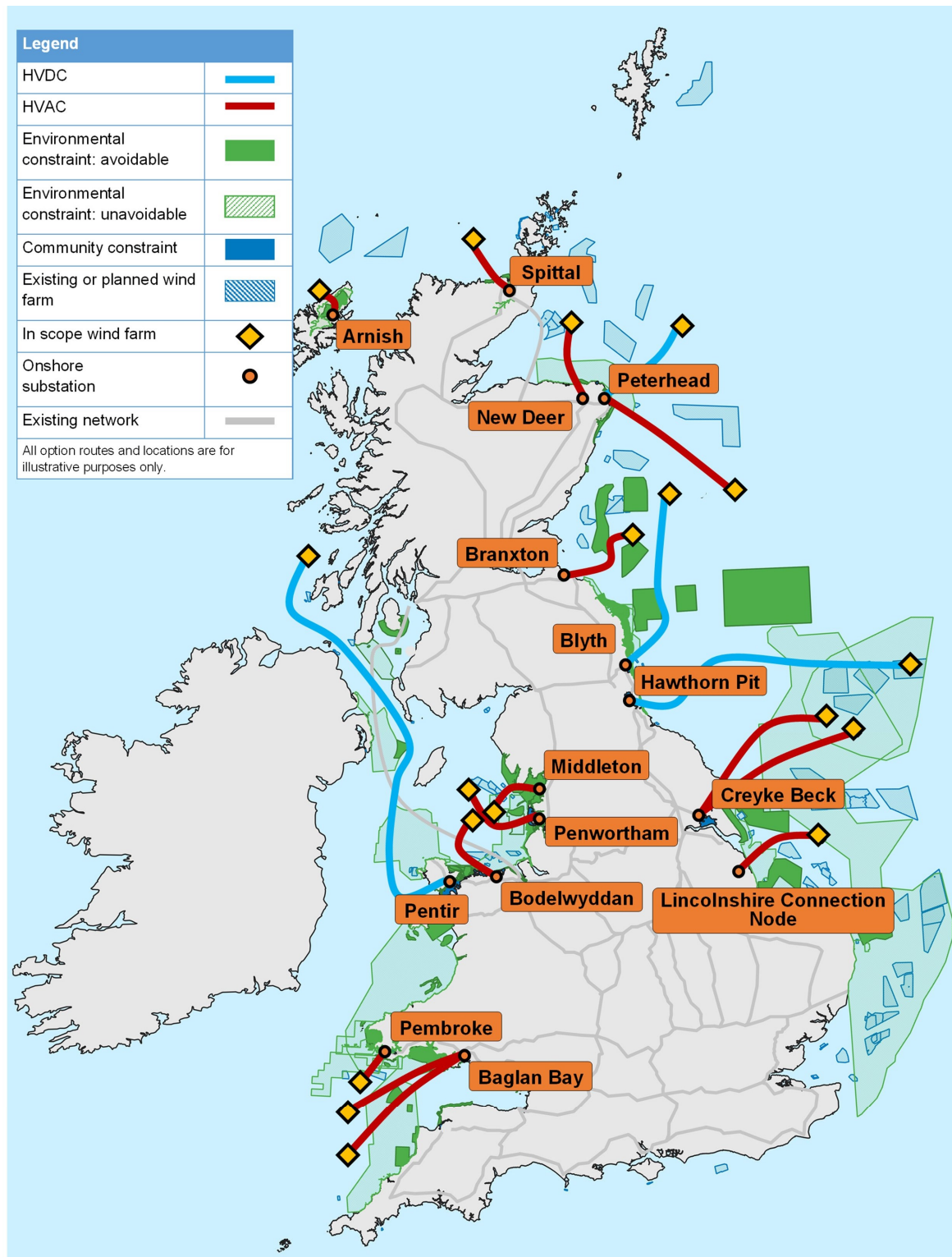
The 2030 onshore transmission network will look very different to the one we see today. To meet the 2030 ambitions and facilitate the delivery of the offshore wind in scope of the HND, 94 reinforcement projects totalling £21.7 billion are required to be delivered by the end of the decade. These range from very small upgrades to large new transmission infrastructure such as new onshore routes or sub-sea cables with the sole purpose of transporting electricity from where it is produced to where there is demand for it. This investment is driven by the increasing level of renewable generation connecting to the system, often in places that have historically seen no requirement for onshore transmission network.

Of the 94 reinforcements required by 2030, many must be delivered earlier to maximise consumer benefit. The NOA process provides this additional insight via an optimal date; ensuring that reinforcements are delivered when they are needed and that the costs of building them outweigh the costs of managing power flows around the network without them in place.

Further detail on the onshore network is included in Appendix 1.

4.6 Optimised radial design

The aim of the optimised radial design is to enable the evaluation of the benefits of a coordinated design relative to an optimised radial design. The optimised radial design is shown in *Figure 10*



The optimised radial design consists of point-to-point connections between offshore wind farms and onshore interface points. The approach used takes into consideration all in scope wind generation, rather than considering each application individually under the current process. This provides a credible counterfactual against which to compare our recommended design.

The optimised radial design connects the 18 wind farms to the onshore network at 15 landing points to shore. It was produced taking into account the four objectives in the HND terms of reference.

4.7 Comparison with recommended design

4.7.1 Economic and Efficient

When the entirety of Great Britain is taken into account, the radial design performs worse than the recommended design from an economic perspective. Although the optimised radial design has lower capital costs (as less offshore infrastructure is needed), it leads to significantly higher constraint costs.

It is also worth noting that the coordinated parts of the recommended design provide redundancy compared to the radial design (which simply provides a minimum-sized connection for each wind farm). This redundancy translates into higher capital costs for the coordinated parts of the design. The economic optimiser used in the design process considers the cost of replacement energy if offshore wind power cannot get to shore.

Based on the assumptions used in our economic modelling, the costs of the offshore network infrastructure required in the recommended design would be around £32 billion. This compares to around £24.4 billion for the optimised radial design (giving the differential of £7.6 billion). These costs are based on high-level assumptions, and we would expect them to change during the Detailed Network Design stage as routing and technology choices are decided.

The economic comparison between the optimised radial design and the recommended design is shown in *table 5* below

Cost Type	Cost Description	Most economic option	Cost differential (£bn)
New offshore/on shore capital and operational costs	The cost of constructing and operating all offshore assets to connect the generators to the system, plus any onshore works essential to connect in a manner compliant with relevant standards that are not NOA works. The costs of new offshore transmission network infrastructure are based on component unit costs derived from data provided by equipment suppliers. The input cost assumptions have been provided to in scope developers and OTNR stakeholders.	Optimised radial	£7.6bn
NOA boundary reinforcement costs	The cost of constructing works that are required for the connection of the generators and/or boundary reinforcement, which have previously been included in a NOA assessment. These costs are broadly comparable between all options considered.	Equivalent ¹⁶	-
Constraint costs	The cost of taking balancing actions to redispatch generation to prevent unacceptable network flows across parts of the network that have limited capacity. These consist of actions to decrease generation output in one part of the country, and	Recommended	£13.1bn

¹⁶ The costs and scope of onshore boundary reinforcements are broadly comparable between the two designs though it should be noted that there is a limit to the amount of boundary reinforcement that can be delivered in the lead up to 2030. This is due to the time taken to deliver large scale infrastructure projects, as well as other factors including supply chain and network access. However, if these delivery constraints were removed and more network reinforcement options were available, the HND would reduce the requirement to invest in onshore infrastructure. This is demonstrated through the significant reductions in constraint costs it provides compared to the optimised radial design.

actions to increase generation output in a different part of the country.

Total costs	Recommended	£5.5bn ¹⁷
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4.7.2 Deliverable and operable

Both the optimised radial design and the recommended design are deliverable and operable and provide the opportunity for wind farms to be able to connect by 2030. The recommended design is more complex, and the longer, and more complex, HVDC links in the recommended design are unlikely to be complete by 2030 in the absence of major acceleration in the supply chain. However, both designs offer the potential to get generation connected by 2030, and increase capacity progressively, given timely allocation of responsibilities, delivery of the commitments in the BESS and a coordinated and concerted effort from all parties. Our analysis has not identified any significant operability challenges with either design, although the DND will explore this further for the recommended design.

4.7.3 Environmental impact

The nature of the infrastructure required means the HND cannot be without impact. However, careful consideration has been given to the design to minimise cumulative environmental impacts.

The recommended design reduces the footprint of the cables being laid to shore by up to a third due to the use of HVDC technology. However, the total length of cable route corridors in the offshore network is slightly higher in the recommended design than in the optimised radial design. This is due to the additional cable needed to provide north to south routes on the east and west coasts. These cable routes are beneficial because they minimise network constraints, enabling more zero carbon wind energy to be utilised and offset the need for less environmentally friendly energy generation. In comparison to the radial design, the recommended design saves 2 million tonnes of CO₂ between just 2030 and 2032. It also reduces the need for future infrastructure, which would be needed to achieve the same emission reductions and does this while minimising environmental impact through designing the offshore network in a coordinated way.

Both designs take account of environmental constraints, and the recommended design seeks to minimise the impact on sensitive habitats through the coordination of wind farm connections to shore. Cable route corridors can avoid many of the identified environmentally sensitive features, however this is not possible in all cases.

For the recommended design, further consideration will need to be given to cable routing in the DND stage to minimise environmental and consenting risks. While the environmental mitigation hierarchy should be followed, it is likely that environmental compensation measures will be required, assuming no viable alternatives are identified in the DND stage. This might include measures at a regional or national level. However, in the first instance measures to alleviate pressures on and protect sensitive habitats both within and outside Marine Protected Areas (MPAs) should be considered, and compensation seen as a last resort.

4.7.4 Community impact

The rapid development of offshore wind is already having an impact on coastal communities. The HND has sought to minimise the impact on communities in balance with the other three design objectives.

The recommended design reduces the impact on local communities, for example, relating to the volume of transmission network infrastructure in some areas, the cumulative impact associated with multiple connections, and onshore transmission reinforcements that are driven by the offshore

¹⁷ The £5.5bn figure is calculated by subtracting £7.6bn from £13.1bn.

network. There is also the potential for the route corridors to avoid many of the identified community constraints; specific route corridors will be defined as part of the DND.

While the HND has tried to reduce community impacts and reduce the number of cable routes to shore, it is not possible to fully eliminate community impacts. At Peterhead and Creyke Beck there is a significant amount of new infrastructure being proposed in addition to the HND which will have a cumulative impact on communities in these regions. There are also new coastal sites being proposed on the West Coast of Scotland and in Lincolnshire which will impact on coastal communities. However, the recommended design provides community benefits by reducing the number of connection locations in North West England (due to the shared cable corridor to Penwortham), and avoiding further connections into East Anglia at this time beyond those already planned, as there is already significant planned and existing offshore transmission infrastructure in this region.

Further detail about the optimised radial design can be found in section 7.

5.Regional overview

This chapter provides an outline of each of the four geographic regions considered in the Holistic Network Design (HND):

- North West Region (including West Scotland)
- South West Region
- East Coast Region
- North Scotland Region





Finally, this chapter provides a system-wide view of the wider transmission reinforcements required as part of the HND. These include the wider works at interface points determined to be essential to delivering 50GW by 2030, as well as the wider network reinforcements required by 2030 to facilitate economic and efficient power flow across the system.

Each regional section presents the recommended design and alternative coordinated designs, as well as the optimised radial design.

Note that the recommended design for the North Scotland Region uses radial connections only. This is because a coordinated design for the in-scope wind farms in this region did not perform as well against the network design objectives as the radial design.

The benefits of each chosen design are discussed, against the four network design objectives (Table 6) which were introduced previously:

Table 6 - the four network design objectives

Objective	Description
 Economic and efficient costs	The network design should be economic and efficient
 Deliverability and operability	The network design should be deliverable by 2030 and the resulting system should be safe, reliable and operable
 Environmental impact	Environmental impacts should be avoided, minimised or mitigated by the network design, and best practice environmental management incorporated in the network design
 Local community impact	Local community impacts are avoided, minimised, or mitigated by the network design

5.1 North West Region

The North West Region includes three Irish Sea projects from Crown Estate Leasing round 4 as well as one project off the West Coast of Scotland.

Spanning the three nations of Great Britain, the region includes large parts of the onshore transmission network.

5.1.1 Projects in scope

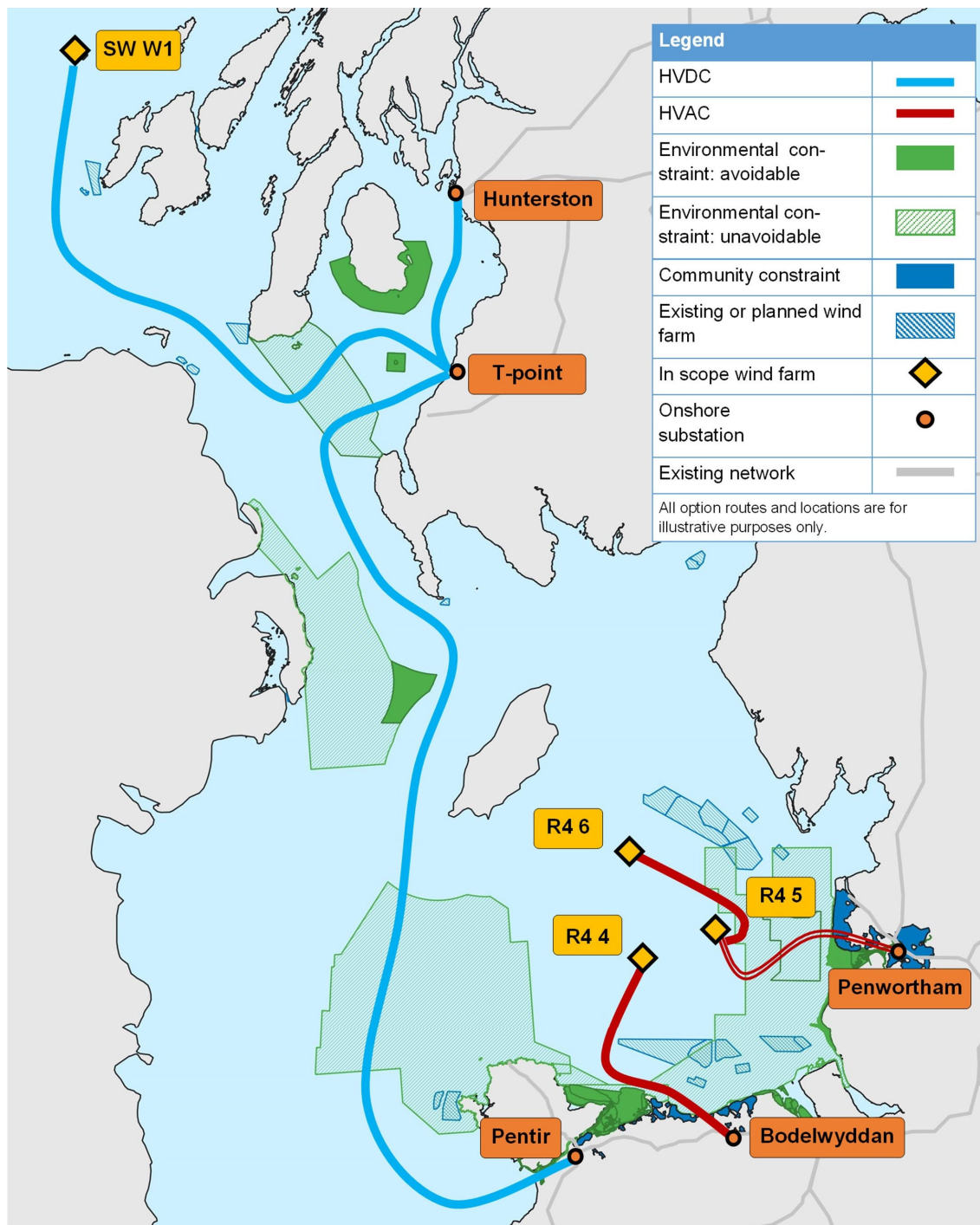
The North West region design connects the following four projects *Table 7*:

Project name	Capacity (MW)
SW_W1	2000
R4_4	1500
R4_5	480
R4_6	1500

There is also a potential opportunity to integrate the planned LirIC interconnector from Scotland to Northern Ireland into the proposed design; more detail about this is provided in section 5.1.9 Coordination with LirLC interconnector.

5.1.2 Offshore design

The recommended offshore design for the North West Region is shown in Figure 11



The recommended design in the North West Region is formed of a connection through offshore waters between Scotland and Wales and connections from the Irish Sea to the North-West of England and North Wales. It includes a High Voltage Direct Current (HVDC) connection from wind farm SW_W1 to a T-point located in the vicinity of South Ayrshire, which further connects to Hunterston and Pentir. This delivers an offshore connection between Scotland and Wales, which bypasses onshore grid constraints and enables transmission of electricity from Scotland to the south, towards areas of higher electricity consumption. HVDC technology needs to be used for this due to the long cable length and large capacity. Due to environmental and deliverability constraints, we have assumed that this cable route approaches Pentir from the south, although route corridors will be determined at the Detailed Network Design stage.

In this design SW_W1 is connected to a T-point, which is assumed to be a location in South Ayrshire on the Scottish mainland. It is possible for the T-point to be offshore or onshore: an offshore T-point would lead to higher capital costs but avoid the environmental impact of cables connecting to shore. An onshore T-point would lead to lower capital costs but there would be an environmental impact of cable landfall. The location of the T-point will be considered further in the Detailed Network Design stage.

When SW_W1 is generating at full output, the link to Pentir will enable this power to be transported south to areas of higher demand, bypassing key constrained boundaries¹⁸ on the England-Scotland boundary (B6) and in the North of England (B7a).

When SW_W1 is not generating at full output, the links from the T-point to Hunterston and Pentir will act as a transmission reinforcement, enabling excess onshore generation output from Scotland to be transported to meet demand further south in Great Britain.

The links to Hunterston and Pentir therefore provide a wider transmission system benefit and avoid the need for an additional north-south link. There is also potential for other projects to connect into the T-point. We would therefore envisage the possibility that the T-point to Hunterston and/or Hunterston-Pentir circuits could form part of the onshore transmission system and would therefore be delivered and operated through the appropriate mechanisms for onshore transmission assets. The SW_W1 developer could therefore only be responsible for the link from SW_W1 to the T-point, with the other circuits being described as TO works within its connection agreement. However, as this situation is not specifically clarified within the Office of Gas and Electricity Market's (Ofgem) May 2022 Minded-to Decision document, further analysis on the primary function of the assets will be needed to confirm this, as envisaged by Ofgem.

The inclusion of a T-point within the design also makes the design more future proof by providing opportunities to accommodate additional connections.

For the R4_5 and R4_6 wind farms, we are recommending radial connections with a shared cable corridor. The shared onshore and offshore cable corridor and landfall minimise the impact of the cables on the environment and local community. This is consistent with the developers' proposal and is expected to limit deliverability risks as a result of a smaller, simpler offshore platform design.

For the R4_4 wind farm, we are recommending a radial connection into Bodelwyddan.

The connections used in the design are described in *table 9*. While these connections represent our current proposal for the design, they may change in further stages of the design process.

Our choice of cable technology (HVDC or High Voltage Alternating Current (HVAC)) in this document has been made in the first instance on the optimal economic design solution based on our assumptions as set out in the Network design guidelines and network overview section. The choice between AC and DC cabling becomes less clear cut in the upper length range for AC cables (150-200 km) and will depend on other project specific factors, including environmental, technical and community constraints. The final choice of technology will be made as part of the Detailed Network Design phase.

¹⁸ Boundaries are explained here: <https://www.nationalgrideso.com/research-publications/etys/etys-and-the-network-planning-process>

Table 8 – Connections table

Node 1	Node 2	Circuit capacity (MW)	Technology ¹⁹	Distance (km) ²⁰
SW_W1	T-point	2000	DC 525 kV XLPE pair with co-axial metallic return	180
Hunterston*	T-point	2000	DC 525 kV XLPE pair with co-axial metallic return	55
T-point	Pentir	2000	DC 525 kV XLPE pair with co-axial metallic return	315
R4_4	Bodelwyddan	1500	AC 3-4 cables	75
R4_5	Penwortham	480	AC 1 cable	60
R4_6	Penwortham	1500	AC 3 cables	95

*The termination point location will be finalised at a later stage, see section 6.3 Next Steps

5.1.3 Onshore works

The design requires onshore works at the interface sites (Hunterston, Pentir, Bodelwyddan and Penwortham) as well as wider sites.

Table 9 – Onshore works required

Substation	Work required
Bodelwyddan	Extension of the existing Bodelwyddan 400 kV substation to establish bays for connection to the offshore network.
Penwortham	Extension of the existing Penwortham 400 kV substation to establish bays for connection to the offshore network.
Pentir	Extension of the existing Pentir 400 kV substation to establish bays for connection to the offshore network.
Hunterston	Extension of the existing 400 kV substation building, including additional bays for connection to the offshore network. The extent of the building extension will only be confirmed during the detailed design stage.

The T-point will require design works either onshore or offshore, these will be studied in the Detailed Network Design (DND) phase.

The design requires works at other sites including uprating, reconductoring and reinforcement. Wider onshore works are described in the system-wide view section 5.5.

¹⁹ AC cable numbers assume 500 MW is possible at 275 kV. Longer distances may require an additional parallel cable to account for reactive power losses.

²⁰ The distances shown relate to an indicative route. Route corridors will be determined as part of the Detailed Network Design process.

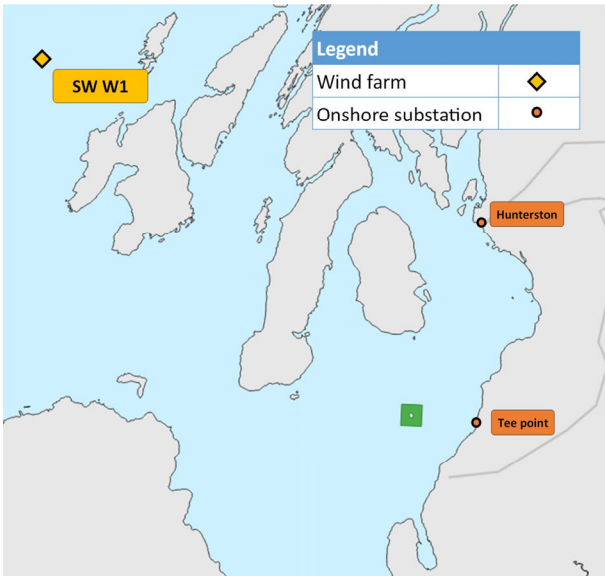
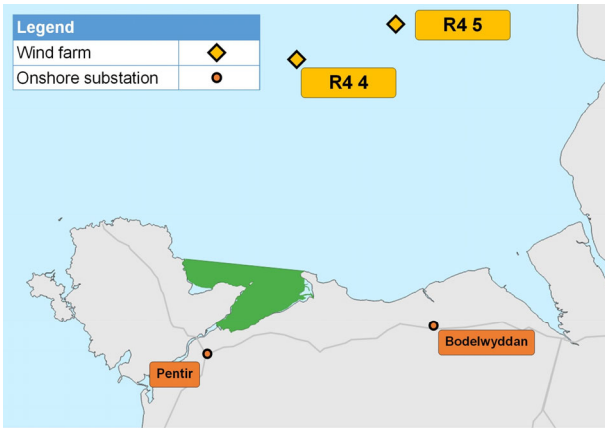
5.1.4 Environment and community constraints

Although route corridors are not defined at this stage of the process, the HND has been developed with a view to avoiding the most significant environmental and community constraints. These include constraints with features expected to be sensitive to impacts from cabling or infrastructure where the risks of cabling would be significant.

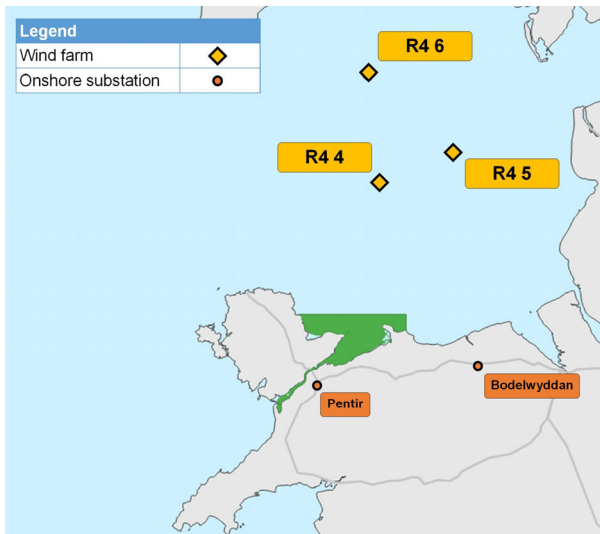
We have assumed that Pentir is approached from the south; this reflects feedback we have received from stakeholders that this would be preferable from an environmental and deliverability perspective. However, route corridors will not be defined until the DND stage.

Table 10 lists the significant constraints which it has been possible to avoid in the HND within the region. As in the regional overview, avoidable constraints are shown in solid fill whereas unavoidable constraints are cross hatched.

Table 10 – Significant constraints

Constraint Map	Description
<p>Constraint 1</p> 	<p>Ailsa Craig</p> <p>Ailsa Craig Special Protection Area (SPA) is an island in the Firth of Clyde designated for its importance to the European Herring gull, Lesser Black-backed gull, Northern gannet, Black-legged kittiwake and Common murre.</p>
<p>Constraint 2</p> 	<p>Large Shallow Inlets and Bays</p> <p>The North Wales coast contains submerged or partially submerged sea caves and large shallow inlets and bays. Large shallow inlets and bays are habitat complexes, which comprise an interdependent mosaic of subtidal and intertidal habitats that have been identified as important, sensitive habitats that should be key considerations for cabling activities.</p>

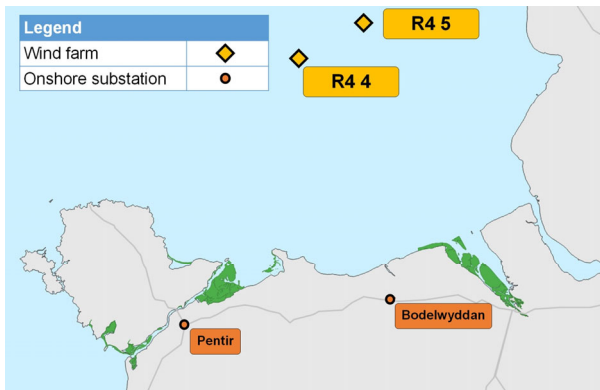
Constraint 3



Menai Strait and Conwy Bay Special Area of Conservation (SAC)

The Menai Strait and Conwy Bay SAC is designated for its marine area, sandbanks, mudflats and sandflats and reefs. The site also contains submerged or partially submerged sea caves and large shallow inlets and bays. The SAC is avoided in the southern approach to Pentir but cannot be avoided in a northern approach.

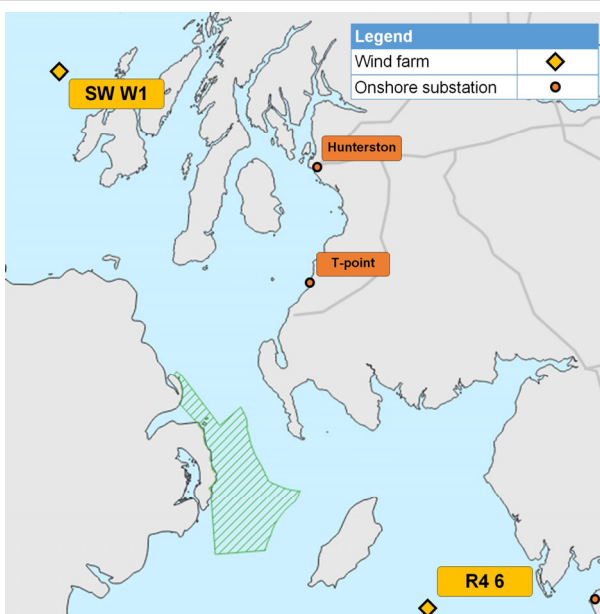
Constraint 4



Mudflats and Sandflats

These intertidal mudflats and sandflats on the North Wales coastline are submerged at high tide and exposed at low tide. These have been identified as important, sensitive, habitats that should be key considerations for cabling activities. Within this habitat, plant and animal communities present vary according to the type of sediment, its stability and the salinity of the water. These are also avoided in the southern approach to Pentir but might be affected by the northern approach.

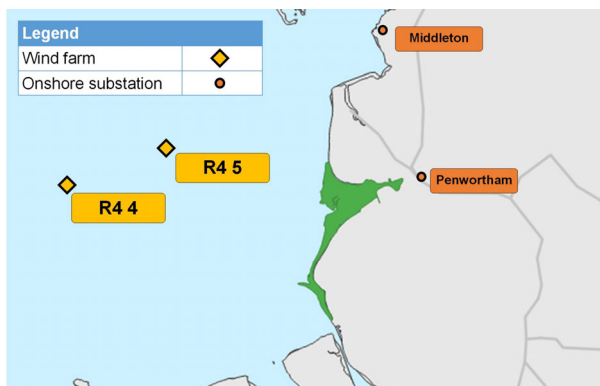
Constraint 5



North Channel SAC

The North Channel SAC is designated due to its protection for harbour porpoise. Habitats within the site consist mainly of coarse or sandy sediments, with patches of rock and mud.

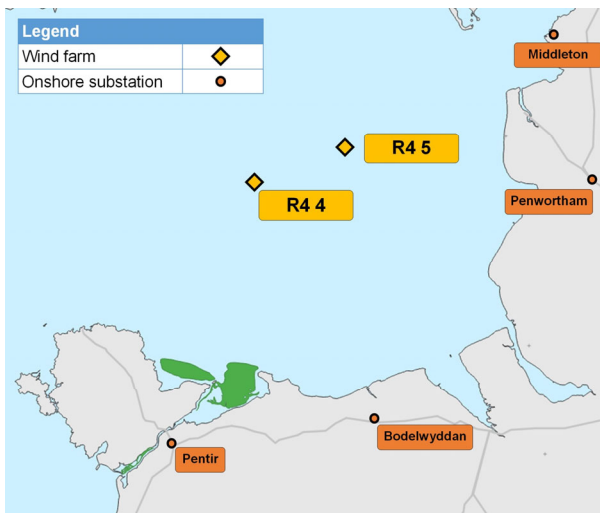
Constraint 6



The Ribble and Alt Estuary SPA

The habitats supporting the Ribble and Alt Estuary SPA are identified by Natural England (NE) and the Joint Nature Conservation Committee (JNCC) as sensitive to cabling. The extensive areas of sandflats, mudflats and saltmarsh of the SPA can be avoided by routing the cable north of the Ribble estuary. The site supports breeding Ruff, Common tern and Lesser Black-backed gull.

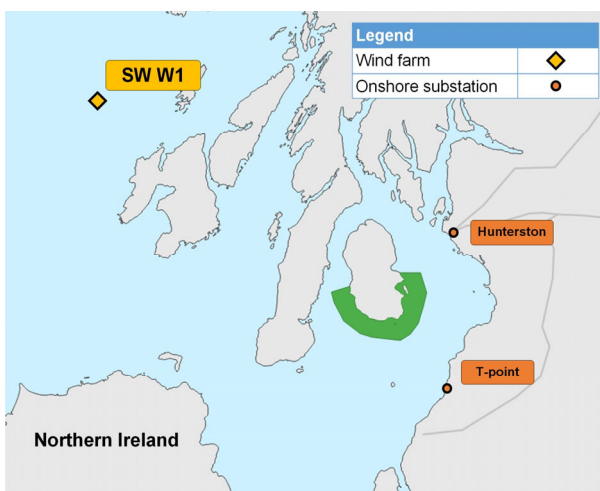
Constraint 7



Sandbanks

The sandbanks of the North Wales coastline, which consist of sandy sediments that are permanently covered by shallow sea water, typically at depths of less than 20m. The diversity and types of community associated with this habitat are determined particularly by sediment type together with a variety of other physical, chemical and hydrographic factors. They have been identified by NRW as key considerations for cabling activities.

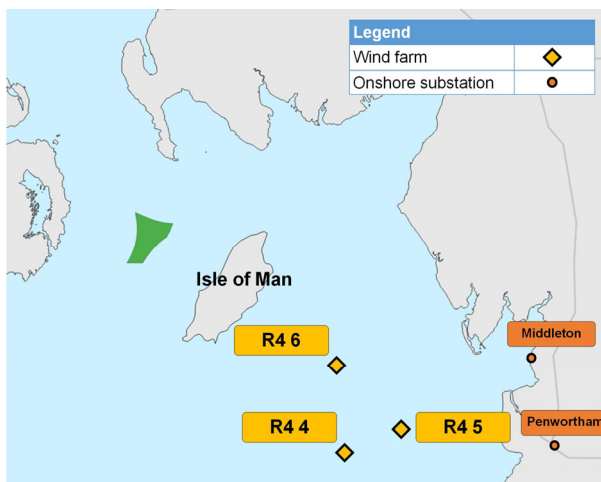
Constraint 8



South Arran

The waters around the southern end of Arran are home to a diversity of habitats and species characteristic of the more exposed areas of the Clyde Sea. The site contains a patchwork of maerl beds, kelp and seaweeds on sediments, burrowed mud, coarse shell gravels with burrowing bivalves, and seagrass beds.

Constraint 9

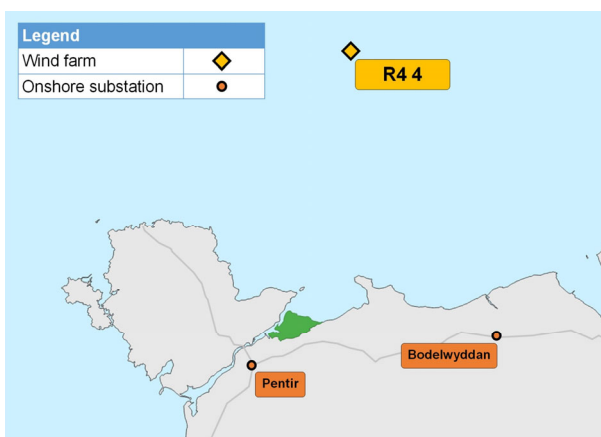


South Rigg MCZ

The South Rigg Marine Conservation Zone (MCZ) contains a variety of habitats (predominately mud and sand with areas of coarse and mixed sediments, as well as rocky habitats) which support a wide range of species.

There is the potential to avoid the MCZ within the route corridors.

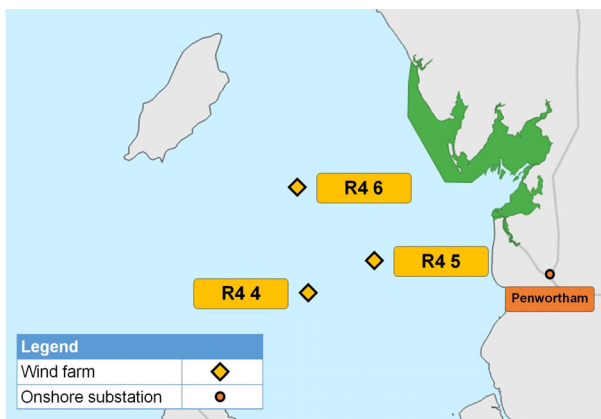
Constraint 10



Lavan Sands, Conway Bay SPA

The Traeth Lafan/ Lavan Sands, Conway Bay SPA is designated for its important wintering area for Eurasian oystercatcher and is a breeding site for Eurasian curlew. It also supports the passage of great crested grebe. The SPA is avoided by a southern approach to Pentir.

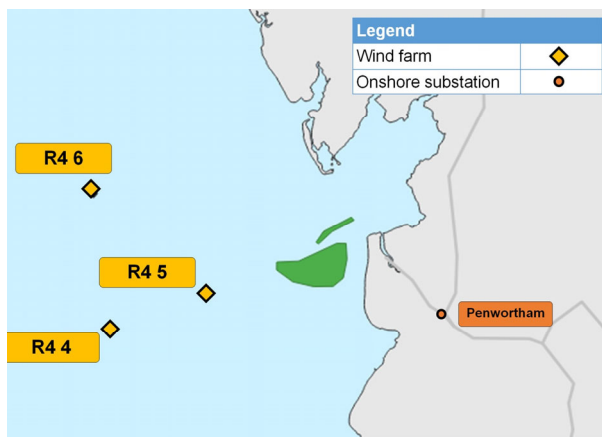
Constraint 11



Morecambe Bay SAC

The Morecambe Bay SAC is designated for its range of marine habitats including coastal sand dunes, estuaries, mudflats and sandflats, and large shallow inlets and bays. Protected species are also present at the site such as the great crested newt.

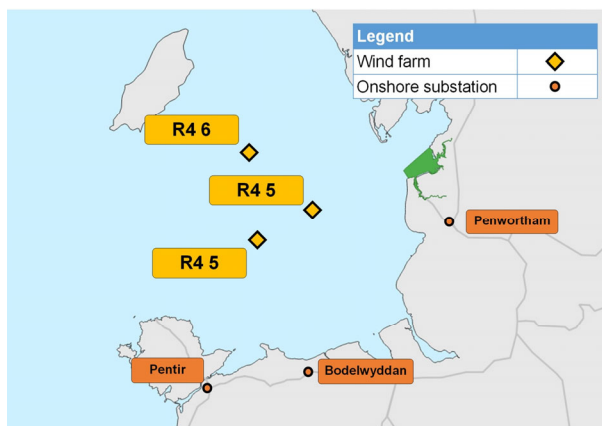
Constraint 12



Shell Flat and Lune Deep SAC

The Shell Flat and Lune Deep SAC is designated for its sandbanks which are covered by seawater all the time and reefs. The bank is an example of a Banner Bank, which are generally only a few kilometres in length with an elongated pear/sickle-shaped form, located in water depths less than 20 m.

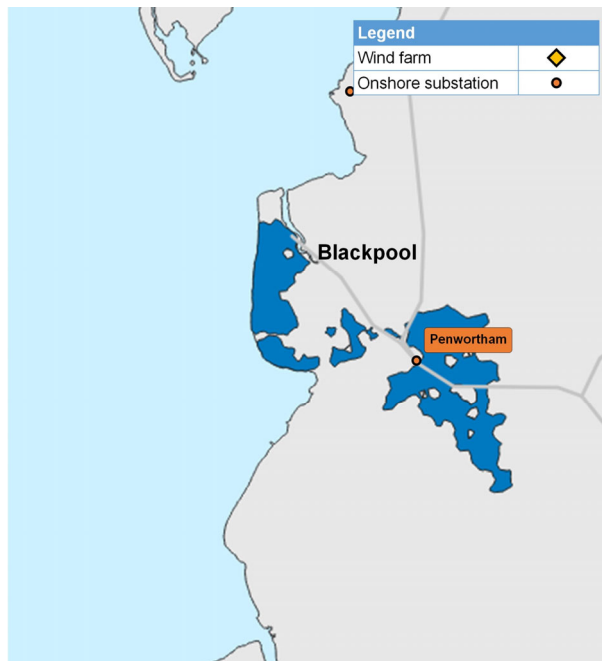
Constraint 13



Wyre-Lune MCZ

Wyre-Lune MCZ is an inshore site that covers an area of approximately 92 km². It is located in the southern part of Morecambe Bay. The site is designated for smelt, which were once widespread in estuaries in the UK but have declined considerably over the past 200 years.

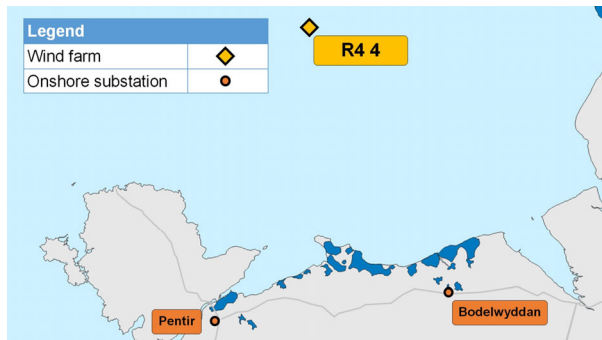
Constraint 14



Major settlements

The major urban areas (Blackpool and Lytham St Annes) can be avoided within the route corridors; however the Penwortham route corridor would require a route through the crossing of Blackpool Airport land area between the settlements after landfall.

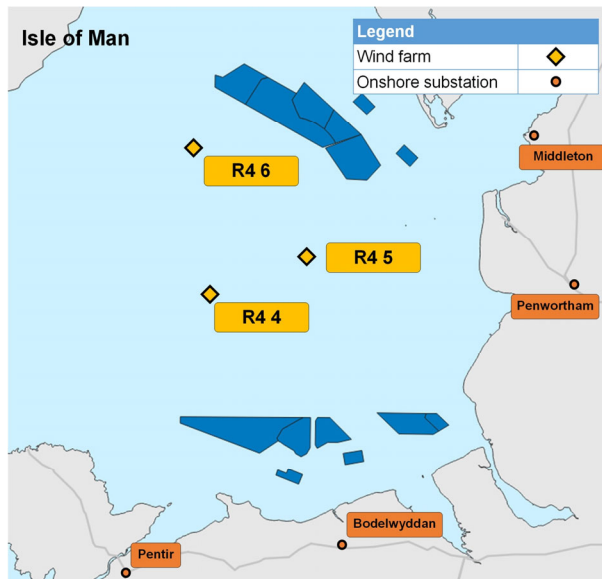
Constraint 15



Major settlements

There are major settlements and urban areas on the north coast of Wales that are likely to be close to landfall for approaches to Bodelwyddan and Pentir. These include Abergele and Llanddulas.

Constraint 16



Existing or proposed wind farms

Potential cable routes from R4_4 to Bodelwyddan extend south west to avoid the Awel y Mor proposed array area. There is also potential to avoid the existing wind farm and Rhyl Flats within route corridors.


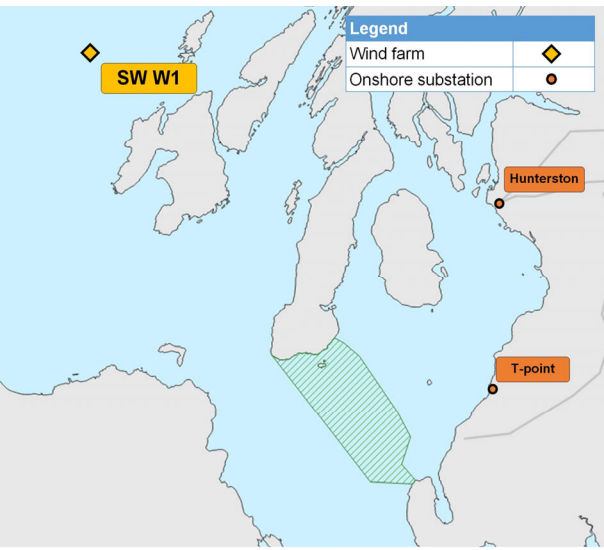

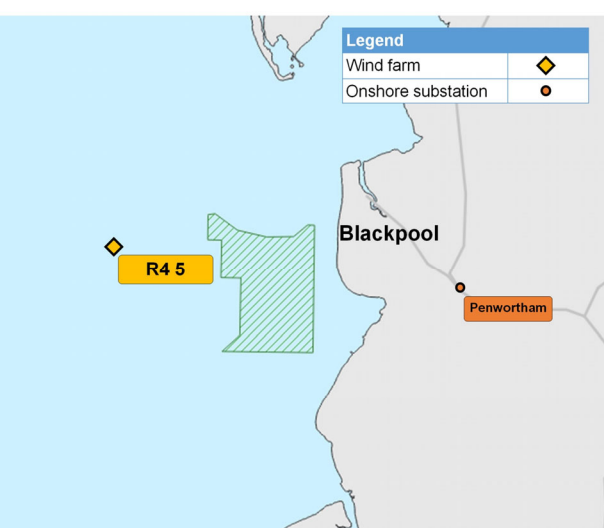
5.1.5 Unavoidable environmental constraints

There are some environmental constraints which cover extensive areas or are close to the point of the subsea cables making landfall that are unavoidable due to the locations of wind farms and onshore substations. *Table 11* lists the significant constraints that it has not been possible to avoid in the HND corridors within the region.

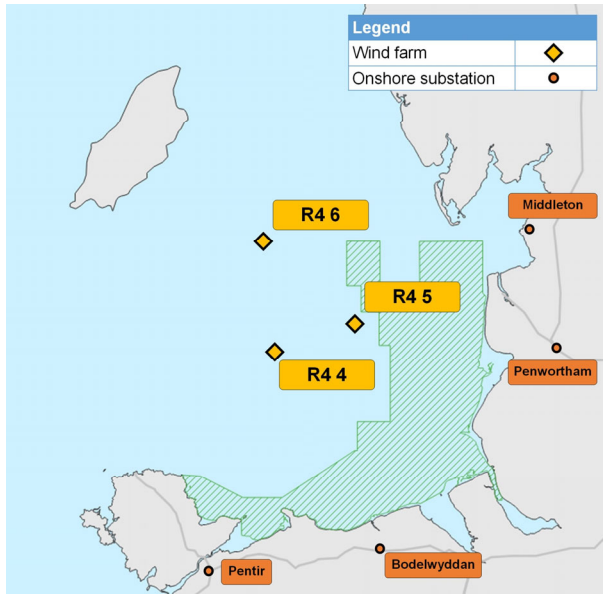
At this strategic route selection stage, the primary method of mitigation was to, as far as was possible, avoid features and/or environmental designations that were identified by the relevant statutory bodies as sensitive to cabling operations. In some instances, these environmental or physical features, or infrastructure, formed linear constraints to cable route corridors, that could not be circumvented. In these cases, consideration was given to whether these features could be crossed over (e.g., infrastructure) with physical protection or under, by directional drilling (environmental areas).

More detailed site surveys, routing and consideration of mitigation measures will be required at the detailed network design stage to further avoid identified specific sensitivities or features within designated areas that have not been avoided, and to identify appropriate crossing locations and techniques. At the detailed design stage further mitigation such as limiting the seasonality of working may also be considered to minimise the potential impacts of cable laying operations in areas that are not practical to avoid. Beyond this, compensatory measures may be required at the DND stage to offset identified impacts.

Table 11 – Unavoidable environmental constraints

Constraint	Map	Description
<p>Constraint 17</p> 		<p>Clyde Sea Sill MPA</p> <p>Clyde Sea Sill MPA is designated for its importance to black guillemots, offshore sand and coarse sediment communities. It is also of geological interest. The Clyde Sea Sill cannot be avoided for approaches to Hunterston.</p>
<p>Constraint 18</p> 		<p>Fylde MCZ</p> <p>The site is designated for the extensive areas of subtidal sediment habitats and plant and animal communities present. These sites are good representations of the seabed habitats and communities found on the eastern side of Liverpool Bay.</p> <p>The Fylde MCZ cannot be avoided for approaches to Penwortham. It has not been identified by Natural England (NE) and the Joint Nature Conservation Committee (JNCC) as having habitats with key sensitivities to offshore wind farm cabling.</p>

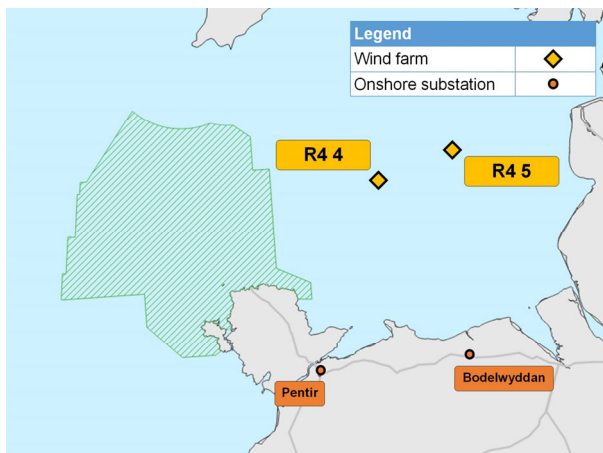
Constraint
19



Liverpool Bay SPA

Liverpool Bay SPA encompasses marine areas supporting large aggregations of wintering red-throated diver and common scoter as well as important marine foraging areas of little terns breeding within The Dee Estuary SPA, and foraging areas of Common terns breeding at the Mersey Narrows and North Wirral Foreshore SPA.

Constraint
20



North Anglesey Marine SAC


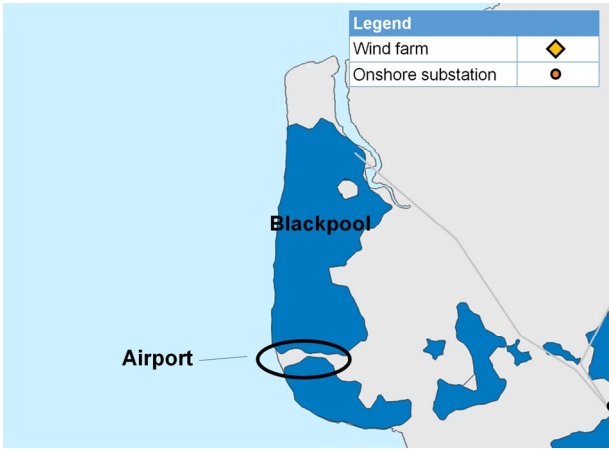

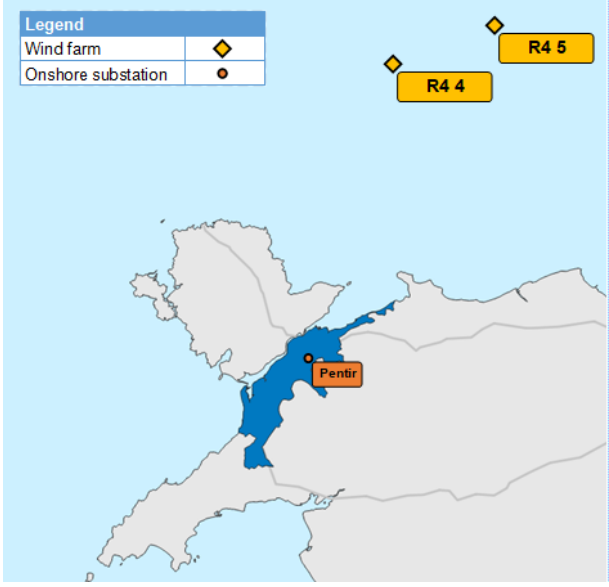
The North Anglesey Marine SAC is designated due to the area being an important site for Harbour porpoise. The North Anglesey Marine SAC overlaps a range of other habitats, including coarse and sandy sediments, rock, and mud. The SAC is avoided in the Northern approach to Pentir but cannot be avoided in a southern approach.

5.1.6 Unavoidable community constraints

Table 12 lists the significant community constraints that it not expected to be possible to avoid in the region. These include rural areas close to the substations and built-up areas close to Blackpool.

The significant community constraints within this region include wrecks, scheduled monuments and urban areas. Most of these constraints can be avoided however, to avoid the urban areas around Blackpool, landfall will potentially be required near Blackpool Airport. Penwortham substation is located within the Lancashire and Amounderness Plain landscape which, due to existing development in the area, is expected to be less sensitive to planned developments. The Ayrshire coastal path would potentially be difficult to avoid for a T-point in South Ayrshire.

Table 12 – Unavoidable community constraints

Constraint	Map	Description
Constraint 17 		Blackpool Airport To avoid the urban areas around Blackpool, landfall will be required at Blackpool Airport.
Constraint 18 		Pentir rural areas Pentir Substation is located within the Arfon area landscape, which is the lowland area bounded on one side by the Menai Strait and on the other by the Snowdonia foothills and adjacent glaciated valleys.

While these tables do not describe all the environmental and community constraints in the North West Region, they provide an overview of the significant constraints that influenced the network design, including constraints that are very close to the interface points and those which have been identified by stakeholders as being particularly sensitive to cabling operations, and thus have significant potential to impact the viability of cable routes through the area. These constraints also highlight the sensitive areas that have been identified as difficult to avoid in designing cable route corridors.

5.1.7 Potential changes to the offshore design

At this stage in the development of the HND it is not possible to detail every aspect of the design. This section outlines the possible alterations that will be considered as part of the DND. For the North West Region there are three possible alterations.

5.1.8 T-point location

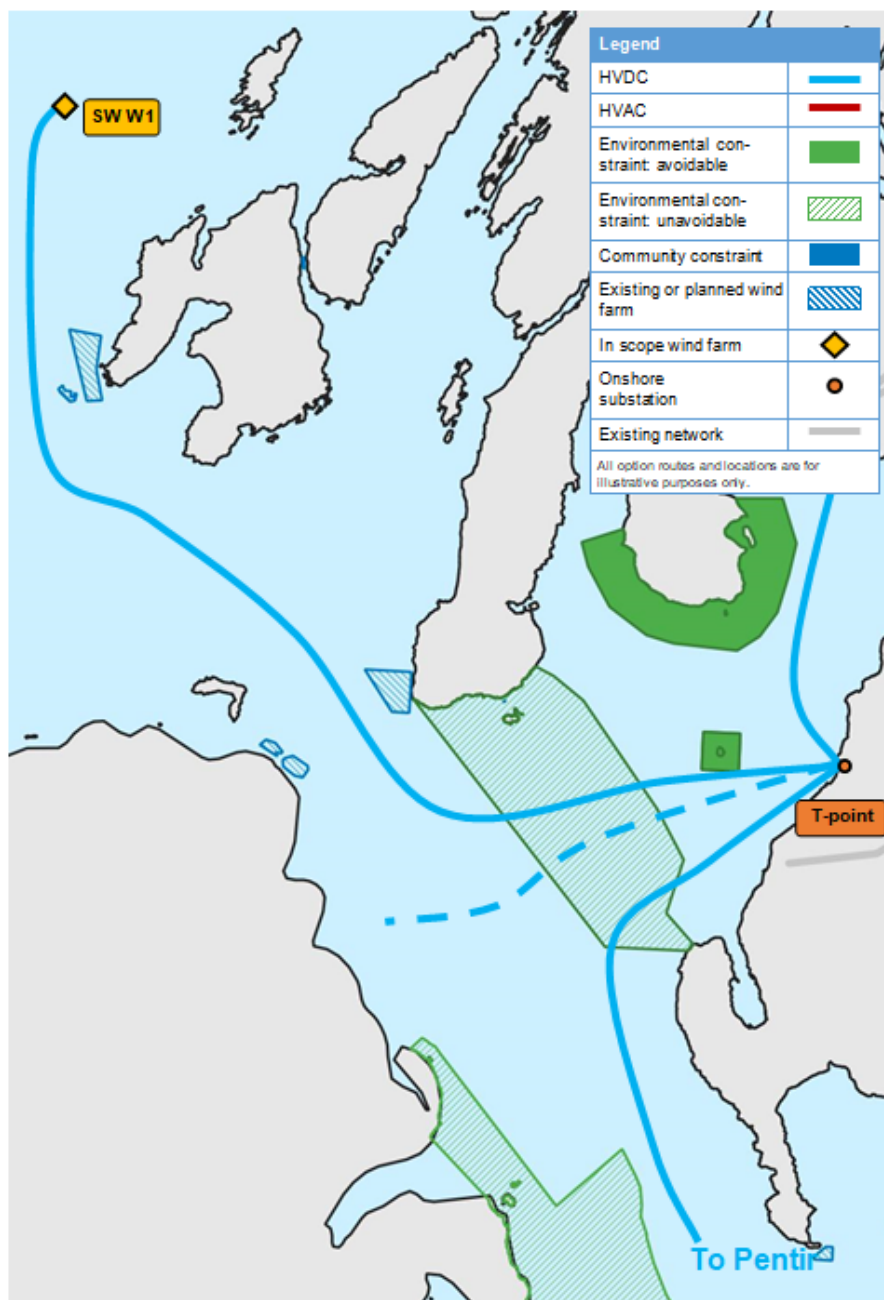
Alternative locations for the T-point/switching station for the multi-terminal HVDC connection between SW_W1, Hunterston and Pentir were considered, including onshore switching stations at various locations in South Ayrshire and offshore platforms.

The high-level initial assessment done for the HND identified a viable location in South Ayrshire. Further work will be required in the DND stage to identify the optimal location for this switching station. Options within South Ayrshire will be considered, as well as offshore locations in the Clyde.

5.1.9 Coordination with LirIC interconnector

The LirIC interconnector is currently planned to be a HVDC connection from Kilroot in Northern Ireland to Kilmarnock South in Scotland. This would intersect with the proposed coordinated design in the North West Region.

Figure 12 - T-Point and LirIC (LirIC shown in dotted line)



It is possible that a favourable economic, environmental and community outcome could be achieved by coordination with the LirIC interconnector. This could be achieved by connecting the LirIC interconnector to the T-point, rather than Kilmarnock South, resulting in one fewer HVDC converter and less cable. For this to be possible, LirIC would need to adopt the same operating voltage and bipole arrangement as the proposed SW_W1 to Hunterston and Pentir HVDC circuit.

This would lead to environmental and community benefits due to fewer landing points and less offshore infrastructure. However, it would introduce additional complexity at the T-point.

For this to be possible, further technical design and economic analysis will need to be carried out; we are currently progressing this work. The regulatory and commercial aspects of this solution would still need to be developed.

5.1.10 Alternative to Hunterston

Kilmarnock South is also under consideration as an alternative to Hunterston. The offshore route corridor and coastal section to Kilmarnock South are moderately constrained environmentally, and lightly constrained onshore. Our analysis showed that a connection to Kilmarnock South would be approximately £25 million more expensive than Hunterston; this differential results from the costs of the offshore infrastructure and works required at each of the substations.

For the purposes of our economic analysis, there are no network boundaries between Hunterston and Kilmarnock South. From a Great Britain wide perspective, there is therefore not expected to be a significant difference in system constraint costs or boundary reinforcement costs associated with connections to each of these substations.

In order to facilitate power flows on the multi-terminal HVDC link south from the SP Transmission area during periods when the SW_W1 generation is at less than full load, a connection at Hunterston relative to Kilmarnock South may advance (in time) the requirement for onshore reinforcement work and potentially increase its scope. Further analysis will need to be undertaken to confirm which is the preferred site.

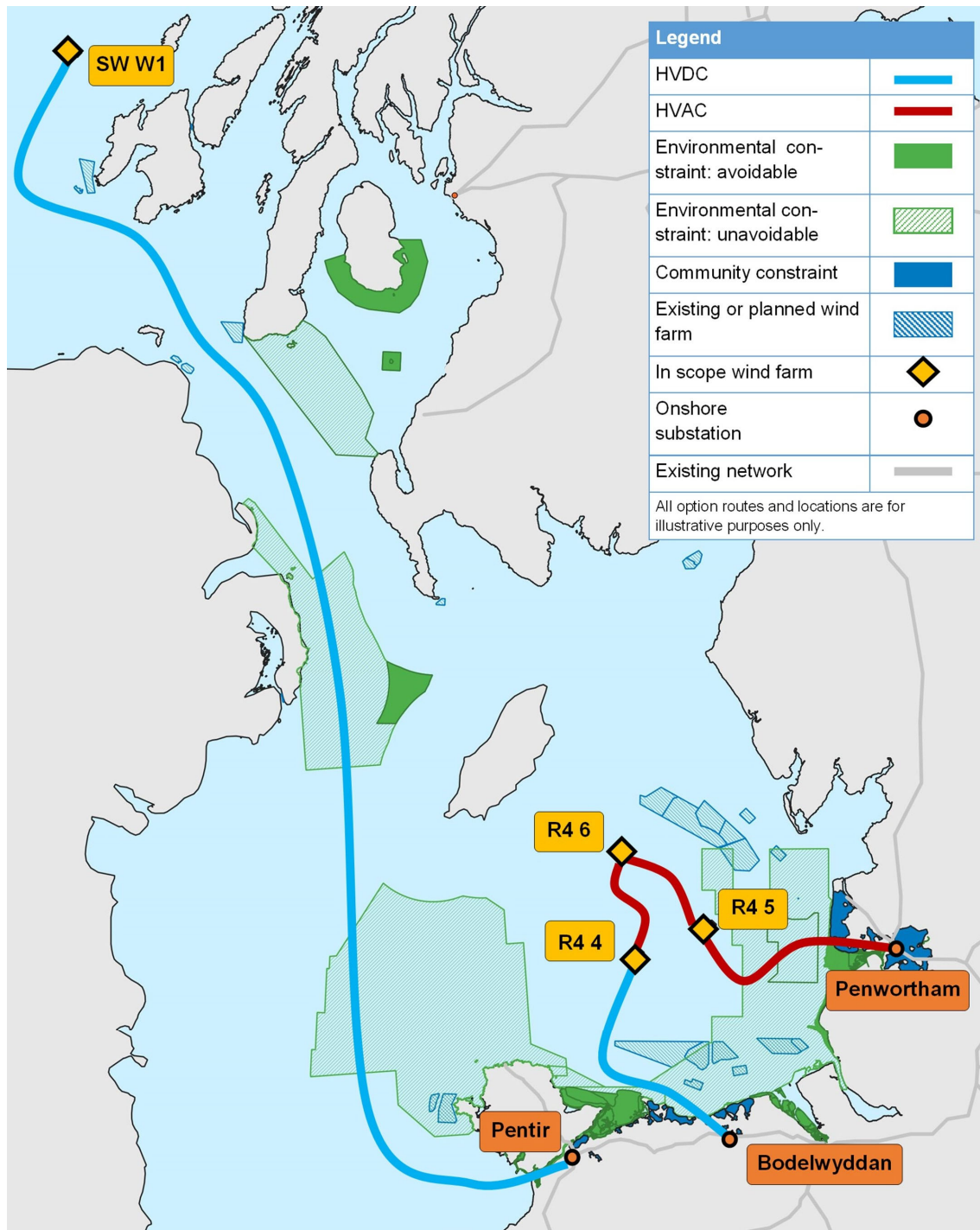
5.1.11 Other offshore designs and variations we considered

As part of the HND process, several design options were considered. This section summarises alternative designs that were not selected for the HND. For the North West Region, two alternative options were considered in detail. The chosen design was considered against an alternative coordinated design and the optimised radial design. Several variations of the chosen design were also considered.

5.1.11.1 North West alternative coordinated design

The alternative coordinated design for the North West Region is shown in *Figure 13* below:

Figure 13 - North West alternative design



The alternative coordinated design for the North West is £1080 million more expensive overall than the recommended design. This is mainly due to higher capital costs due to additional infrastructure in the Irish Sea. The costs and scope of onshore boundary reinforcements are broadly comparable between the two designs. These figures were calculated by changing the recommended design in the North West to the alternative coordinated design, but keeping the rest of the offshore design the same as the recommended design.

The alternative coordinated design does not have the link to Hunterston. This would result in higher constraint costs, as the design does not provide additional capacity between mainland Scotland and North Wales to be utilised in the event of low output from SW_W1. However, the alternative coordinated design provides a connection between North Wales and the North West, which would lead to a reduction in constraint costs.

To maintain full controllability of the coordinated arrangement in the Irish Sea, at least one of the links in the ring configuration would need to be HVDC; in this design this is the link from R4_4 to Bodelwyddan. The alternative coordinated design would therefore include more infrastructure in the Irish Sea, which would lead to a significant increase in capital costs, which would only be partly offset by the removal of the T-point and link to Hunterston.

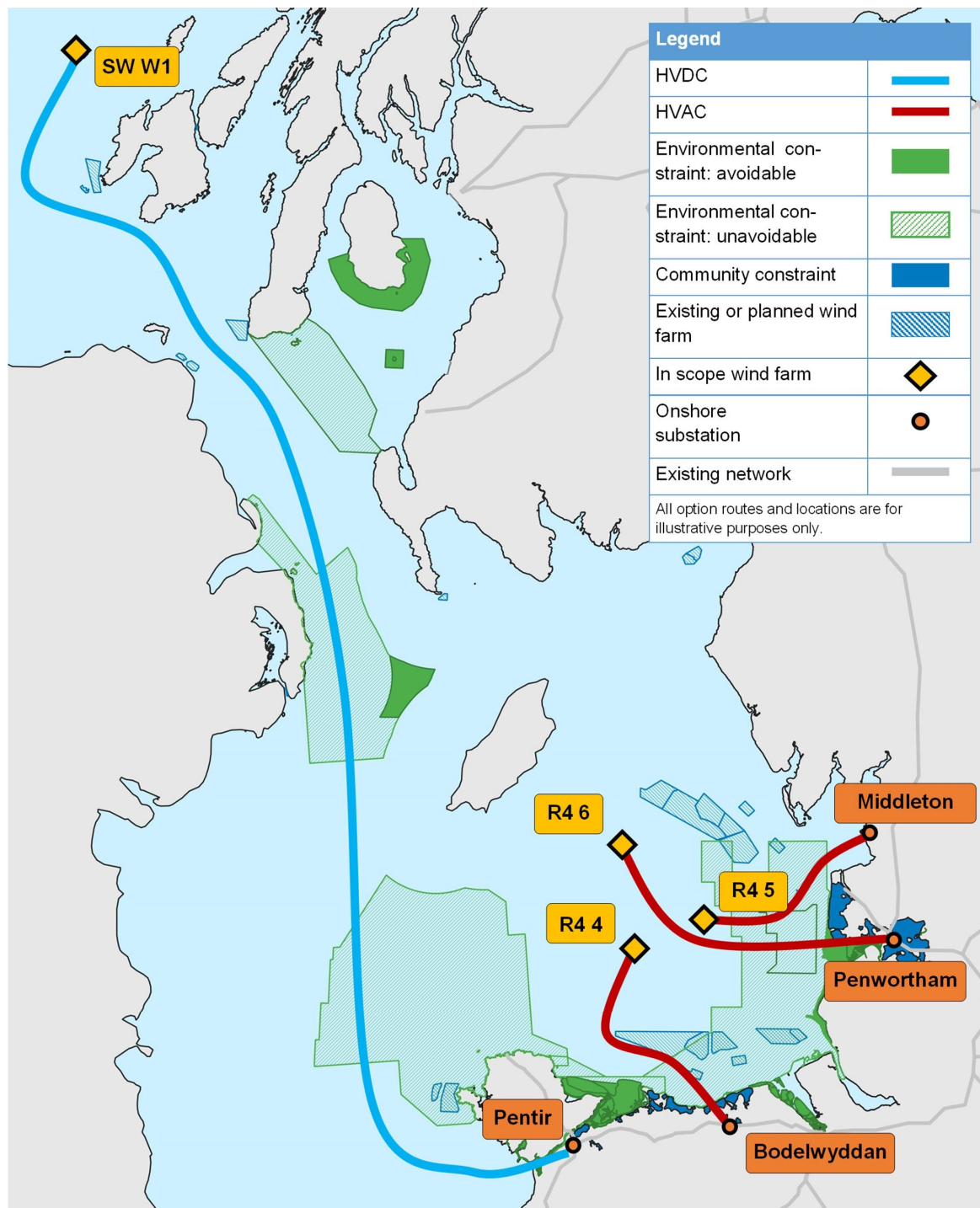
From a deliverability perspective, this option is similar to the chosen design. The deliverability concern is the extremely long HVDC cable from SW_W1 to Pentir. There is also a moderate level of design complexity with the additional connections between offshore wind farms.

The environmental considerations are equivalent to the chosen option. The Liverpool Bay SPA, the Menai Strait and Colwyn Bay SAC and the Ribble and Alt Estuary SPA are all significant constraints. It is not expected to be possible to define route corridors which avoid the Liverpool Bay SPA. Minimising impacts on the Ribble and Alt Estuary SPA will require landfall at Blackpool Airport. Overall, this option is considered heavily constrained in terms of environmental features. Landfall at Blackpool Airport can help avoid significant constraints in the Ribble Estuary. The Menai Strait and Colwyn Bay SAC can be avoided with the southern approach to Pentir.

The community considerations are also equivalent to the chosen option. The significant community constraints include wrecks, scheduled monuments and urban areas. Most of these constraints can be avoided. However, to avoid the urban areas around Blackpool, landfall would be required at Blackpool Airport. The same substations are used as in the chosen design (Penwortham, Pentir and Bodelwyddan) but without Hunterston and the T-point connections from SW_W1.

5.1.11.2 North West radial design

The optimised radial design is shown in Figure 14



As discussed in section 4.6 Optimised radial design, when all of Great Britain is taken into account, the recommended design performs better than the optimised radial design option from an economic perspective.

Deliverability, environmental and community considerations for the radial design for each region are discussed further in section 7 Optimised radial design.

5.1.11.3 Other design options

These options were considered as part of the design process but were not taken forward for detailed consideration. They are included here to demonstrate the range of designs that were assessed.

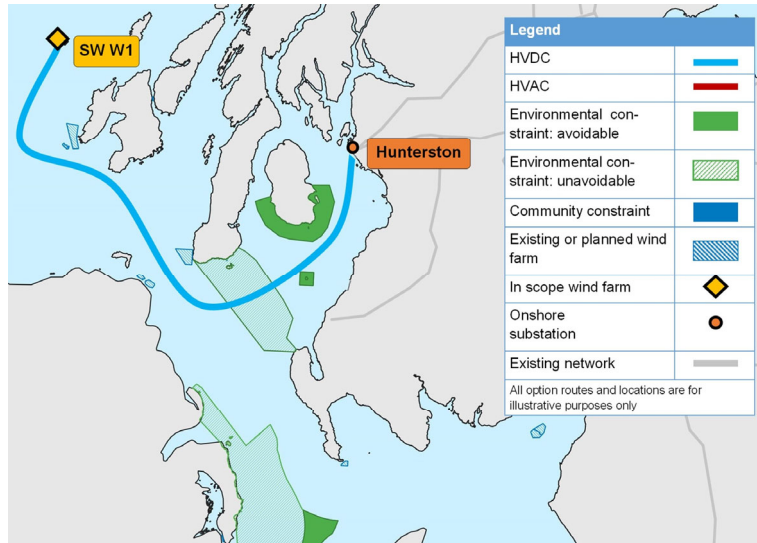
Table 13 - Other options

HVDC link to Irish Sea Ring	
Variation	<p>In this configuration, the Irish Sea wind farms would be interconnected in a ring. R4_4 would be connected to Bodelwyddan via a DC link, and R4_5 to Penwortham via an AC link. R4_6 would be connected to the R4_4 and R4_5 platforms via AC circuits to each platform, and to Hunterston via an HVDC link. To maintain full controllability of the coordinated arrangement, at least one of the links in the ring configuration needs to be HVDC; in this design this is the link to Bodelwyddan.</p>
Comparison with chosen design	<p>This option was tested to set out a comparison between environment and economic design objectives. By establishing most of the connections offshore, constrained sites such as Pentir could be avoided. However, the additional HVDC infrastructure would lead to a significant increase in capital costs, which would not be outweighed by savings in constraints.</p>
Reason for disregarding	<p>This design was not taken forward as a result of its high capital costs, due to the considerable number of DC circuits. Although DC circuits are needed to maintain full controllability of the coordinated arrangement, they also increase costs and complexity (due to the requirement for additional control systems and converter stations).</p>

Connecting SW_W1 to Hunterston

Variation

Within the radial design, a connection of SW_W1 into Hunterston (rather than Pentir) was considered.



Comparison with chosen design

A connection into Hunterston would lead to higher constraint costs, which would be incurred on the England - Scotland boundary and in the North of England. Within the radial design, the constraint costs associated with a connection to Hunterston would be £8995 million higher than those associated with a connection to Pentir.

However, the connection to Hunterston would be significantly shorter, leading to a £1070 million saving in capital costs.

From an environmental perspective, both routes would be given an Amber RAG rating if a southerly approach to Pentir is taken, however it is noted that the connection to Pentir is significantly longer. The economic analysis assumes that a southerly approach to Pentir is taken.

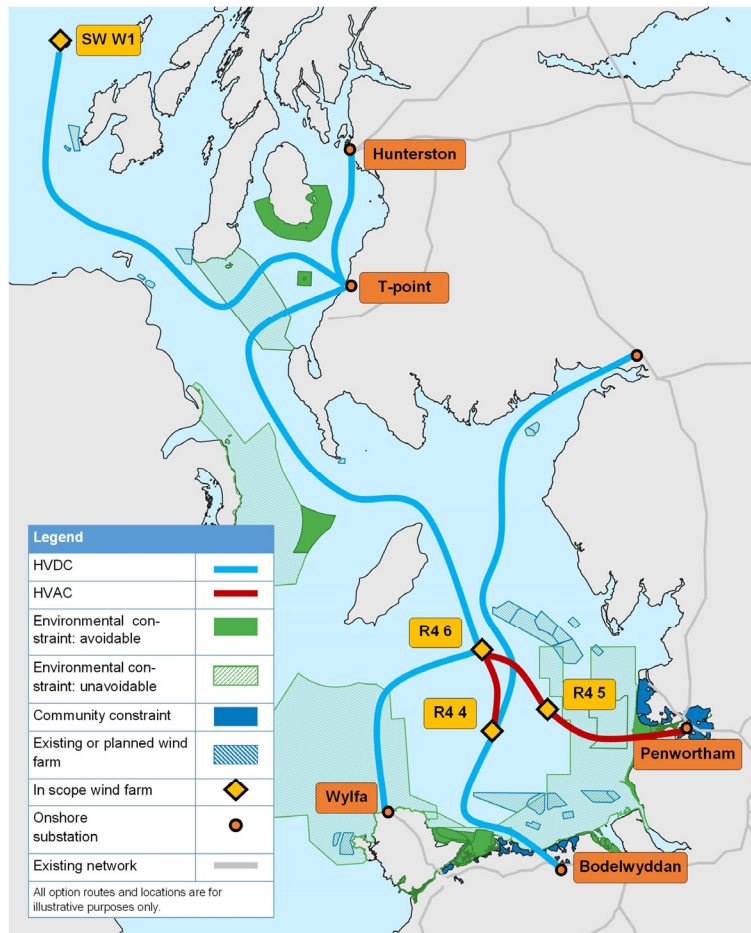
Reason for disregarding

This option was not taken forward as it performed less well than the preferred radial design from an economic perspective (it would lead to additional costs of £7925 million).

Double bipole links to Scotland

Variation

This is a very complex and ambitious coordinated arrangement. The design considers R4_5 connected to Penwortham. R4_4 would be connected via HVDC bipoles to both Bodelwyddan and to Scotland. R4_6 has four connections: to Wylfa via a HVDC bipole, to R4_4 via two AC circuits, to R4_5 via two AC circuits and to SW_W1 as well as Hunterston in Scotland via a multi-terminal HVDC bipole.



Comparison with chosen design

This configuration would bring in significant amounts of power to North Wales and would almost certainly require very significant onshore reinforcement.

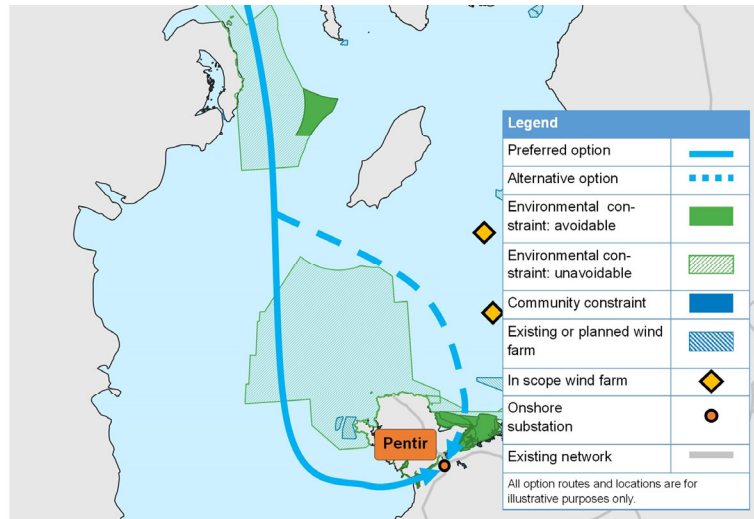
Reason for disregarding

This design was not taken forward due to its high cost and additional complexity.

Approach to Pentir

Variation

The recommended design uses an indicative route approaching Pentir from the south. We also considered an alternative route which approaches Pentir from the north. Although route corridors are not defined within the HND, we have sought to use realistic route corridors within our economic analysis.



Comparison with chosen design

For a connection from the T-point to Pentir, an approach from the north would be approximately £50 million less expensive. This is because the route would be approximately 20 km shorter, with 295 km of cable from the T-point to Pentir.

However, this route would involve cabling through environmentally sensitive areas around the Menai Strait.

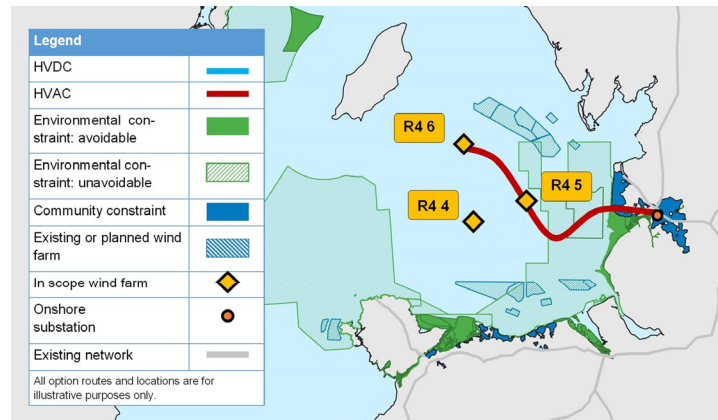
Reason for disregarding

This option would align with some highly constrained areas, including the Menai Strait, which are sensitive to cabling operations. After feedback from stakeholders, this option was deemed to be unsuitable. We have therefore used routes approaching Pentir from the south within our economic analysis (for both radial and coordinated designs).

R4 5 to R4 6 Coordination

Variation

As part of the design process, we considered electrical coordination between R4_5 and R4_6.



Comparison with chosen design

This design would include more coordination than the recommended design. In the recommended design the two wind farms share a cable route corridor but there is no electrical connection between them offshore. In this design R4_6 connects directly to an offshore platform at the R4_5 site. The two wind farms would then use a shared export cable to export power to shore, connecting at Penwortham.

Reason for disregarding

This option was proposed as part of the Options Appraisal Summary Tables shared with stakeholders. The R4_5 and R4_6 developers jointly proposed the recommended solution as an alternative to our original proposal. As the developers' proposal performs better from an economic perspective, due to the smaller, simpler offshore platform design, our original proposal was not taken forward.

The total number of cables to shore is the same in both designs, and both designs allow for all the cables to use the same corridor.

Connection to Wylfa

Variation

A connection to Wylfa was considered instead of connecting to Pentir.

Comparison with chosen design

This interface point is technically feasible and has fewer environmental constraints than other sites in the North West.

Reason for disregarding

A connection here would require a new double circuit between Wylfa and Pentir including a new cable tunnel across the Menai Strait. An approach to Pentir from the south was chosen instead to avoid the environmental constraint of the Menai Strait.

5.1.12 Economic and efficient considerations

We have sought to use realistic route lengths within our economic analysis. Within our optimisation, the costs of the links to Pentir (across all options) assume that Pentir is approached from the south as explained in the Environment and Community considerations section below.

The recommended design performs better from an economic perspective than the alternative designs considered. When compared to the alternative coordinated design, section 5.1.10, the recommended design is £1080 million less expensive overall. This is mainly due to lower capital costs as a result of less infrastructure in the Irish Sea. The costs and scope of onshore boundary reinforcements are broadly comparable between the two designs. These figures were calculated by changing the recommended design in the North West to the alternative coordinated design, but keeping the rest of the offshore design the same as the recommended design.

As described in section 4.7, the recommended design also performs better than the optimised radial design from an economic perspective.

5.1.13 Deliverability and operability

The design is partly deliverable by 2030 under current regulatory and consenting frameworks. Although firm connections will not be available until later years in some cases without delivery of the commitments in the *BESS*, the design could be built using a phased approach.

5.1.13.01 HVDC

The design includes a significant volume of HVDC infrastructure and a T-point connection from SW_W1. These connections, and the length of cable required, will take several years to design, manufacture, and commission.

It is estimated that construction of the three-ended HVDC link could take approximately eight to ten years, making delivery before 2030 challenging. The link could be built in stages to enable progressive access to the system ahead of the full link being completed. The responsibility for each section of the link is discussed in an earlier section of this chapter.

5.1.13.02 Overall Complexity

The overall complexity of the recommended design is higher than the radial design, with the three ended HVDC link and the coordinated cable corridor for R4_5 and R4_6. However, the design is partly deliverable by 2030.

Offshore infrastructure for R4_4, R4_5 and R4_6 is expected to be deliverable by 2030.

5.1.13.03 Technical and environmental

There are a number of technical challenges that would need to be overcome as part of this design. There are long HVDC links and offshore cable crossings, pipelines and offshore rock that will likely need to be crossed in several of the route corridors. The landfall areas around Bodelwyddan and Penwortham are constrained due to the large number of cable and offshore rock crossings required in this option, along with landfall constraints.

Avoiding environmental constraints in the Ribble and Alt Estuaries could require cable routing close to Blackpool Airport. Whilst cable routing on or close to the airport should be technically feasible, the impact on airport operations and the feasibility of using the airport land remain to be established.

5.1.14. Onshore works

For this option, all interface point site works can be completed by 2030.

However, some of the works listed for this connection at wider sites have an Earliest In Service Date (EISD) beyond 2030 which include a new onshore transmission circuit. We are working with the TOs to review the programme for these works to understand if they can be accelerated.

5.1.15 Operability

The radial connections of R4_4, R4_5 and R4_6 are not expected to raise any unusual operability issues.

The connection of SW_W1 into to a three-ended HVDC system poses some operability challenges but is like the Shetland connection to the Caithness-Moray HVDC system currently in construction²¹.

With the SW_W1 project being larger than the infrequent infeed loss limitation, the HVDC system needs to respect that limit. The design has employed bipole HVDC with metallic return and cable separation to maintain credible infeed to loss to half of the SW_W1 capacity.

The HVDC control system should be set so that under moderate to high wind output, most of the power transfer should be fed into North Wales to reduce north to south power flow limitations on the wider transmission network. Under outage or fault conditions, power flows may need to be directed towards Hunterston instead.

5.1.16 Stakeholder feedback

Stakeholders noted that successful delivery of the coordinated design may depend on which party is responsible for building each part of the design, the date by which each part of the design can be constructed, and the timescales by which this responsibility is known.

Stakeholders raised concerns that the coordinated HND designs required large platforms, leading to complex builds and significant anticipatory investment for some parties (those building additional infrastructure to facilitate a coordinated design), and dependency and risk for other parties (those dependent on this infrastructure to connect).

Stakeholders raised concerns about the northern approach to Pentir that affected the sensitive habitats of the Menai Strait and Colwyn Bay SAC. Taking this into account, an approach to Pentir from the south was developed which was preferable from an environmental and deliverability perspective. Although route corridors will not be defined until the DND stage, we have updated our economic analysis to reflect costs associated with offshore routes which approach Pentir from the south. This does not change our overall recommendation but represents a more feasible route corridor.

Stakeholders felt that the links from Hunterston and Pentir to the T-point provide a wider transmission system benefit, and therefore should be delivered and operated under the appropriate mechanisms for onshore transmission assets. Our assessments to date support this logic. However, this is subject to further analysis by Ofgem.

Following stakeholder feedback, the design for R4_5 and R4_6 was changed from a coordinated design with electrical integration offshore, to radial connections with a shared cable corridor. The connections would share a land substation site, landfall, and cable corridors. The developers had proposed this solution as an alternative to our proposed coordinated design. We evaluated the developers' proposal in comparison to our original proposal and found that it performs better from an economic perspective, as the simpler offshore platform designs reduce the infrastructure costs.

²¹ <https://www.ssen-transmission.co.uk/projects/shetland/>

5.1.17 Conclusions and next steps

The recommended design connects the four in scope generators to the transmission network.

As envisaged by Ofgem, further analysis on the primary function of each asset will be needed to confirm who is responsible for each part of the coordinated design.

The recommended design is **economic and efficient**, offering savings of £1080 million compared with the alternative coordinated design due to lower capital costs. When looking at the whole of Great Britain, the recommended design is also more economic and efficient than the optimised radial design. In comparison to the optimised radial design, the recommended design has higher costs for connecting and operating the transmission network infrastructure needed to connect the wind farms. However, the design of the SW_W1 connection and T-point will provide a wider network benefit, delivering savings in constraint costs by transferring additional power from north to south and bypassing onshore boundary constraints.

The design is **partly deliverable by 2030** under current regulatory and consenting frameworks. Firm connections will not be available until later years in some cases without delivery of the commitments in the British Energy Security Strategy (*BESS*). However, the design could be built using a phased approach.

The design includes a significant volume of HVDC cables, and it will be challenging to deliver the full three-ended HVDC link by 2030. Additionally, some of the required reinforcement works currently have dates which extend beyond 2030. We are working with the relevant TOs to review the programme for these works in light of the commitments in the *BESS*. The timings and required works for each connection will be determined as part of the connection offer update programme.

The design minimises **the impact on the environment**. It is expected to be possible to define route corridors which avoid many important environmental constraints. Whilst it is not expected to be possible to avoid all environmental constraints, this design performs better than the alternative radial design by introducing a shared cable corridor to Penwortham and avoiding the Morecambe Bay SAC.

The **design minimises local community impact**. The community sensitivities in the region can either be avoided or mitigated successfully. It is expected to be possible to define route corridors that avoids key community sensitivities in the region. The recommended design for the Irish Sea provides community benefits over the radial design by reducing the number of cable corridors, which will reduce community impact from construction activities.

On all four of the design objectives this design performs as well, if not better than, the alternative designs considered. It balances the design objectives successfully to provide an efficient holistic design.

5.2 South West Region

For the South West Region, it would be premature to propose a finalised design before more certainty of the Celtic Sea leasing round is known. For the purposes of this study, 1 GW of Celtic Sea floating wind has been assumed, split into three wind farms. This assumption was based on the ambitions for the region at the time that the scope for the HND was defined, as well as the size of projects that were being developed.

The design presented here is not the final design for the Celtic Sea. The design will be updated once more detail is known about the capacity and location of seabed leases in the Celtic Sea.

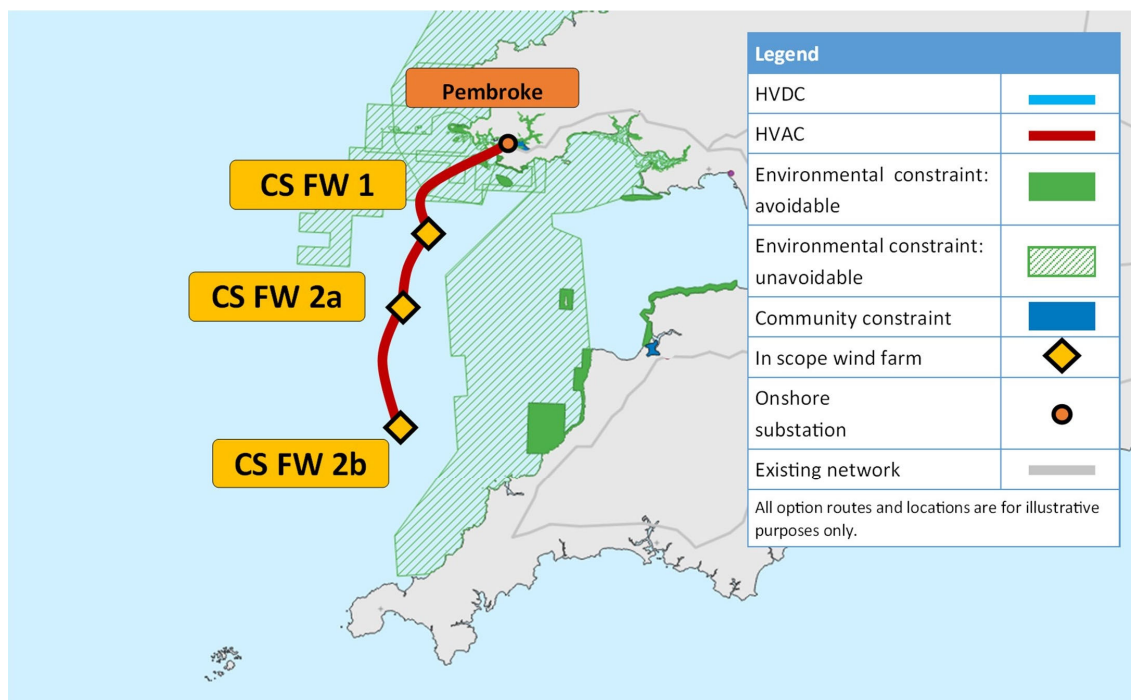
5.2.1 Projects in scope

The South West Region design connects the following three projects *Table 14*:

Project name	Capacity (MW)	Notes
CS_FW_1	300	The Celtic Sea projects included here do not relate to specific projects but are assumed based on the ambitions for the region.
CS_FW_2a	300	
CS_FW_2b	400	

5.2.2 Offshore design

Based on the locations assumed for those wind farms, the indicative recommended design connects all three Celtic Sea wind farms in a double circuit AC chain to Pembroke. This is shown in *Figure 15*:



This is our indicative recommended design for the region based on these assumed wind farm locations and sizes.

Due to the uncertain locations of the wind farms, as well as the likelihood that there will now be much more than 1 GW of wind in the area, these results are largely given for information and interest, and it is our intention to not give a firm recommendation on the best overall solution until a

more accurate view of the wind farms in the area can be agreed upon and studied in a future process.

The design connects all three Celtic Sea wind farms in an AC chain to Pembroke. Each link in the chain would consist of two electrically separable circuits, with each circuit being capable of carrying half of the overall capacity needed on that link.

Our choice of cable technology (HVDC or High Voltage Alternating Current (HVAC)) in this document has been made in the first instance on the optimal economic design solution based on our assumptions as set out in the Network design guideline and network overview section. The choice between AC and DC cabling becomes less clear cut in the upper length range for AC cables (150-200 km) and will depend on other project specific factors, including environmental, technical and community constraints. The final choice of technology will be made as part of the DND phase.

The connections used in the design are described in *Table 15*:

Node 1	Node 2	Circuit capacity (MW)	Technology ²²	Distance (km) ²³
CS_FW_1	Pembroke	1000	AC 2-3 cables	45
CS_FW_2a	CS_FW_1	700	AC 2 cables	35
CS_FW_2b	CS_FW_2a	400	AC 1-2 cables	45

5.2.3 Onshore works

The onshore works required at Pembroke include extending the substation and replacing the circuit breakers *Table 16*.

Substation	Work required
Pembroke	Extension of the current Pembroke 400 kV substation to create a new Gas Insulated Switchgear (GIS) compound including bays for connection to the offshore network.

Further onshore works include turning in circuits, uprating circuits and installing Static Synchronous Series Compensators (SSSC) to manage power flow.

The design requires works at other sites including uprating, reconductoring and reinforcement. Wider onshore works are described in the system-wide view section 5.5

Pembroke, the proposed interface point for the South West region coordinated design, has been identified as a very constrained site, and not all constraints can be avoided. However, given the geographical location of the wind farms considered in the HND, it lends itself to being a good connection point against the other design criteria. In further iterations of the HND, consideration will be required as to whether on balance this site remains a good connection location.


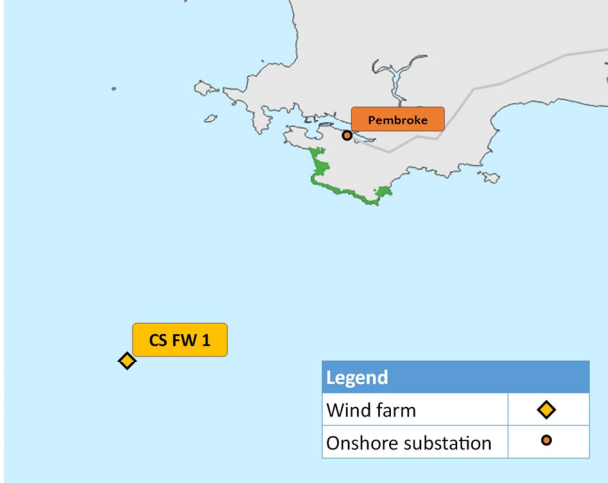



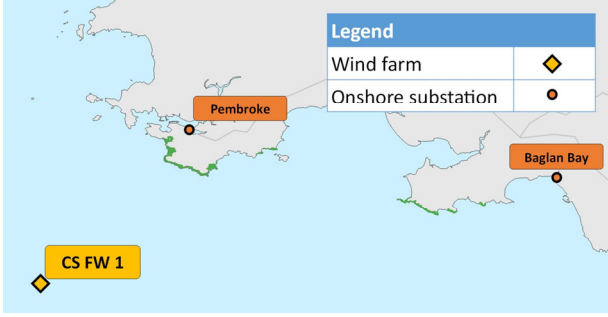
Although route corridors are not defined at this stage of the process, the HND has been developed with a view to avoiding the most significant environmental and community constraints. These include constraints with features expected to be sensitive to impacts from cabling or infrastructure where the risks of cabling would be significant.

²² AC cable numbers assume 500 MW is possible at 275 kV. Longer distances may require an additional parallel cable to account for reactive power losses.

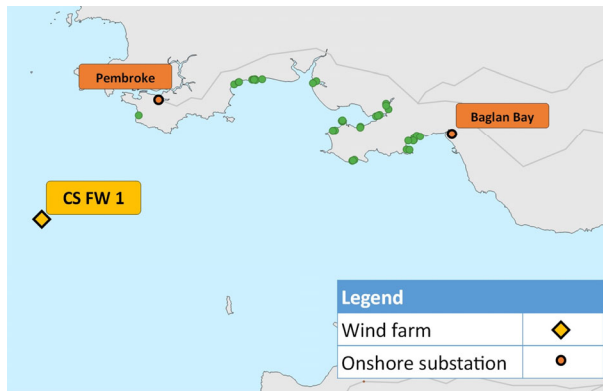
²³ The distances shown relate to an indicative route. Route corridors will be determined as part of the DND process.

Table 17 lists the significant constraints which it has been possible to avoid in the HND within the region. As in the regional overview, avoidable constraints are shown in solid fill whereas unavoidable constraints are cross hatched.

Table 17 - Environment and community constraints:

Constraint Map	Description
<p>Constraint 2</p>  	<p>Castlemartin Coast SPA</p> <p>The SPA is designated for its breeding population of red-billed chough which makes up 3.5% of the Great Britain breeding population. There is potential to avoid the SPA in approaches to Pembroke.</p>
<p>Constraint 3</p>  	<p>Northwest of Lundy MCZ</p> <p>The northwest of Lundy MCZ is an inshore site that covers an area of 173 km², 15 km northwest of Lundy. It is located in the Western Channel and Celtic Sea Region. The northwest of Lundy site contains a large area of subtidal coarse sediment which provides habitat that supports a variety of species, for example Segmented Bristle worms, Venus clams and small crustaceans (such as crabs and barnacles) living within and on top of the sediment.</p>
<p>Constraint 4</p>  	<p>Limestone coast of Southwest Wales</p> <p>The Limestone Coast of Southwest Wales is designated for its vegetated sea cliffs and fixed coastal dunes with herbaceous vegetation.</p>

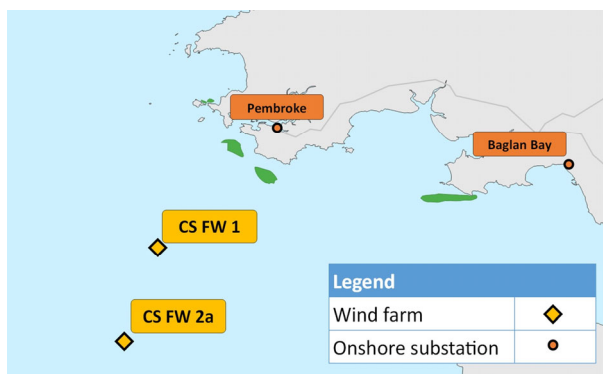
Constraint 6



Peat and clay exposures

This habitat on the South Wales coastline includes littoral and sublittoral examples of peat and clay exposures, both of which are soft enough to allow them to be bored by a variety of piddocks. It has been identified by NRW as key considerations for cabling activities.

Constraint 7



Sandbanks

Sandbanks of South Wales, which are slightly covered by sea water all the time, consist of sandy sediments that are permanently covered by shallow sea water, typically at depths of less than 20 m. The diversity and types of community associated with this habitat are determined particularly by sediment type together with a variety of other physical, chemical and hydrographic factors. They have been identified by NRW as key considerations for cabling activities.

Constraint 9



Rhoscrowther and Milford Haven

The urban areas of Rhoscrowther and Milford Haven are located within the vicinity of Pembroke substation.

5.2.4.01 Unavoidable environmental constraints

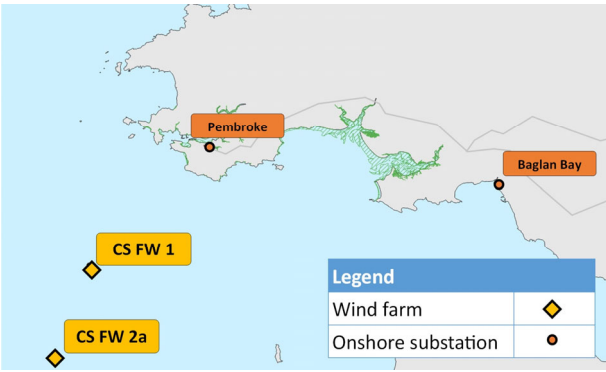
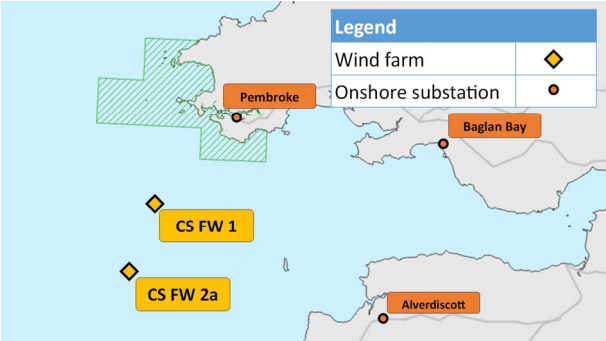
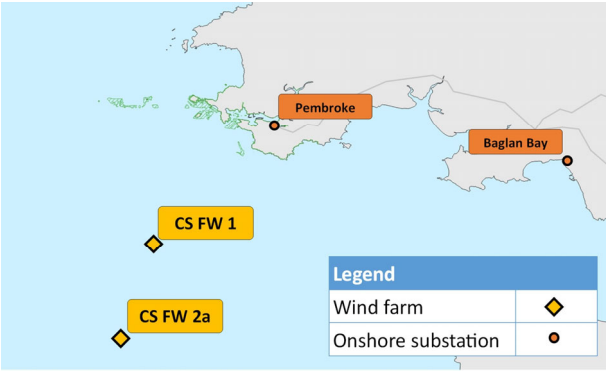
There are some environmental constraints which cover extensive areas or are close to the point of the subsea cables making landfall that are unavoidable due to the locations of wind farms and

onshore substations. *Table 18* lists the significant constraints that it is not possible to avoid in the region.

At this strategic route selection stage, the primary method of mitigation was to, as far as was possible, avoid features and/or environmental designations that were identified by the relevant statutory bodies as sensitive to cabling operations. In some instances, these environmental or physical features, or infrastructure, formed linear constraints to cable route corridors, that could not feasibly be circumvented. In these cases, consideration was given as to whether these features could be feasibly crossed over (e.g., infrastructure) with physical protection or under by directional drilling (environmental areas).

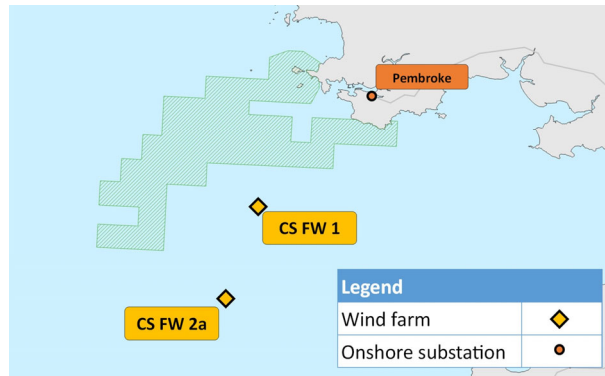
More detailed site surveys, routing and consideration of mitigation measures will be required at the DND stage to further avoid identified specific sensitivities or features within designated areas that have not been avoided, and to identify appropriate crossing locations and techniques. At the DND stage further mitigation such as limiting the seasonality of working may also be considered to minimise the potential impacts of cable laying operations in areas that are not practical to avoid. Beyond this, compensatory measures may be required at the detailed network design stage to offset identified impacts.

Table 18 - Unavoidable environmental constraints

Constraint Map	Description
<p>Constraint 10</p> 	<p>Mudflats and sandflats</p> <p>Intertidal mudflats and sandflats of the South Wales coast are submerged at high tide and exposed at low tide. Within this habitat the plant and animal communities present vary according to the type of sediment, its stability and the salinity of the water. They have been identified by NRW as key considerations for cabling activities.</p>
<p>Constraint 12</p> 	<p>Pembrokeshire Marine SAC</p> <p>The SAC is a multiple interest site that has been selected for the presence of eight marine habitat features and seven species features.</p>
<p>Constraint 13</p> 	<p>Reefs</p> <p>Reefs are rocky marine habitats or biological concretions that rise from the seabed. They are generally subtidal but may extend as an unbroken transition into the intertidal zone, where they are exposed to the air at low tide. Two main types of reef can be recognised: those where animal and plant communities develop on rock or stable</p>

boulders and cobbles, and those where structure is created by the animals themselves (biogenic reefs).

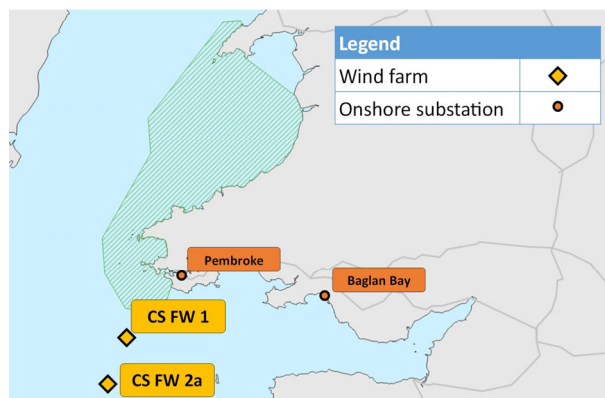
Constraint 14



Skomer, Skokholm and the seas off Pembrokeshire SPA

The SPA is classified for the protection of: European storm-petrel, manx Shearwater, Atlantic puffin, and Lesser Black-backed gull, as well as Red-billed chough, Short-eared owl and breeding seabird assemblage.

Constraint 15



West Wales Marine SAC



The SAC is identified as an area of importance for Harbour porpoise. This SAC overlaps a number of other SACs including parts of the Pembrokeshire Marine SAC and the Pen Llŷn a'r Sarnau SAC, and encompasses the entire Cardigan Bay SAC.

5.2.4.02 Unavoidable community constraints

Table 19 lists the significant community constraints that it not expected to be possible to avoid in the region.

The community constraints include offshore wrecks and the Pembrokeshire Coast National Park and National Trails. It is not possible to avoid the National Park and National Trails.

Table 19 - Unavoidable community constraints

Constraint Map	Description
<p>Constraint 16</p>  	<p>Pembrokeshire National Park The Pembrokeshire Coast National Park is located along the coastline.</p>

While these tables do not describe all the environmental and community constraints in the South West Region, they provide an overview of the significant constraints that influenced the network design, including constraints that are very close to the interface points and those which have been identified by stakeholders as being particularly sensitive to cabling operations, and thus have significant potential to impact the viability of cable routes through the area. These constraints also highlight the sensitive areas that have been identified as difficult to avoid in designing cable route corridors.

5.2.5 Potential changes to the offshore design

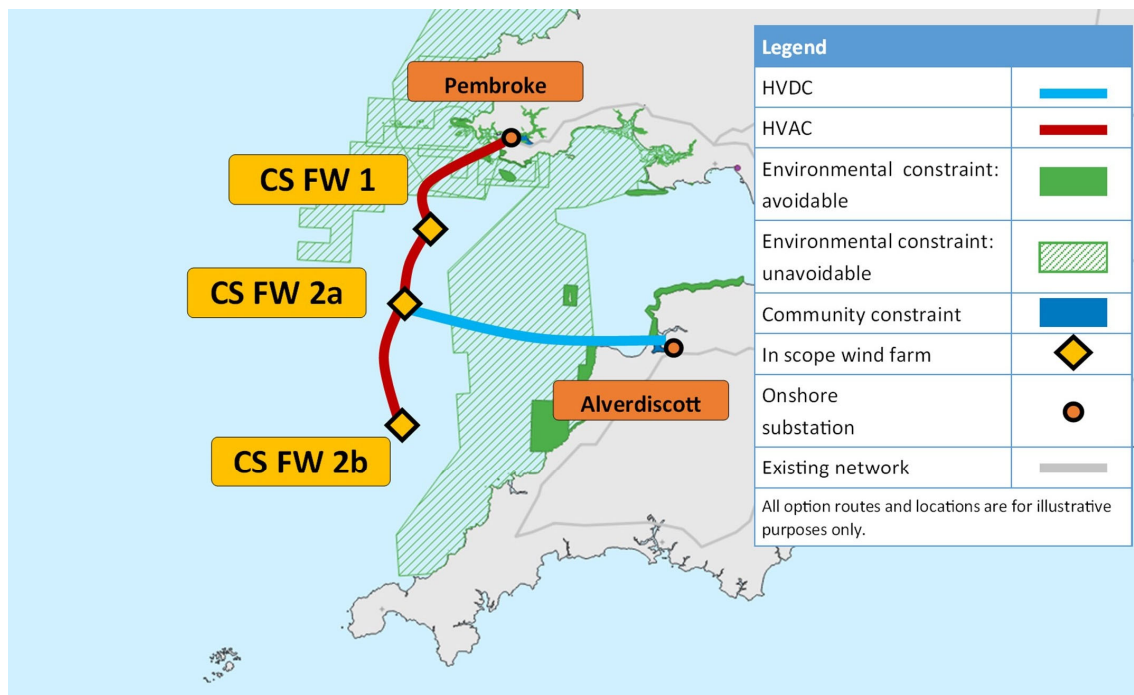
It is important to note that the design shown here for the Celtic Sea is only indicative and will be updated once more detail is known on the capacity and location of seabed leases in the Celtic Sea. A large range of alterations are therefore possible.

5.2.6 Other offshore designs and variations we considered

As part of the HND process, several design options were considered. This section summarises alternative designs that were not selected for the HND. For the South West Region, two alternative options were considered in detail, as well as further design options.

5.2.7 Alternative coordinated design

Figure 16 Alternative coordinated design



This option connects all three wind farms in an AC chain to Pembroke (similarly to the recommended design) and includes a HVDC link from CS_FW_2a to Alverdiscott.

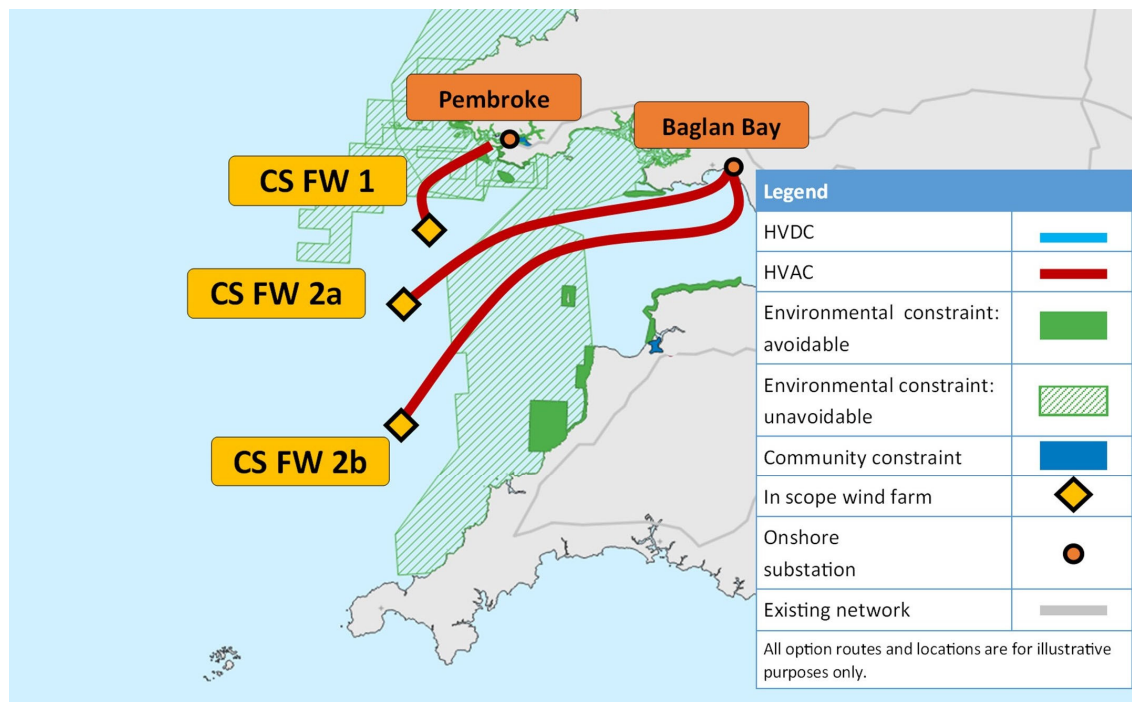
This option would be £735 million more expensive overall. This is due to the £1100 million increase in capital costs, which is larger than the £365 million decrease in constraint costs. The costs and scope of onshore boundary reinforcements are broadly comparable between the two designs. These figures were calculated by changing the recommended design in the South West Region to the alternative coordinated design, but keeping the rest of the offshore design the same as the recommended design.

The alternative design would introduce an extra interface point at Alverdiscott, which would involve crossing areas sensitive to cabling including the Bristol Channel Approaches SAC. There are also Site of Special Scientific Interest (SSSI) designations close to Alverdiscott which it would be difficult to avoid at landfall. There is also potential for cumulative impacts from a converter station due to recent solar farm development in the vicinity of the Alverdiscott substation and other proposed projects. However, the search area for a converter station site can be relatively wide.

The inclusion of a HVDC link within this design would also make it more complex and more challenging to deliver in full by 2030.

5.2.6.2 South West radial design

The optimised radial design is shown in Figure 17



As discussed in section 4.6 Optimised radial design, when all of Great Britain is taken into account, the recommended design performs better than the optimised radial design option from an economic perspective.

Deliverability, environmental and community considerations for the radial design for each region are discussed further in section 7 Optimised radial design.

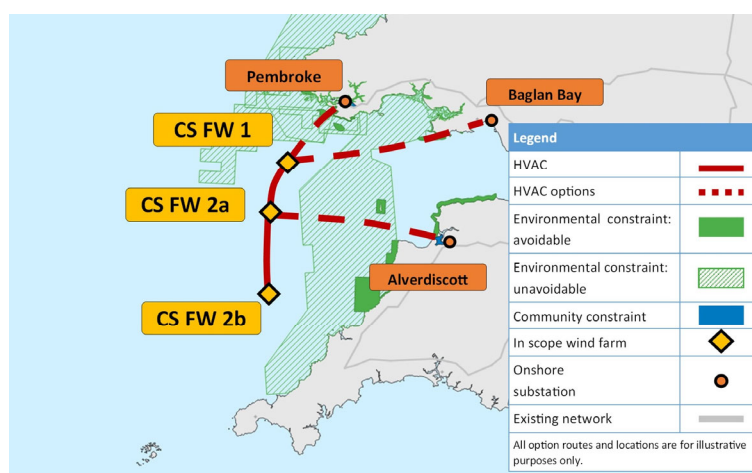
5.2.6.3 Other design options

These options were considered as part of the design process but were not taken forward for detailed consideration. They are included here to demonstrate the range of designs that were assessed.

Table 20 - Other design options

Single Circuit Chain to Pembroke, Alverdiscott or Baglan Bay

Variation Similar to the recommended design, but these designs consist of only a single circuit connecting all three wind farms. Each option includes a single connection to shore, either from CS_FW_1 to Pembroke, CS_FW_1 to Baglan Bay or CS_FW_2a to Alverdiscott.



Comparison with chosen design These options were considered as likely to be the lowest capital cost way to connect all parties in scope to each onshore substation.

Reason for disregarding Rejected due to lack of redundancy for the single outage of any circuit.

Double Circuit Chain to Alverdiscott or Baglan Bay

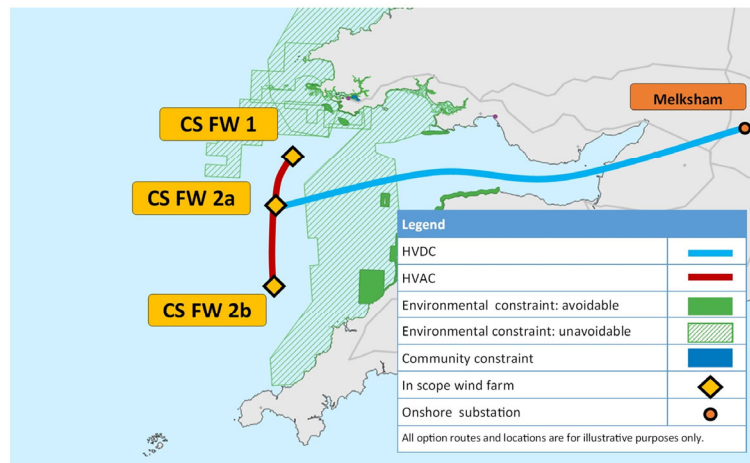
Variation These options connect all three wind farms together via double circuits. A double circuit connection is used either from CS_FW_1 to Baglan Bay or from CS_FW_2a to Alverdiscott. The layout of these options is the same as the previous options.

Comparison with chosen design This was considered as a way to connect all power either to Alverdiscott or Baglan Bay with 50% n-1 redundancy (i.e., maintaining 50% of capacity if one cable fails).

Reason for disregarding Rejected due to performing less well economically compared to the other options considered, without enough other reasons to promote it.

Single circuit grouping with HVDC link to Melksham

Variation Three wind farms connected with a single circuit. HVDC link from CS_FW_2a to Melksham.



Comparison with chosen design A HVDC link to Melksham was considered to analyse the impact on constraint costs of taking power out of the South West Region.

Reason for disregarding Rejected due to lack of redundancy for a single outage of any circuit, and the cost and complexity of introducing a HVDC link which was not outweighed by the savings it delivered.

5.2.7 Economic and Efficient considerations

This design, while only provisional, is recommended based on the assumptions in the South West Region because it has lower total costs than the alternative designs considered.

Compared to the alternative coordinated design, the total costs of the recommended design are £735 million lower. This is due to the recommended design having £1100 million lower capital costs, but £365 million higher constraint costs. The difference in capital costs is due to the HVDC link from CS_FW_2a to Alverdiscott, which is present in the alternative coordinated design but not in the recommended design. The difference in constraint costs is because the alternative coordinated design introduces an offshore connection from South West England to South Wales, which is not present in the recommended design. The costs and scope of onshore boundary reinforcements are broadly comparable between the two designs. These figures were calculated by changing the recommended design in the South West to the alternative coordinated design, but keeping the rest of the offshore design the same as the recommended design.

As described in section 4.7, the recommended design also performs better than the optimised radial design from an economic perspective.

5.2.8 Deliverability and operability

It is expected that the full indicative recommended design for the South West could be constructed by 2030.

5.2.8.1 HVDC

No HVDC technology is included in the indicative recommended design for the South West.

5.2.8.2 Overall complexity

The design is relatively simple, but the additional connections between wind farms would introduce a degree of complexity over the radial design.

5.2.8.3 Technical and environmental

One deliverability risk is the connection into Pembroke. It may not be possible to accommodate the offshore connections into Pembroke as well as other future generation opportunities.

Further deliverability and operability questions will be considered when the Celtic Sea wind projects have been awarded. For example, technical differences with the potential for floating substations will impact the overall deliverability of the offshore network in the region.

5.2.8.4 Onshore works

The design does not trigger requirements for any new circuits beyond those already being considered by the transmission owner, and all the works necessary for this option are deliverable by 2030.

5.2.8.5 Operability

With the offshore wind farms sharing connection assets, the operational planning and management of outages will require additional coordination compared to direct radial connections.

5.2.9 Stakeholder feedback

Since sharing our indicative design recommendations with stakeholders, we have updated our economic analysis to take account of constraint costs in years beyond 2030. This meant that the economically optimal design became the coordinated link to Pembroke, whereas it had previously been the design with a HVDC link from CS_FW_2a to Alverdiscott (now described as the alternative coordinated design).

As this design also performed better from an environmental and community perspective due to the removal of the additional cable route, we updated our indicative recommendation.

5.2.10 Conclusions and next steps

For this iteration of the HND, 1 GW of floating wind has been assumed in the Celtic Sea, split into three windfarms. The indicative recommended design will be updated once further information is known about locations and capacities of wind farms in the Celtic Sea.

The indicative recommended design is **economic and efficient** and offers savings of £735 million over the alternative coordinated design due to lower capital costs. When looking at the whole of Great Britain, the recommended design is also more economic and efficient than the optimised radial design.

The design is expected to be **fully deliverable by 2030**. The recommended design does not trigger any new transmission circuits onshore, and all onshore works are expected to be in service by 2028.

The design **minimises environmental impact** by avoiding constraints where possible, and only using a single interface point. It results in fewer landing points and is expected to result in fewer crossings of environmentally constrained areas compared to the radial counterfactual. Our analysis has identified significant onshore and offshore constraints around the Pembroke site; careful consideration will need to be given to future developments in this location.

The **design seeks to minimise local community impact** as there is potential to define a route which avoids urban areas and other community and heritage features. There are some national parks and trails that cannot be fully avoided: mitigation measures will be considered as part of the DND stage. The coordinated design would lead to fewer interface points than the radial alternative.

5.3 East Coast Region

The East Coast Region covers both the East of England and the East of Scotland.

The significant number of wind farms to connect on the east coast of Great Britain and the requirement to add additional connection capacity between the north and the south, means that the design for this region is complex and involves significant infrastructure.

Our assessment indicates there is clear value in transferring power south through the offshore network from the eastern ScotWind zone, via the developments off the east coast of England. The benefit this provides offsets the additional network costs involved and additional future infrastructure.

5.3.1 Projects in scope

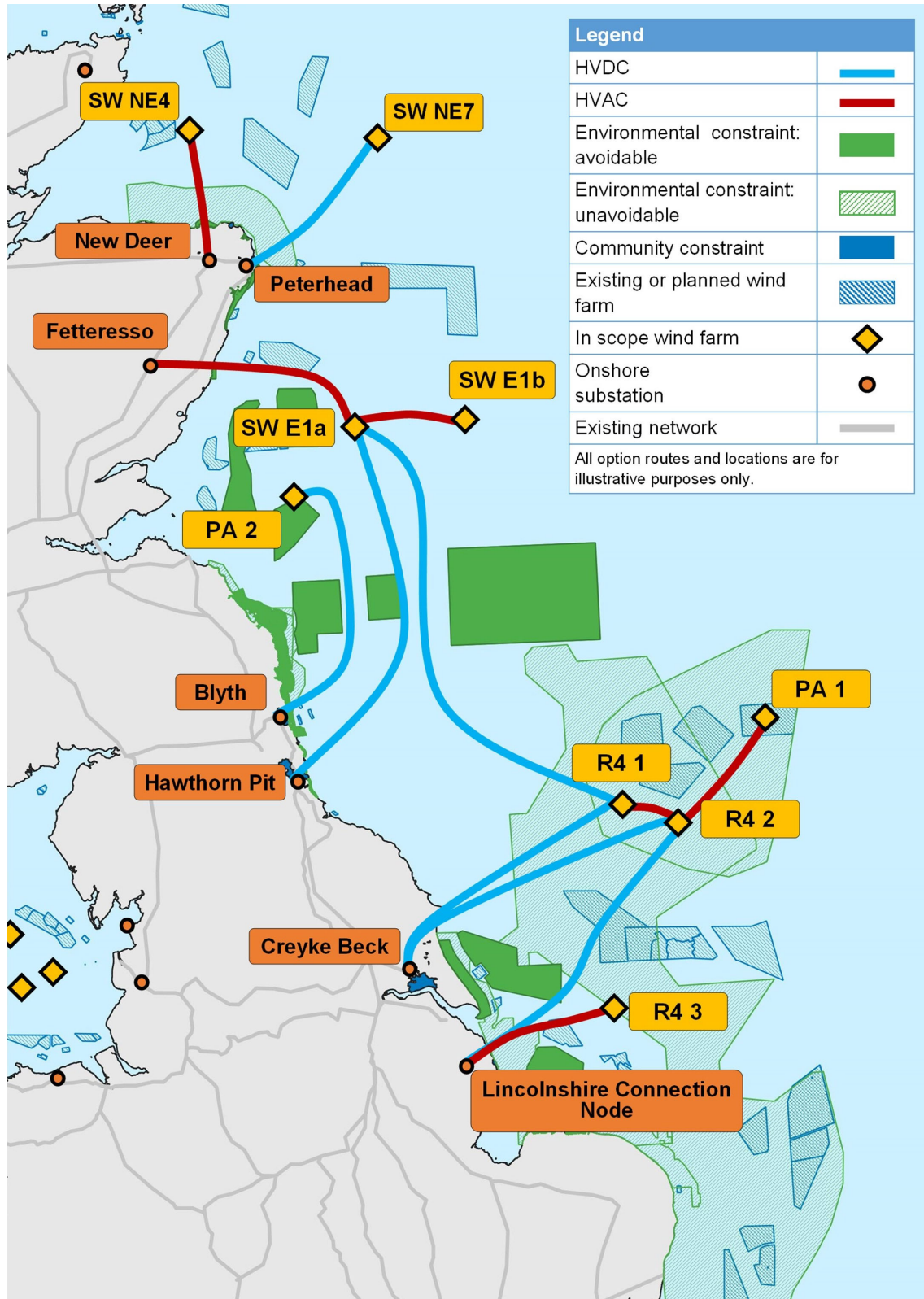
The East Coast Region design connects the following nine projects *Table 21*:

Project name	Capacity (MW) ²⁴	Notes
R4_1	1500	
R4_2	1500	
R4_3	1500	
PA_1	1320	PA_1 has been included as it is spatially and temporally relevant to the HND process
PA_2	1800	
SW_E1a	1500	This generator has connection contracts for 3000 MW. A capacity of 1500 MW is included in this phase of the HND due to limitations on the total amount of ScotWind generation, but we expect to include its full capacity in the follow up exercise.
SW_E1b	1200	
SW_NE4	1500	This generator has a connection contract for 2000 MW. A capacity of 1500 MW is included in this phase of the HND due to limitations on the total amount of ScotWind generation, but we expect to include its full capacity in the follow up exercise.
SW_NE7	1500	This generator has a connection contract for 3000 MW, currently divided into two stages (1000 MW followed by 2000 MW). The capacity of 1500 MW reflects an alternative staging arrangement which takes account of the developer's intention to use HVDC technology. Only 1500 MW is included in this phase of the HND due to limitations on the total amount of ScotWind generation considered in this phase, but we expect to include its full capacity in the follow up exercise.

²⁴ The capacities listed here are the capacities that were modelled in the HND. They may not reflect the capacities currently listed in connection contracts or in the ScotWind leasing round.

5.3.2 Offshore design

Our recommended design is shown in Figure 18



The design includes four radial connections:

- SW_NE4 to New Deer
- SW_NE7 to Peterhead

- PA_2 to Blyth
- R4_3 to Lincolnshire Connection Node

The remaining wind farms are connected through a coordinated design. The ScotWind projects, SW_E1b and SW_E1a, have a coordinated connection to Fetteresso with further connections south to Hawthorn Pit and Creyke Beck via R4_1.

PA_1 connects to R4_2 offshore. R4_2 then connects via HVDC links to Creyke Beck and to the Lincolnshire Connection Node via an AC link to R4_1.

Our choice of cable technology (HVDC or High Voltage Alternating Current (HVAC)) in this document has been made in the first instance on the optimal economic design solution based on our assumptions as set out in the Network design guidelines and network overview section. The choice between AC and DC cabling becomes less clear cut in the upper length range for AC cables (150-200 km) and will depend on other project specific factors, including environmental, technical and community constraints. The final choice of technology will be made as part of the DND phase.

The connections used in the design are described in table 22. While these connections represent our current proposal for the design, they may change in further stages of the design process.

Table 22 - Connections table

Node 1	Node 2	Circuit capacity (MW)	Technology ²⁵	Distance (km) ²⁶
R4_1	SW_E1a	1800	DC	525 kV XLPE bundled pair 285
R4_1	R4_2	1500	AC	3-4 cables 30
R4_1	Creyke Beck	1800	DC	525 kV XLPE bundled pair 160
R4_2	Creyke Beck	1800	DC	525 kV XLPE bundled pair 180
R4_2	Lincolnshire Connection Node	1800	DC	525 kV XLPE bundled pair 210
R4_2	PA_1	1320	AC	3-4 cables 85
R4_3	Lincolnshire Connection Node*	1500	AC	3-4 cables 105
PA_2	Blyth	1800	DC	525 kV XLPE pair with metallic return 145
SW_E1a	SW_E1b	1200	AC	3-4 cables 80
SW_E1a	Hawthorn Pit	1800	DC	525 kV XLPE bundled pair 225
SW_E1a	Fetteresso	2000	AC	4-5 cables 115

²⁵ AC cable numbers assume 500 MW is possible at 275 kV. Longer distances may require an additional parallel cable to account for reactive power losses.

²⁶ The distances shown relate to an indicative route. Route corridors will be determined as part of the DND process.

SW_NE7	Peterhead	1500	DC	525 kV XLPE pair with metallic return	135
SW_NE4	New Deer	1500	AC	3-4 cables	90

* Note that the choice of the Lincolnshire Connection Node site is not finalised and will be decided after further analysis.

5.3.3 Onshore works

The design requires onshore works at the interface sites (Peterhead, Fetteresso, New Deer, Blyth, Creyke Beck, Lincolnshire Connection Node, Hawthorn Pit) as well as wider sites.

Table 23 – Onshore works

Substation	Work required
Peterhead	Establish a new substation site in the vicinity of the existing Peterhead 400 kV substation including bays for connection to the offshore network and works to connect the new site to the existing substation. The location of the new site is still to be confirmed.
Fetteresso	Establish bays for connection to the offshore network at the existing Fetteresso 400 kV substation.
New Deer	Establish bays for connection to the offshore network at the existing New Deer 400 kV substation.
Blyth	Extension of Blyth 400 kV substation, beyond existing substation boundary to accommodate additional bays and new interbus transformers.
Creyke Beck	Extension of the new Creyke Beck 400 kV substation which is already being planned for other customer connections to provide additional bays for the offshore network.
Lincolnshire Connection Node	Extension of the new Lincolnshire Connection Node 400 kV substation which is already being planned for other customer connections to provide additional bays for the offshore network.
Hawthorn Pit	Extension of the new Hawthorn Pit 400 kV substation which is already being planned for the Eastern Link project to provide additional bay for the offshore network.

The design requires works at other sites including uprating, reconductoring and reinforcement. Wider onshore works are described the system-wide view section 5.5


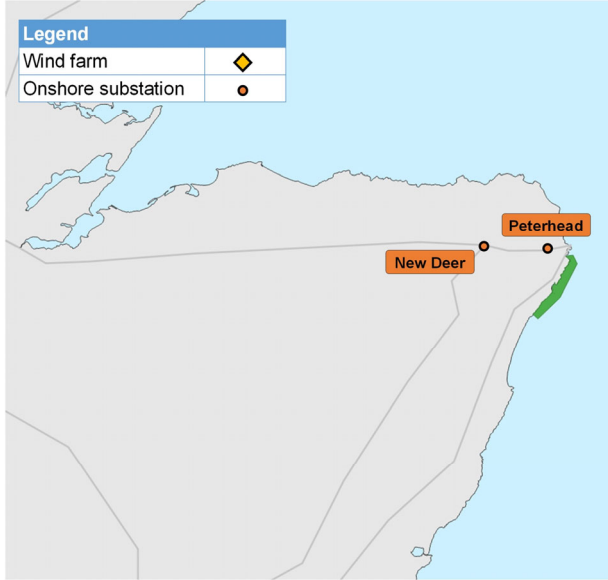

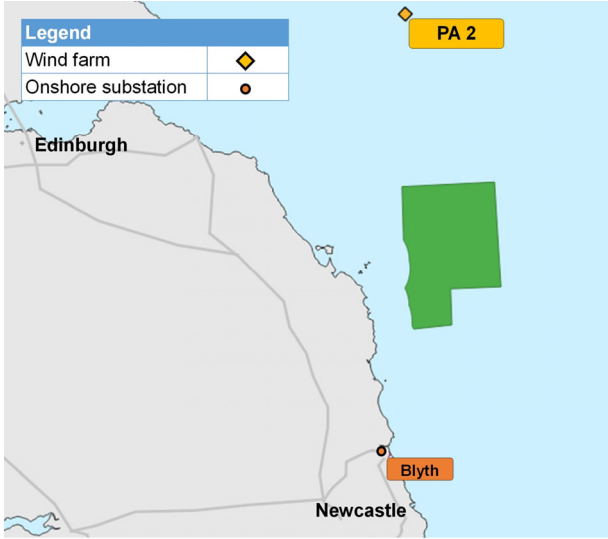
5.3.4 Environment and Community considerations

Both the recommended and radial design options increase the cable route length in the Dogger Bank Special Area of Conservation (SAC), which is unavoidable due to the location of three of the windfarms within the SAC. The recommended design, however, performs worse than the radial design in this aspect. The current layout of the recommended design reduces the number of cables to shore by connecting PA_1 into an offshore hub at R4_2, however, it increases the cable route length in the Dogger Bank SAC. The impact on the SAC could be reduced in the DND stage through careful siting of infrastructure and consideration of cable routing to minimise the impact.

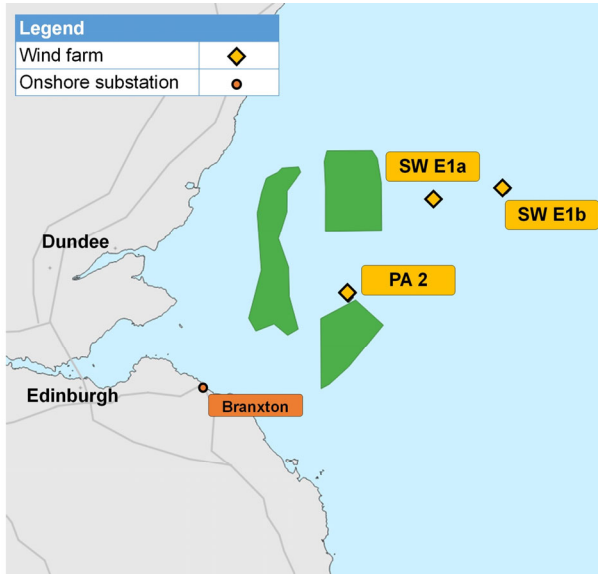
Although route corridors are not defined at this stage of the process, the HND has been developed with a view to avoiding the most significant environmental and community constraints. These include constraints with features expected to be sensitive to impacts from cabling or infrastructure where the risks would be significant.

Table 24 lists the significant constraints which it has been possible to avoid in the HND within the region. As in the regional overview, avoidable constraints are shown in solid fill whereas unavoidable constraints are cross hatched.

Table 24 - Environment and community constraints:

Constraint	Map	Description
Constraint 1 		<p>Buchan Ness to Collieston coast MPA and SPA</p> <p>The Buchan Ness to Collieston SPA is designated for its vegetated cliff slopes with an abundance of local species such as Scots lovage and roseroot. In several places the cliff edge retains semi-natural plant communities. The indicative route corridors in the design avoid the site but conflicts between cable routing projects to Peterhead might require routes to the south that might affect this SPA.</p>
Constraint 2 		<p>Farnes East MCZ and MPA</p> <p>The site is designated for its subtidal coarse sediment seabed, subtidal sand and subtidal mixed sediments, with a scattering of small patches of moderate energy circalittoral rock. A glacial trench, which forms the deepest part of the MCZ, contains subtidal mud. There is the potential to avoid the MCZ within the cable route corridors, but avoidance would affect the Berwickshire and North Northumberland coast SAC and/or Northumberland Marine SPA.</p>

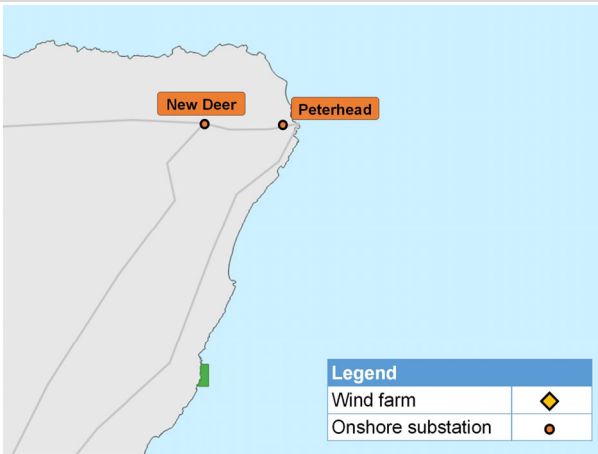
Constraint 3



Firth of Forth Banks Complex MPA

Firth of Forth Banks Complex MPA is designated for its unique mixture of habitats that overlie the underwater banks and for its role in improving our understanding of the history of glaciation. Whilst affected by the radial design, the recommended design has the potential to avoid this MPA.

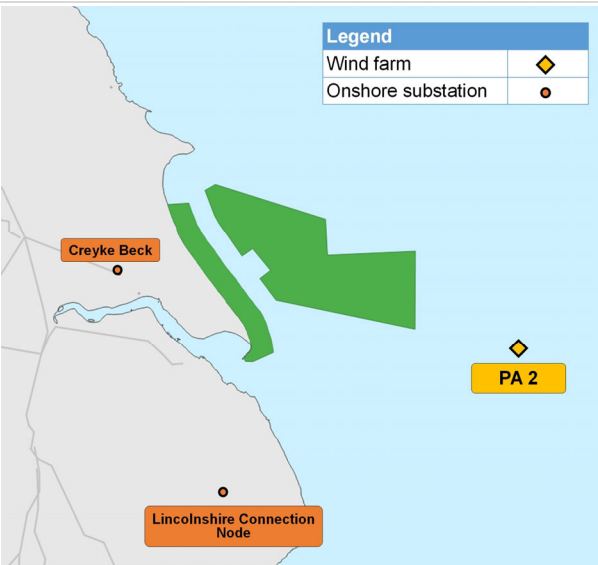
Constraint 4



Fowlsheugh SPA

The Fowlsheugh SPA regularly supports 145,000 seabirds. The site regularly supports populations of European importance of the migratory species: Common guillemot and Black-legged kittiwake and nationally important populations of razorbill, Northern fulmar and Herring gull.

Constraint 5



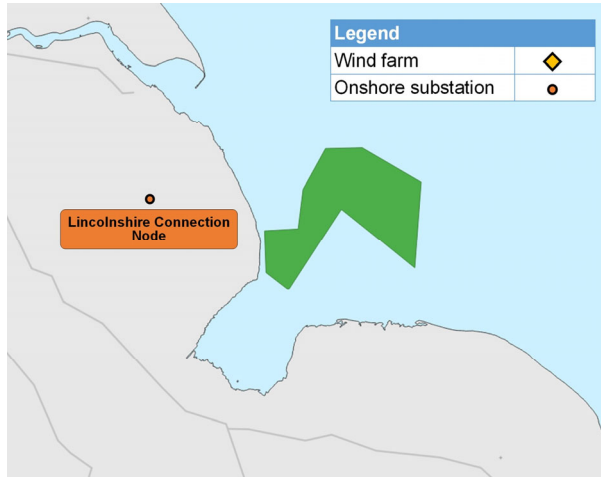
Holderness Inshore and Offshore MCZs

The Holderness Inshore MCZ is designated to protect muds, sands, rock and coarse and mixed sediments to help preserve habitats of various fish species and crustaceans. The site is also designated to protect a geological feature, Spurn Head, which is a unique example of an active split system.

The Holderness Offshore MCZ is designated for the protection of subtidal coarse and mixed sediment, subtidal sand, North Sea glacial tunnel valleys and ocean quahog environments. Both MCZs can be avoided within the approach to Creyke Beck although to do so encroaches on an area of concern to the

north known as Smithic Bank. All options for cable routing in this area and the Holderness MCZs will need to be reviewed in the DND.

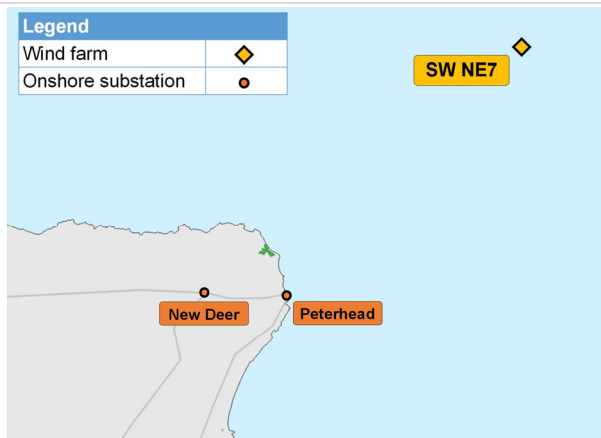
Constraint 6



Inner Dowsing, Race Bank and North Ridge SAC

The Inner Dowsing, Race Bank and North Ridge SAC is designated for its sandbank coarse sediment, subtidal mixed sediment, subtidal sand) and subtidal biogenic reefs. Although avoided by the northern route corridor in this part of the HND, this is a long diversion. We acknowledge that routes potentially affecting this SAC will need to be reviewed in the DND.

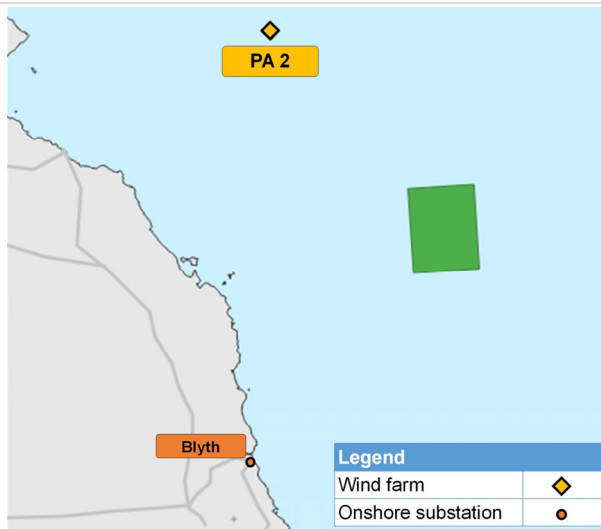
Constraint 7



Loch of Strathbeg SPA

Loch of Strathbeg SPA is composed of a shallow freshwater loch with surrounding wetland, dune and grassland communities. It provides wintering habitat for a number of important wetland bird species, particularly wildfowl.

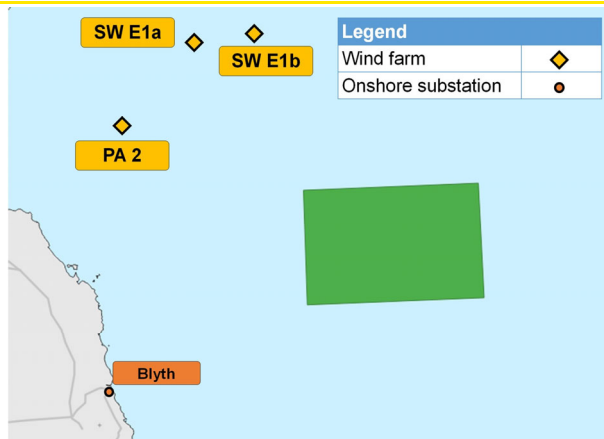
Constraint 8



North east of Farnes Deep MCZ

The site is designated for its habitats. The habitats within the MCZ are relatively stable and support a diverse range of marine flora and fauna such as anemones, worms, molluscs, echinoderms, and fish species.

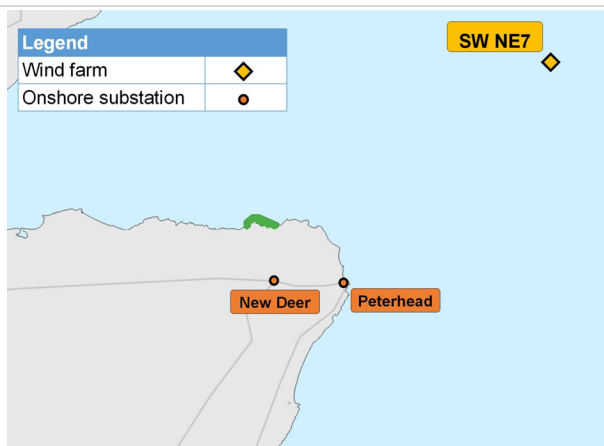
Constraint 9



Swallow Sand MCZ

The Swallow Sand site is low energy, providing a stable sediment habitat supporting a diverse range of marine species including worms, brittlestars, bivalves and gastropods.

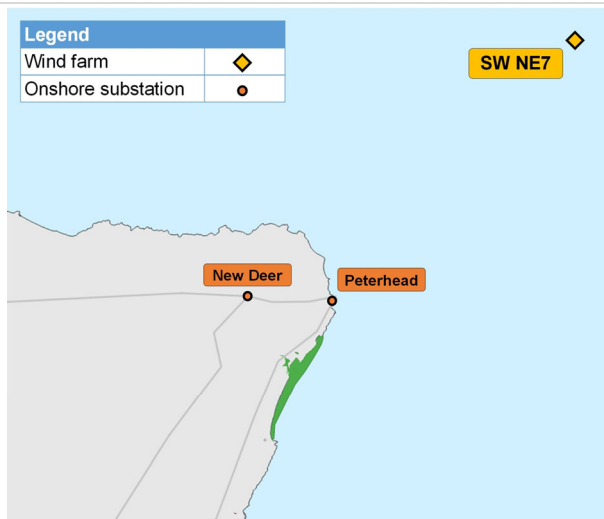
Constraint 10



Troup, Pennan and Lion's Heads SPA

The Troup, Pennan and Lion's Heads SPA is a 9 km stretch of sea cliffs along the Aberdeenshire coast. The cliffs support large colonies of breeding seabirds, including Fulmar, guillemot, Herring gull, and kittiwake.

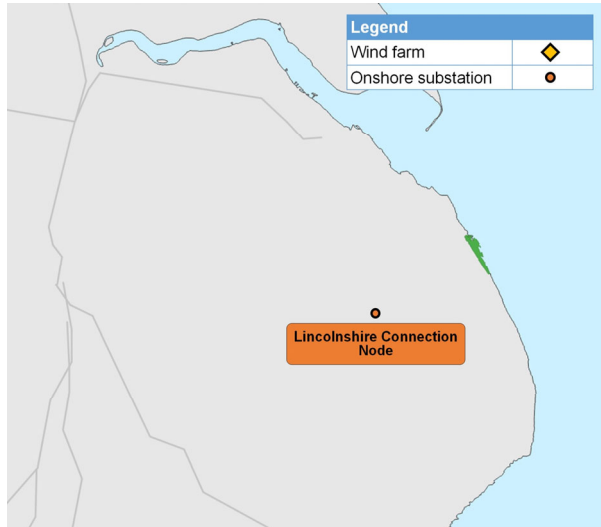
Constraint 11



Ythan Estuary, Sands of Forvie and Meikle Loch SPA

Ythan Estuary, Sands of Forvie and Meikle Loch SPA covers a complex area in the north east of Scotland that contains the long, narrow estuary of the River Ythan, the Sands of Forvie on the east bank of the estuary; the eutrophic Meikle Loch and a marine component covering the area between Aberdeen and Cruden Bay to the north. Ythan Estuary, Sands of Forvie and Meikle Loch SPA is designated for regularly supporting populations of European importance including terns, lapwings, Eider and Redshank.

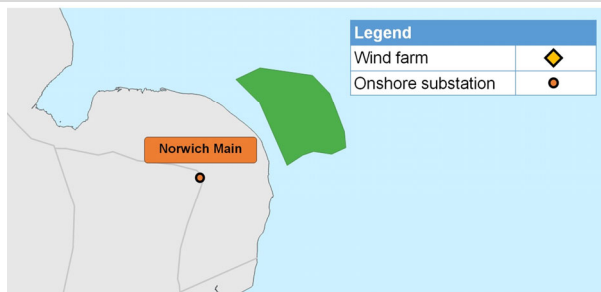
Constraint 12



Saltfleetby- Theddlethorpe Dunes and Gibraltar Point SAC

The site has been designated for its range of dune systems present. These include shifting dunes, fixed dunes, dunes with sea-buckthorn and humid dune slacks.

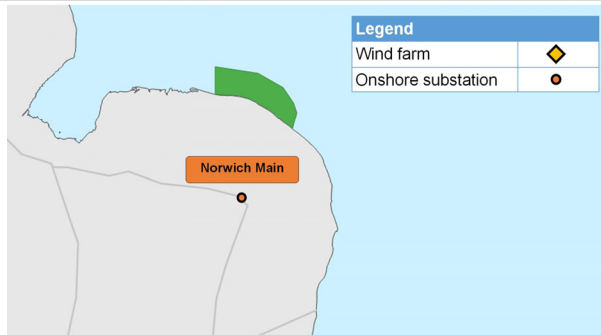
Constraint 13



Haisborough, Hammond and Winterton SAC

The Haisborough, Hammond and Winterton SAC is designated for its sandbanks, which are slightly covered by sea water all the time, for which this is considered to be one of the best areas in the United Kingdom.

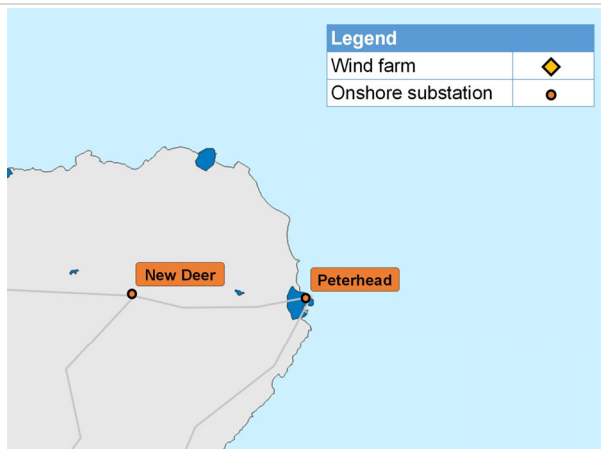
Constraint 14



Cromer Shoal Chalk Beds MCZ

The MCZ protects seaweed dominated infralittoral rock, these rocks in shallow water are an important habitat, providing a home for a variety of small creatures which shelter and feed amongst seaweeds.

Constraint 15



Peterhead and New Deer

Moderate constraints were identified at Peterhead due to the high number of residential properties around the substation. The constraints identified also include potential effects upon the landscape and cultural heritage features (such as Boddam Castle and the designated conservation Area). There are also a number of other cable routing projects proposed that require access to Peterhead.

Moderate constraints were identified at New Deer and Fetteresso potentially impacting residential areas.

Constraint 15



East England Settlements

There are settlements in the vicinity of the Blyth, Hawthorn Pit and Creyke Beck substations.


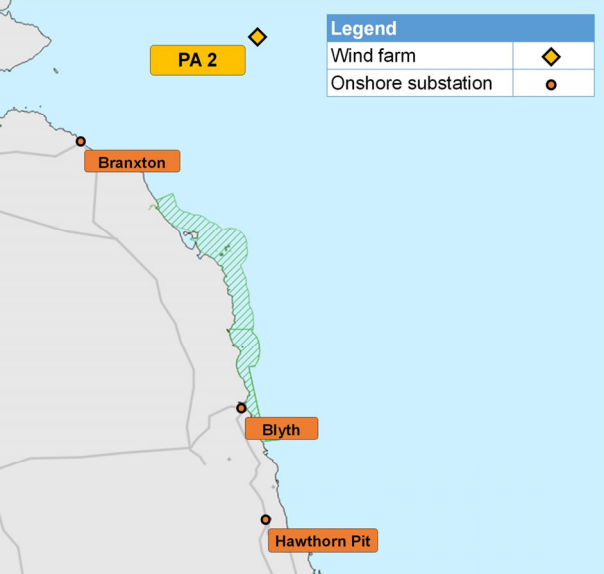

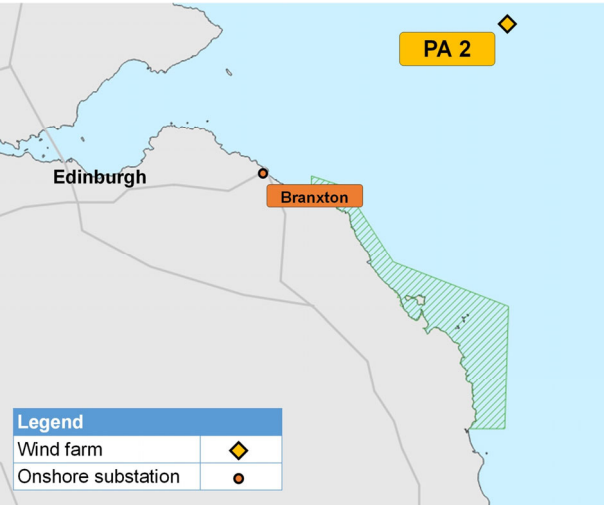
5.3.4.1 Unavoidable environmental constraints

There are some environmental constraints which cover extensive areas or are close to the point of the subsea cables making landfall, which are unavoidable due to the locations of wind farms and onshore substations. *Table 25* lists the significant constraints that it is not possible to avoid in the region.

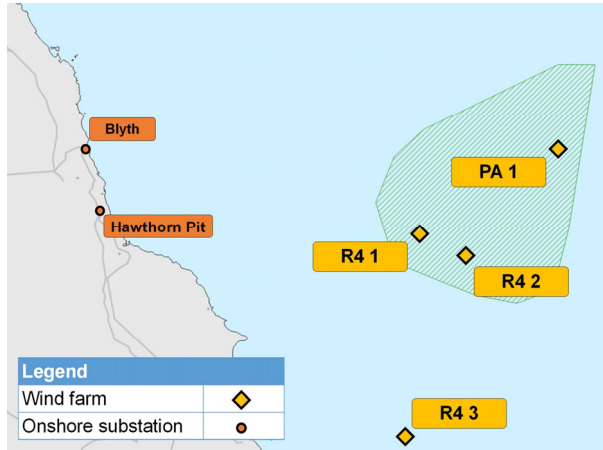
At this strategic route selection stage, the primary method of mitigation was to, as far as was possible, avoid features and/or environmental designations that were identified by the relevant statutory bodies as sensitive to cabling operations. In some instances, these environmental or physical features, or infrastructure, formed linear constraints to cable route corridors, that could not feasibly be circumvented. In these cases, consideration was given as to whether these features could be feasibly crossed over (e.g., infrastructure) with physical protection, or under by directional drilling (environmental areas).

More detailed site surveys, routing and consideration of mitigation measures will be required at the DND stage to further avoid identified specific sensitivities or features within designated areas that have not been avoided, and to identify appropriate crossing locations and techniques. At the detailed design stage further mitigation such as limiting the seasonality of working may also be considered to minimise the potential impacts of cable laying operations in areas that are not practical to avoid. Beyond this, compensatory measures may be required at the DND stage to offset identified impacts.

Table 25 - Unavoidable environmental constraints

Constraint	Map	Description
<p>Constraint 16</p> 		<p>Berwick to St Mary's and Coquet to St Mary's MCZ</p> <p>The Berwick to St Mary's site is designated for its nationally important numbers of breeding common eider. The area also supports regionally and nationally (England) important numbers of common eider in the non-breeding season.</p> <p>The Coquet to St Mary's site is designated for its several different types of rock and sediment on the shoreline and on the seabed. These habitats and communities support mobile species such as starfish, sea urchins, crabs, and lobsters. The MCZs are directly east of the landfall at Blyth and so cannot be avoided.</p>
<p>Constraint 17</p> 		<p>Berwickshire and North Northumberland Coast SAC</p> <p>This site is designated for its large shallow inlets and bays; mudflats and sandflats not covered by seawater at low tide (intertidal mudflats and sandflats); reefs; and submerged or partially submerged sea caves. Breeding colonies of grey seals are located in the site.</p>

Constraint 18

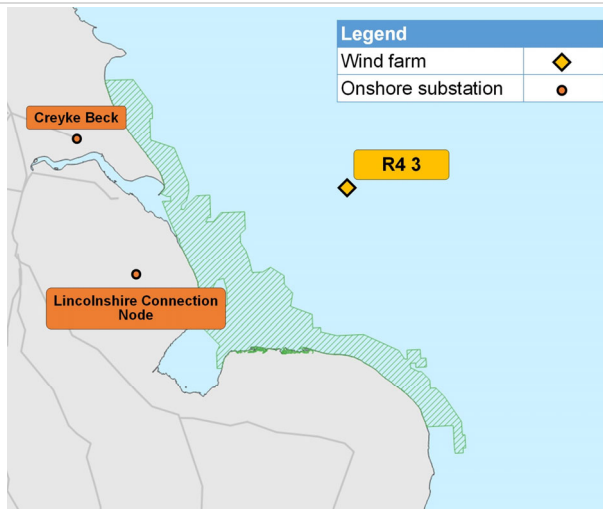


Legend	
Wind farm	◆
Onshore substation	●

Dogger Bank SAC

The Dogger Bank is the largest sandbank in UK waters and extends into both Dutch and German waters. It is home to a variety of species which live both on and within the sandy sediment. Potentially affected by a number of route corridors of the recommended design and the features of the SAC are sensitive to cabling operations. As the R4_1, R4_2 and PA_1 offshore generation sites are proposed within the designated area, it is assumed that export cabling would also be required. The locations of offshore platforms and cable routes in the recommended design will need to be reviewed in the DND to minimise cable route lengths in the SAC and/or effects on sensitive features of the SAC.

Constraint 19

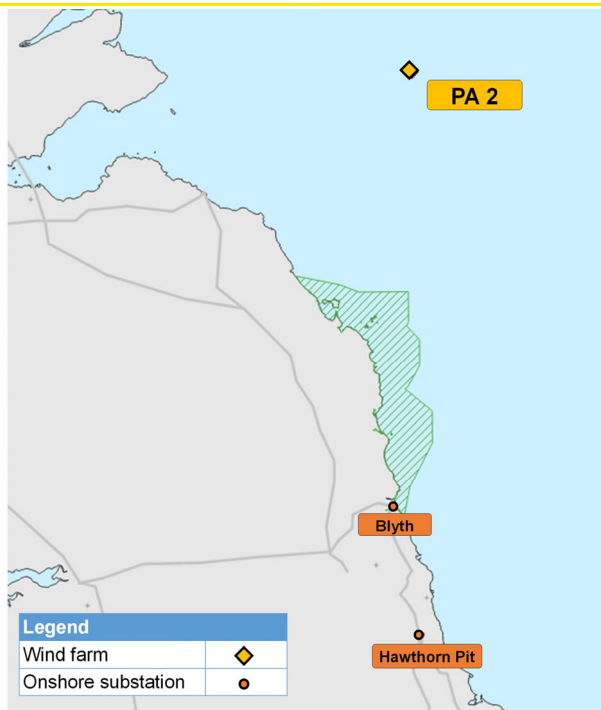


Legend	
Wind farm	◆
Onshore substation	●

Greater Wash SPA

The Greater Wash SPA is designated for the protection of Red-throated Diver, Common scoter, and Little gull during the non-breeding season, and for breeding Sandwich tern, Common tern and Little tern.

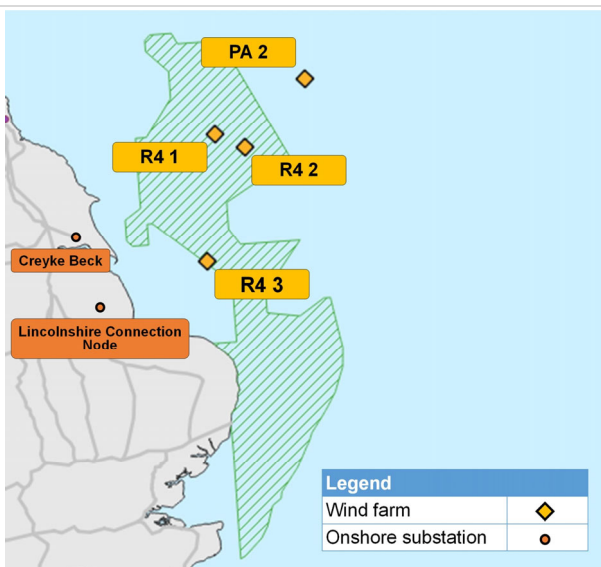
Constraint
20



Northumberland Marine SPA

The site is designated for its importance to breeding populations of five species listed in Annex I of the EC Birds Directive.

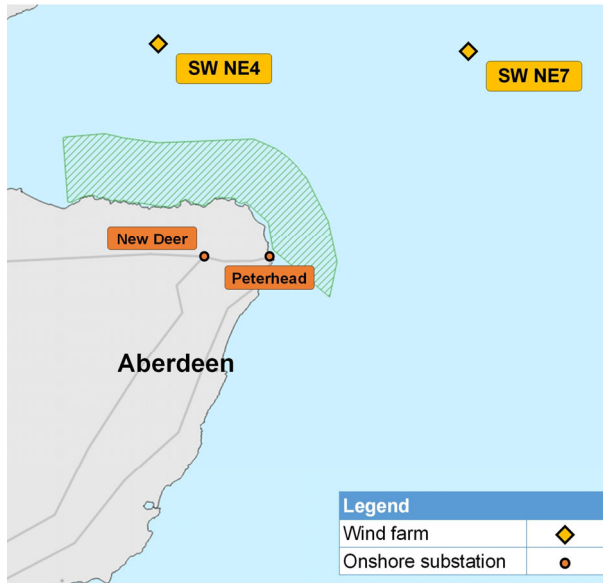
Constraint
21



Southern North Sea SAC

The Southern North Sea SAC is identified as an area of importance for Harbour porpoise. This site includes key winter and summer habitats for this species. The SAC cannot be avoided. A mix of habitats, such as sandbanks and gravel beds, are included in the site, which overlaps with Dogger Bank SAC.

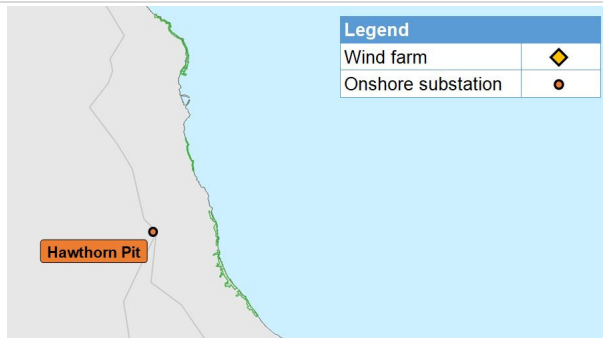
Constraint
22



Southern Trench MPA

Cable approaches to New Deer and Peterhead would have to cross this MPA, though the southern trench itself can be avoided.

Constraint
23



Durham Coast SAC

This site is designated for its unique vegetated sea cliffs on magnesian limestone exposures and is the only example in the UK. The SAC stretches along the coastline for approximately 3 km.

5.3.4.2 Unavoidable community constraints

In addition to the community constraints identified above, the cumulative impact of the continued development of energy infrastructure on coastal communities on the east coast has been identified. This is particularly applicable to Creyke Beck, Peterhead and the Lincolnshire Connection Node.

While these tables do not describe all the environmental and community constraints in the East Coast Region, they provide an overview of the significant constraints that influenced the network design, including constraints that are very close to the interface points and those which have been identified by stakeholders as being particularly sensitive to cabling operations, and thus have significant potential to impact the viability of cable routes through the area. These constraints also highlight the sensitive areas that have been identified as difficult to avoid in designing cable route corridors.

5.3.5 Potential changes to the offshore design

At this stage in the development of the HND it is not possible to detail every aspect of the design. This section outlines the possible alterations that will be considered as part of the detailed network design. For the East Coast Region there is one possible alteration:

One option considered that we will continue to develop, is the design variation where R4_3 connects further in land to a site near Spalding. This removes the dependency on the development of the Lincolnshire Connection Node substation site and the new circuit between south Humber and south Lincolnshire (GWNC²⁷). This may provide an opportunity for an earlier connection date and makes connection of R4_3 less dependent on the delivery of GWNC.

The longer cable route in this variation has a higher cost and has an environmental and community impact which needs to be taken into consideration.

However, if an earlier connection can be achieved, there is a potential overall benefit to the consumer. There is therefore an economic case for incurring the additional investment needed for a longer cable route if a connection date can be sufficiently brought forward.

We envisage that a modular approach to offshore platforms in the coordinated East Coast design will aid deliverability and make the design more expandable for future requirements. Deliverability for the East Coast design and possible design variations to aid this is discussed later in this section. This should be considered further as by those undertaking the DND stage.

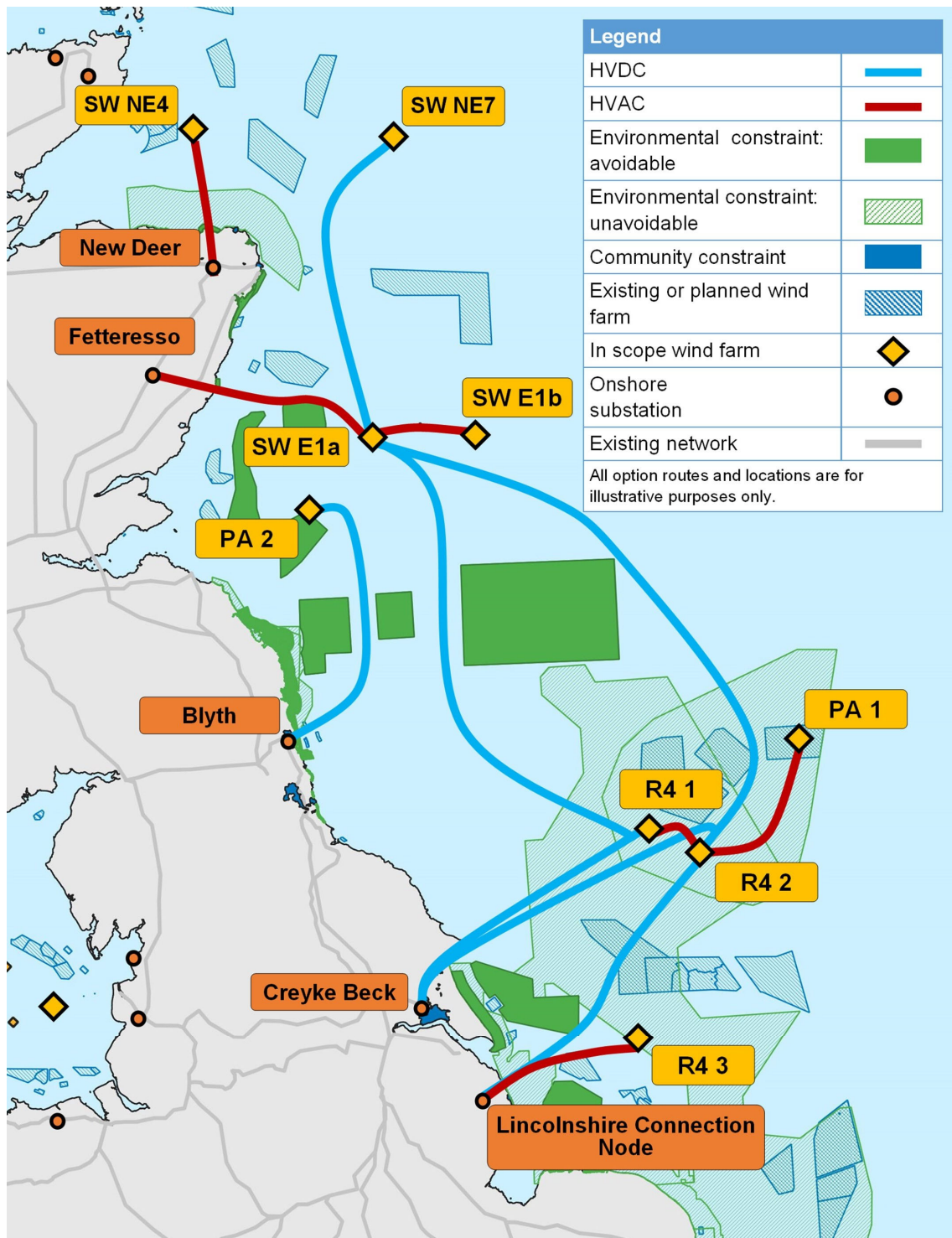
²⁷ Option GWNC is a new 400 kV double circuit between the south Humber and Lincolnshire areas that has been previously assessed by the NOA process. For further detail please see the *NOA 2021/22 Refresh* publication.

5.3.6 Other offshore designs and variations we considered

As part of the HND process, several design options were considered. This section summarises alternative designs that were not selected for the HND. For the East Coast Region, two alternative options are described in detail: an alternative coordinated design and an optimised radial design.

5.3.7 Alternative coordinated design

The alternative coordinated design is shown in Figure 19



This design uses three radial connections: SW_NE4 to New Deer, PA_2 to Blyth and R4_3 to the Lincolnshire Connection Node.

The other wind farms are connected through a coordinated design. SW_E1b, SW_NE7 and SW_E1a connect to an offshore platform and PA_1 to the R4_2 offshore platform.

The offshore platform(s) in the vicinity of SW_E1a connects to an interface point at Fetteresso. It also connects to R4_1, R4_2 offshore platforms and Creyke Beck through two multi-terminal HVDC links.

Finally, R4_2 connects to the Lincolnshire Connection Node, and also to the R4_1 offshore platform.

The alternative coordinated design reduces the number of landfall sites but performs worse in terms of economic impact and deliverability.

The alternative coordinated design is less economic and efficient than the recommended design. The alternative coordinated design is £5780 million more expensive overall, with higher capital costs (£3960 million higher) which are mainly due to its additional offshore converter stations. It also has higher constraint costs (£1820 million higher) than the recommended design. The costs and scope of onshore boundary reinforcements are broadly comparable between the two designs. These figures were calculated by changing the recommended design for the East Coast to the alternative coordinated design but keeping the rest of the offshore design the same as the recommended design.

This design also has an additional three-ended HVDC link when compared with the recommended design. This adds complexity and increases the difficulty of delivering the design by 2030.

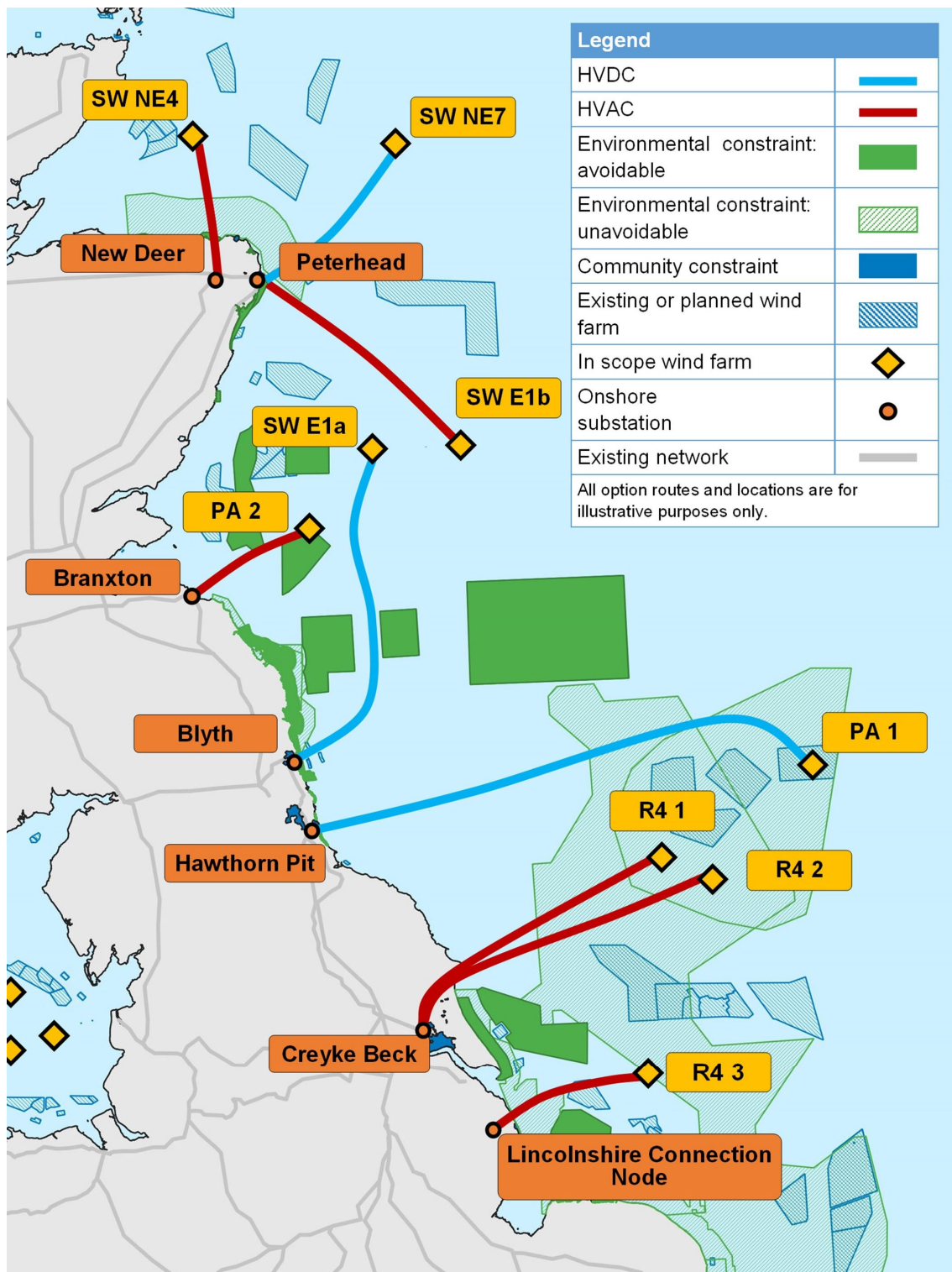
This alternative coordinated design uses fewer connections to shore, with only five onshore interface points compared with seven in the recommended design. This is because there is no interface point at Peterhead or Hawthorn Pit in the alternative coordinated design. The alternative coordinated design therefore performs better from an environmental and community perspective.

The additional multi-terminal HVDC converter station adds additional complexity and cost. Therefore, this option performs worse on economic and deliverability criteria. Although the alternative coordinated design would connect wind from the north east ScotWind Zone into the coordinated network, this does not take account of the full ScotWind capacity which is planned to connect. The option of connecting together the north east and east ScotWind zones will be considered further as part of the follow up design exercise, providing the opportunity to reduce future environmental and community impacts.

Noting the considerations above, the recommended design performs worse from an environmental and community perspective, but better from a deliverability and economic perspective. However, there are future opportunities to improve the recommended design from an environmental and community perspective.

5.3.8 East coast radial design

The optimised radial design is shown in Figure 20



As discussed in section 4.6 Optimised radial design, when all of Great Britain is taken into account, the recommended design performs better than the optimised radial design option from an economic perspective.

Deliverability, environmental and community considerations for the radial design for each region are discussed further in section 7 Optimised radial design.

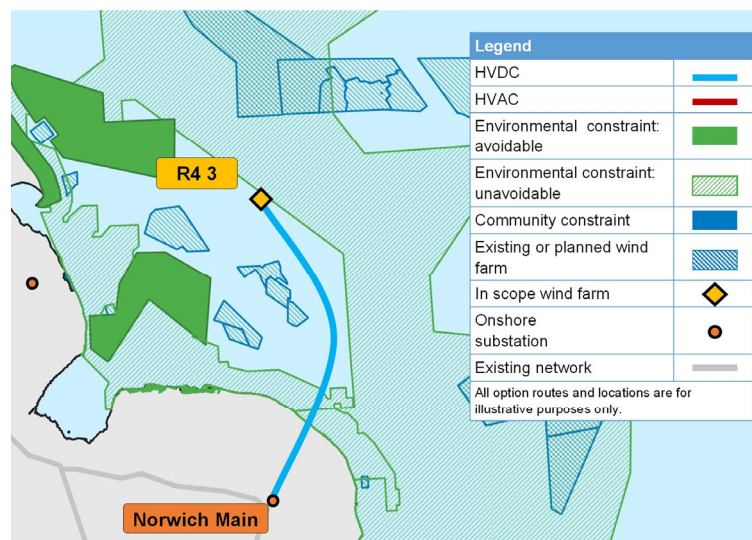
5.3.9 Other design options

These options were considered as part of the design process but were not taken forward for detailed consideration. They are included here to demonstrate the range of designs that were assessed.

Table 26 – Other design options

Radial connection to Norwich Main

Variation Within the radial options appraisal, a connection into East Anglia at Norwich Main substation was considered. This would have enabled several of the wind farms on the east coast to connect to interface sites further south. This would have led to lower costs overall, due to the reduction in constraint costs associated with connecting generation closer to areas of higher demand (London and the South East of England).



Comparison with chosen design The recommended design does not include any new connections from offshore wind farms into East Anglia beyond those currently planned at this time. This is due to the technical, environmental and community impacts of adding this connection on top of those already in place and planned. Particular challenges include the likelihood that the environmental constraints at Cromer Shoals MCZ and Haisborough, Hammond and Winterton SAC could not be avoided without taking an alternative route, which has previously been dismissed due to technical and cable safety concerns.

Although the location performed well from an economic point of view, it is unlikely to be feasible in the timescales the HND is considering to find a route that is acceptable from an environmental or technical perspective beyond those already in place and in development.

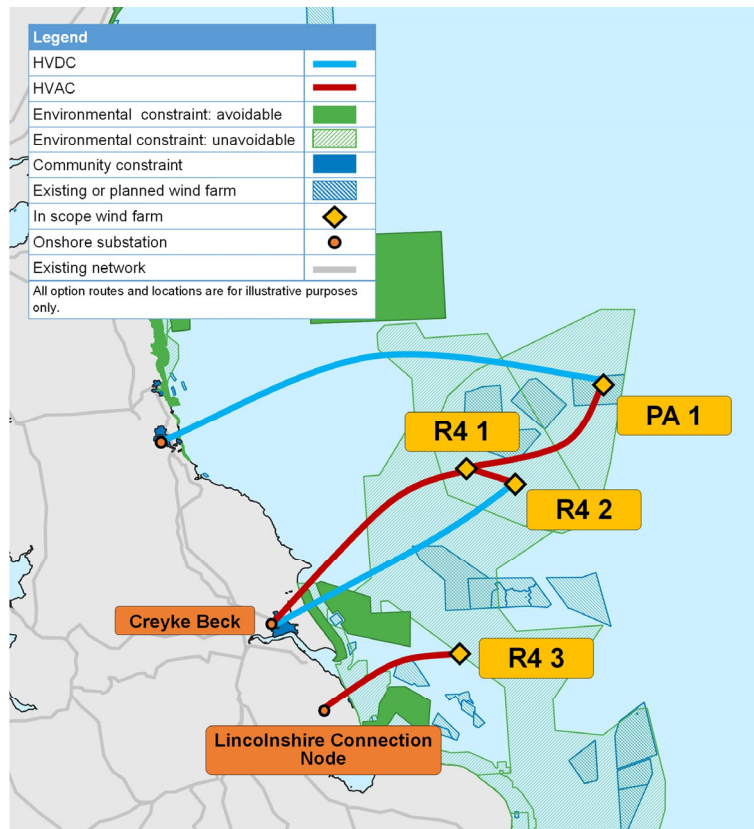
Reason for disregarding For the reasons set out above, the connection into Norwich Main is considered high risk of being undeliverable within the timescales required. As a result, Norwich Main is not considered to be a suitable connection site in the HND, even though it performs better from an economic perspective.

Greater number of offshore assets

Variation	Some alternative options considered a much higher number of offshore assets, for example increasing the capacity between Scotland and England, to determine whether this would provide an economic benefit.
Comparison with chosen design	These options did not perform well against our assessment criteria: they introduced additional cost and complexity offshore, which was not outweighed by savings in constraint costs. Due to constraints associated with Norwich at this time (as above) there were limited landfall sites in England to connect the additional offshore infrastructure.
Reason for disregarding	These options were not taken forward as the increase in costs due to the additional infrastructure was greater than the savings in constraint costs that these assets would deliver.

Teesside to Humber region ring

Variation This option considered a ring between Teesside and the Humber region for just the English wind farms.



Comparison with chosen design	The option has lower capital costs than the chosen design due to a lower number of offshore assets, but it led to higher constraint costs because less power could be transferred from Scotland to England.
Reason for disregarding	This option was disregarded because it limits the options for coordination with Scotland as it only enables a single offshore link to connect to Teesside from further north. This would lead to higher constraint costs than the recommended design, which would outweigh the savings in capital costs.

Coordination with Eastern Links (eastern Scotland to England transmission reinforcements)

Variation	The NOA process recommends that several offshore HVDC links are constructed between eastern Scotland and England. Consideration was given to coordination with the 3rd and 4th Eastern Links due to their route and potential landing point coinciding with the coordinated designs.
Comparison with chosen design	Connecting wind farms directly to these links reduces the available transfer capacity from Scotland to England. The recommended design therefore requires the 3rd and 4th Eastern Links in addition to the offshore network proposed in the recommended design.
Reason for disregarding	Limiting the available transfer capacity from Scotland is not preferable as this would lead to higher constraint costs.

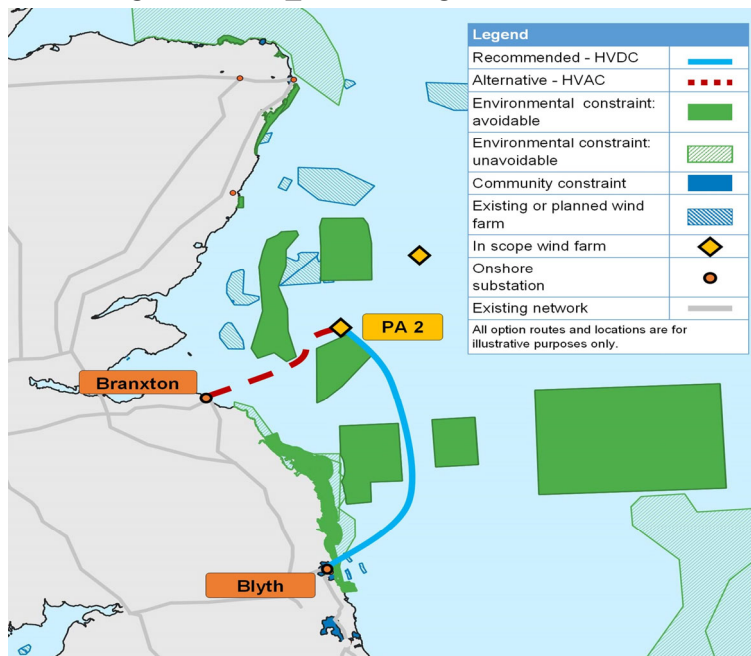
Using AC technology for more offshore routes

Variation	AC technology could have been used to construct more of the offshore routes.
Comparison with chosen design	Using AC technology would have reduced capital costs by reducing the requirements for converter stations. However, in some situations this would have created an AC route in parallel to the onshore network. Compared to the onshore 275 kV and 400 kV double circuits to which the offshore network would be parallel, the offshore cable circuits would be relatively weak. This would make them prone to overloading and may actually reduce network power transfer capability. To avoid this, fast responding power control systems would need to be put into place which introduces additional complexity, cost and operability risk.
Reason for disregarding	All options which would introduce a parallel AC route were not taken forward in favour of a DC link which provides controllability.

Connecting PA_2 into Branxton rather than Blyth

Variation

We considered connecting PA_2 into Branxton, as this would require less offshore infrastructure than a connection to Blyth. The optimised radial design shows PA_2 connecting into Branxton.



Comparison with chosen design

Connecting PA_2 into Branxton would lead to a reduction in capital costs as it is a shorter link. However, when considering constraint costs beyond 2030 in the recommended design, the constraint costs associated with a connection into Branxton are significantly higher than those associated with a connection into Blyth.

The total costs of a connection into Blyth are therefore lower than the total costs of a connection into Branxton. A connection into Blyth would also avoid environmental constraints at Branxton. A connection into Branxton would perform worse from a deliverability perspective as it is not consistent with development work carried out to date and clashes with other planned offshore connections at Branxton.

Reason for disregarding

A connection into Branxton performs worse from an economic, environmental and deliverability perspective.

5.3.10 Economic and Efficient considerations

The recommended design performs better from an economic perspective than the alternative designs considered. When compared to the alternative coordinated design in *Section 5.3.7*, the recommended design is £5780 million less expensive overall. The recommended design has lower capital costs (£3960 million lower): this is mainly because the recommended design includes fewer offshore converter stations. The recommended design also has lower constraint costs (£1820 million lower): this is mainly because the recommended design has more capacity to transfer power from Scotland to England. In the alternative coordinated design, one of the circuits going south from SW_E1a goes to R4_2 (effectively meaning that its capacity is shared), whereas in the recommended design this circuit goes directly into Hawthorn Pit. The costs and scope of onshore boundary reinforcements are broadly comparable between the two designs. These figures were calculated by changing the recommended design for the East Coast to the alternative coordinated design, but keeping the rest of the offshore design the same as the recommended design.

As described in section 4.7, the recommended design also performs better than the optimised radial design from an economic perspective.

5.3.11 Deliverability and operability

The design provides the opportunity for in scope wind farms to be able to connect by 2030 under the current regulatory and planning frameworks. The longer, and more complex, HVDC links in the design are unlikely to be complete by 2030 in the absence of major acceleration in the supply chain. However, the design offers the potential to get generation connected by 2030, and increase capacity progressively, given timely allocation of responsibilities, delivery of the commitments in the *BESS* and a coordinated and concerted effort from all parties. During this interim phase, the network would have reduced redundancy.

5.3.11.01 HVDC

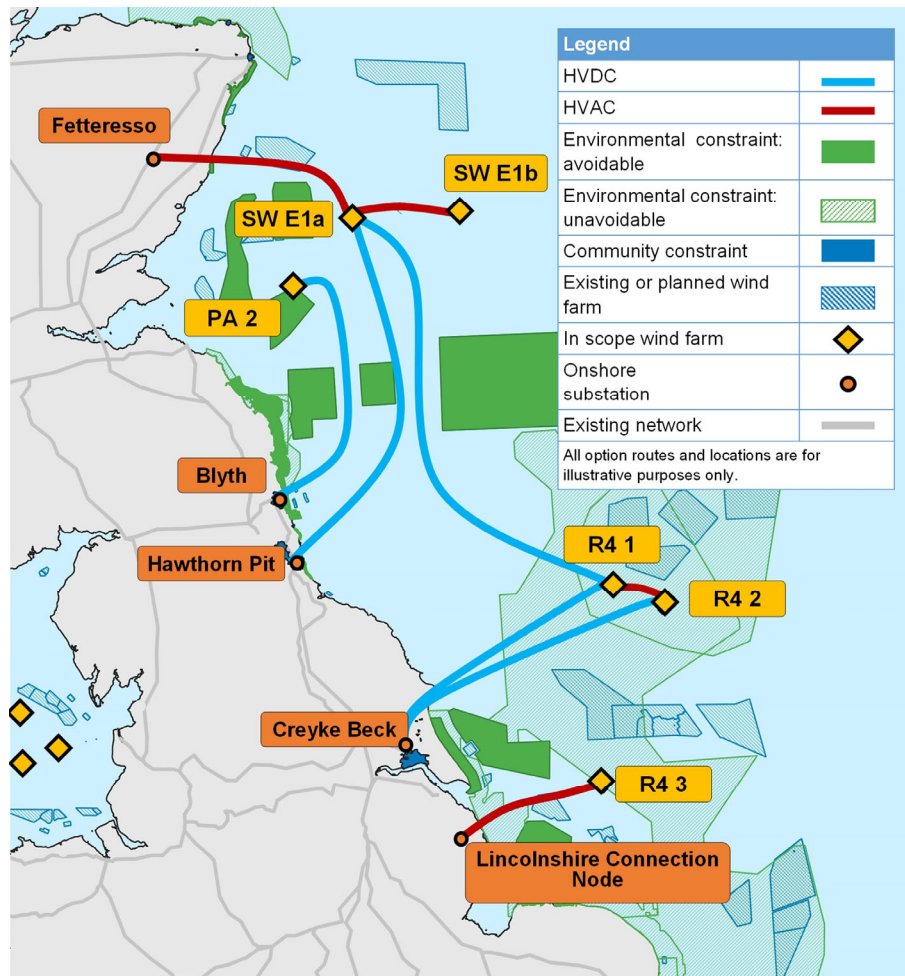
This East Coast design includes five point-to-point HVDC links and a three-ended HVDC circuit. This represents a deliverability risk in terms of cable supply and installation. Some of these are unlikely to be complete by 2030 as set out above, although the design offers the potential to connect generation ahead of this.

5.3.11.02 Overall complexity

The design is complex with several offshore connections between wind farms and HVDC/HVAC connections to the same points. These potentially increase the technical difficulty and the timeframes required for construction and commissioning. They also increase the level of interaction and interdependence between different elements of the design which are likely to become the responsibility of different parties in planning, consenting and construction.

It is not possible at this time to create a fully staged construction timeline for the recommended design for the East Coast Region and not possible to look at all plausible variations, particularly at the northern group of the coordinated section in the ScotWind area. However, we have tested the outcome for a mismatch in the development timelines for the PA_1 and R4_2 sites in the southern group, by examining a design for 2030 in the absence of PA_1. Under this scenario, our optimal design is the same as our recommended design, with the only differences being that the link from PA_1 to R4_2 is not required and the link from R4_2 to the Lincolnshire Connection Node is of less value. This scenario is illustrated in Figure 21.

Figure 21 - Design for 2030 in the absence of PA_1



One conclusion that can be drawn from this assessment is that the links from PA_1 to the R4_2 locations and onwards to Lincolnshire Connection Node can be thought of as a single self-contained package with a linkage to the rest of the design close to R4_2. This approach would also avoid the need to build a single large platform when multiple smaller platforms are more deliverable and entail a lot less work in anticipation of future links. Generally, we envisage that a modular approach to offshore platform design will aid deliverability and make the design more expandable. The most appropriate approach will be informed by Ofgem's asset classification process. The practical implications should be considered further by those undertaking the DND stage.

5.3.11.03 Technical and environmental

The principal offshore technical constraints include ports, dredge spoil dumping sites and offshore infrastructure including pipelines and cable crossings.

5.3.11.04 Onshore works

The design requires several onshore works that are either not included in NOA or currently on "Hold". Most works have an EISD on or before 2030 apart from 11 options which have EISDs later than 2030.

The Lincolnshire Connection Node requires a new onshore circuit which is currently not anticipated to be delivered until 2031; an alternative site further in land remains under consideration as a connection point for R4_3. The timings and required works for each connection will be determined as part of the connection offer update process.

5.3.11.05 Operability

The complex nature of the East Coast design, with its mixture of HVAC and HVDC circuits, gives some operational challenges. The power flows in the offshore network need to be actively managed by means of the HVDC circuits to provide greatest power transfer capability, avoid potential overload conditions and adverse interactions with the onshore network.

For moderate to high wind conditions, it is expected that most power flows will be directed towards the southerly connection points. Under outage or fault conditions, the next available circuits should pick up their loading to maintain power balance.

Dynamic studies have found that the proposed design is stable but the offshore voltage control of both the HVAC and HVDC systems needs to be carefully configured using resource from the wind farms, HVDC converters and reactive compensation equipment.

5.3.12 Stakeholder feedback

Stakeholders noted that successful delivery of the coordinated design may depend on which party is responsible for building each part of the design, the date by which each part of the design can be constructed, and the timescales by which this responsibility is known.

Stakeholders raised concerns that the coordinated HND designs required large platforms, leading to complex builds and significant anticipatory investment for some parties (those building additional infrastructure to facilitate a coordinated design), and dependency and risk for other parties (those dependent on this infrastructure to connect).

Stakeholders also provided feedback about the deliverability of some of our recommendations. We had originally proposed a solution where SW_NE7's connection was split into two phases, with 1000 MW in the first phase and 2000 MW in the second phase (total 3000 MW). Our original design (as shared with developers) proposed a 1000 MW HVAC connection to Peterhead for the first phase of SW_NE7. For SW_NE4, we had proposed a 2000 MW HVAC connection to New Deer (reflecting the capacity in its connection agreement), although this is higher than the published capacity associated with the option agreement with Crown Estate Scotland²⁸.

Feedback from the SW_NE7 developer indicated that the staging originally assumed for SW_NE7 was not consistent with their needs and preferred technology choice (HVDC). We agree that it could be challenging to deliver a HVAC connection of this length, particularly given landfall constraints around Peterhead. An HVDC connection could have a reduced environmental impact, allowing for cables to be laid closer (for example in a single trench onshore), and with each cable carrying a higher capacity. We have therefore recommended a 1500 MW HVDC connection to Peterhead for SW_NE7.

We note that the HND can only include a limited capacity of ScotWind generation, as described in section 2.3 ScotWind projects in scope. As the two sites are proposed to connect to the same part of the network, moving capacity between the SW_NE4 and SW_NE7 sites does not have a significant impact on the rest of the network. However, increasing the total capacity of these sites (even if generation is removed elsewhere) would increase power flows across the network, leading to additional constraint costs or an increased requirement for boundary reinforcement.

Due to the above, and the fact that the published information related to SW_NE4's ScotWind option agreement does not currently reflect its full 2000 MW connection contract capacity, we have therefore only been able to include 1500 MW of SW_NE4's capacity within the HND. We expect to include the remaining 500 MW within the HND follow up process, although this may be subject to staging.

The follow up process to the HND will include the remaining capacities for SW_NE4 and SW_NE7.

Stakeholders have provided feedback to share concerns that designated sites, including MPAs, have not been able to be avoided by the proposed HND design and concerns have been raised about the impact that additional cable routes could have on sediment processes on the East Coast of England, particularly in relation to the Creyke Beck and Lincolnshire Connection Node sites. Concerns have also been raised regarding the increased cable routing in the Dogger Bank SAC in

²⁸ <https://www.crownestatescotland.com/news/scotwind-offshore-wind-leasing-delivers-major-boost-to-scotlands-net-zero-aspirations>

the recommended design. We have reviewed these concerns and considered whether there are alternative cable routing options. While it may be possible to reduce the length of cable in some protected areas, the location of the windfarms and the designated areas mean it is not possible to completely avoid them. Further consideration will need to be given in the DND stage to minimise environmental impact and follow the mitigation hierarchy.

Feedback from the R4_3 developer raised concerns about the dependency of their proposed connection to Lincolnshire Connection Node on the construction of the new circuit between south Humber and south Lincolnshire (GWNC). Economic analysis has identified a potential overall benefit to the consumer if a connection date can be sufficiently brought forward. This option is still being considered and further analysis is being undertaken.

5.3.13 Conclusions and next steps

The East Coast Region is complex and connects nine offshore wind farms to the onshore network as well as providing valuable connections offshore between England and Scotland.

Our assessment indicates there is clear value in transferring power through the offshore network from the eastern ScotWind zone to the south via the developments off the East Coast of England.

We envisage that a modular approach to offshore platforms in the coordinated East Coast design will aid deliverability and make the design more expandable for future requirements. Our assessment tells us that the need for a HVDC link from R4_2 to the Lincolnshire Connection Node, along with the AC connection from PA_1 itself, is triggered by the PA_1 connection. As there are likely to be different deliverability issues and time constraints for the different projects to work through, we recommend that the design for this grouping is taken forward in discrete packages with provision for offshore linkages at the appropriate point. A similar principle could be adopted for the SW_E1a and SW_E1b grouping, and it may be possible to complete a similar assessment in the follow up process to the HND. As envisaged by Ofgem, further analysis on the primary function of each asset will be needed to confirm who is responsible for each part of the coordinated design.

The recommended design is **economic and efficient**, offering savings of £5780 million compared with the alternative coordinated design. This is due to savings in converter station costs (offshore converter stations are significantly more expensive), and lower constraint costs in the recommended design due to a larger capacity to transfer power from Scotland to England. The recommended design is also more economic and efficient than the optimised radial design.

The design is **deliverable and operable** and provides the opportunity for in scope wind farms to be able to connect by 2030 under the current regulatory and planning frameworks. The longer, and more complex, HVDC links in the design are unlikely to be complete by 2030 in the absence of major acceleration in the supply chain. However, the design offers the potential to get generation connected by 2030, and increase capacity progressively, given timely allocation of responsibilities, delivery of the commitments in the *BESS* and a coordinated and concerted effort from all parties.

The design seeks to **minimise the impact on the environment** by avoiding areas of significant constraint where possible, although not all environmentally sensitive areas can be avoided. The north to south links in the design provide additional power flow capabilities without increasing the number of onshore connection points, and offset future requirements for reinforcement.

The design seeks to **minimise local community impact** where possible, by avoiding further connections into East Anglia at this time beyond those already planned. Careful planning at the DND stage should enable community impacts elsewhere to be minimised.

5.4 North Scotland Region

For the North Scotland Region, the recommended design uses radial connections only, with no coordination between wind farms. The design connects two wind farms, SW_N1 and SW_N4. Although a coordinated design was considered which linked these two wind farms, this did not perform well against the network design objectives due to the distance between the two projects.

It was not possible to identify an economically justifiable option to link to the west coast. For the generation considered within this phase of the HND we could not identify a technically viable option to link to the east coast via an offshore route.

It was concluded that coordination within this region does not perform well against the network design objectives.

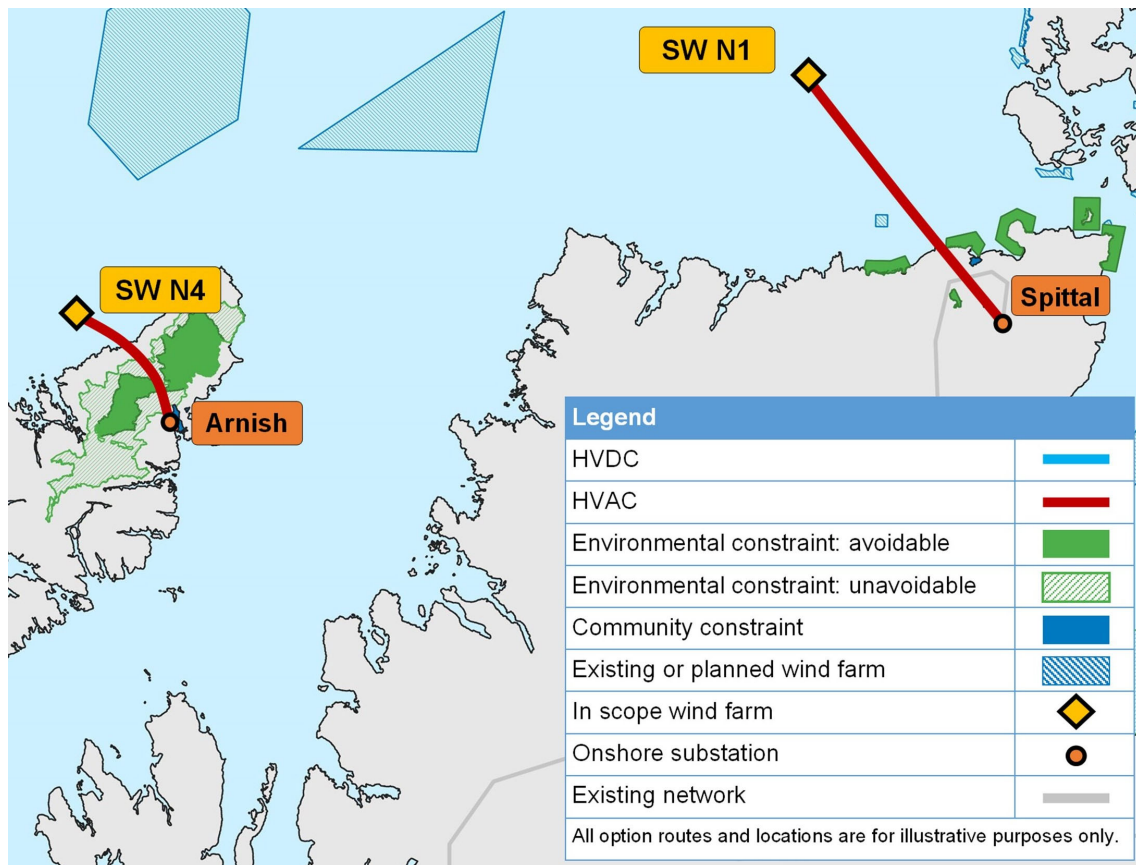
5.4.1 Projects in scope

The North Scotland Region design connects the following two projects in *Table 27*:

Project name	Capacity (MW)
SW_N1	2250
SW_N4	740

5.4.2 Offshore Design

Based on the known locations for these wind farms, the recommended design provides radial connections for both sites, connecting SW_N1 to Spittal substation and SW_N4 to Arnish (Lewis), shown in *Figure 22*:



This is our recommended design for the region.

The design consists of AC connections from SW_N1 to Spittal, and from SW_N4 to Arnish (Lewis).

Because SW_N4 is connecting to Arnish on the Western Isles, an HVDC link will need to be established from the Western Isles to the Great Britain mainland (forming part of SSEN's transmission network).

The nature of this link depends on whether SSEN's proposed 600 MW link from Arnish to Beaulieu (planned to be completed in 2027) goes ahead; this is dependent on regulatory approval and a sufficient volume of onshore generation on the Western Isles.

- If the 600 MW link does not go ahead, an 1800 MW HVDC link from Arnish to Beaulieu could be constructed.
- If the 600 MW link goes ahead, SSEN would construct a separate 1800 MW link from the Western Isles to the mainland (which would connect to a different mainland substation as it is not feasible to construct two separate links from Arnish to Beaulieu).

Our analysis within the HND assumes that connecting SW_N4 to Arnish would require a new 1800 MW link from Arnish to Beaulieu. This link would provide some headroom for additional generation to connect in the future.

Our choice of cable technology (HVDC or High Voltage Alternating Current (HVAC)) in this document has been made in the first instance on the optimal economic design solution based on our assumptions as set out in the Network design guidelines and network overview section. The choice between AC and DC cabling becomes less clear cut in the upper length range for AC cables (150-200 km) and will depend on other project specific factors, including environmental, technical and community constraints. The final choice of technology will be made as part of the DND phase.

The connections used in the design are described in *table 28*. While these connections represent our current proposal for the design, they may change in further stages of the design process.

Node 1	Node 2	Circuit capacity (MW)	Technology ²⁹	Distance (km) ³⁰
SW_N1	Spittal	2250	AC 4-6 cables	66
SW_N4	Arnish	740	AC 2-3 cables	40

5.4.3 Onshore works

The design requires onshore works at the interface sites (Arnish and Spittal) as well as wider sites *Table 29*.

Substation	Work required
Arnish	Establish a 1.8 GW monopole HVDC link from a new 275 kV substation site on the Western Isles, including bays for connection to the offshore network, to a site on the Great Britain mainland. The location of the new site on the Western Isles and the site on the Great Britain mainland is still to be confirmed.
Spittal	Establish a new 400 kV substation site in the vicinity of the existing Spittal 275 kV substation including bays for connection to the offshore network and works to connect the new site to

²⁹ AC cable numbers assume 500 MW is possible at 275 kV. Longer distances may require an additional parallel cable to account for reactive power losses.

³⁰ The distances shown relate to an indicative route. Route corridors will be determined as part of the Detailed Network Design process.

the existing substation. The location of the new site is still to be confirmed.

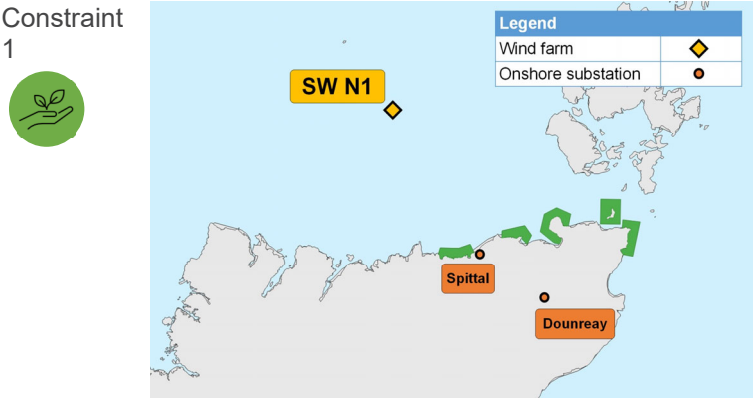
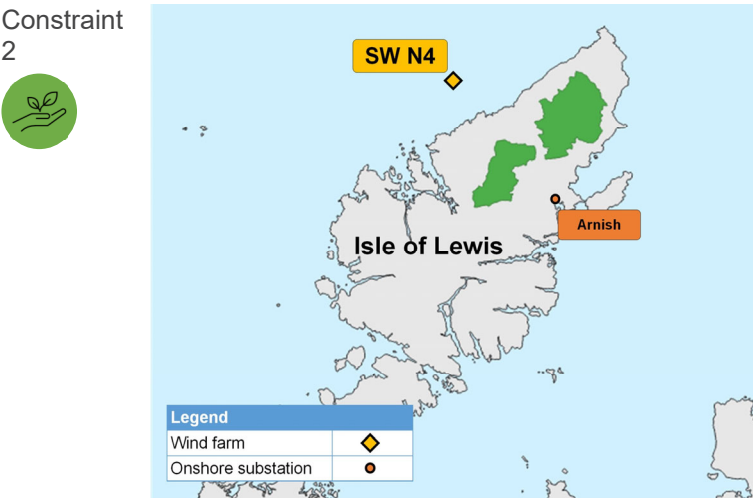
The design requires works at other sites including uprating, reconductoring and reinforcement. Wider onshore works are described in section the system-wide view section 5.5

5.4.4 Environment and Community considerations

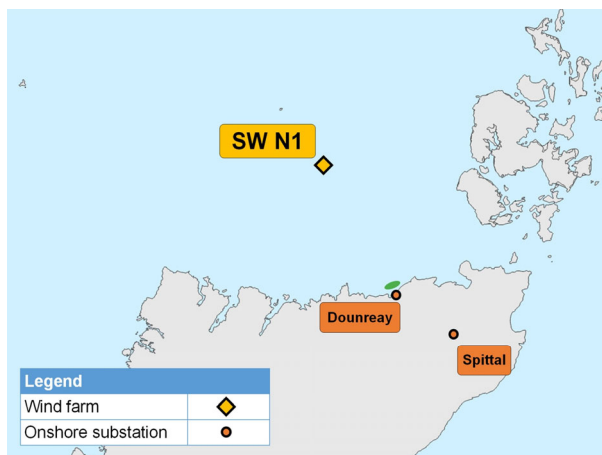
Although route corridors are not defined at this stage of the process, the HND has been developed with a view to avoiding the most significant environmental and community constraints. These include constraints with features expected to be sensitive to impacts from cabling or infrastructure where the risks of cabling would be significant.

Table 30 lists the significant constraints which it has been possible to avoid in the HND within the region. As in the regional overview, avoidable constraints are shown in solid fill whereas unavoidable constraints are cross hatched.

5.1.8 Environment and community constraints

Constraint Map	Description
<p>Constraint 1</p> 	<p>North Caithness Cliffs SPA and MPA</p> <p>This site is designated for its very large populations of breeding seabirds such as peregrine kittiwake and guillemot.</p> <p>The site covers a number of sections of the north coast. Although it has been avoided by the HND, landfall opportunities are limited along this coastline and other options might need to be included in the future which might affect the SPA.</p>
<p>Constraint 2</p> 	<p>Lewis Peatlands (SAC)</p> <p>The Lewis Peatlands SAC is designated for the presence of Blanket bog, depressions on peat substrates, acid peat-stained lakes and ponds, wet heathland with cross-leaved heath, clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels and other species.</p>

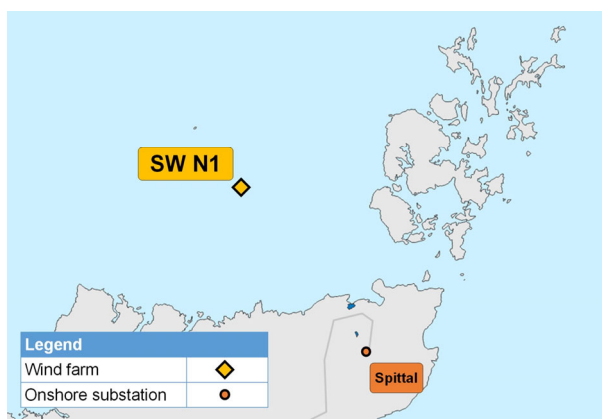
Constraint
3



Dounreay Radioactive Particles

Radioactive particles are known to be present in the marine environment around the Dounreay nuclear site. *Approximate location shown in figure.*

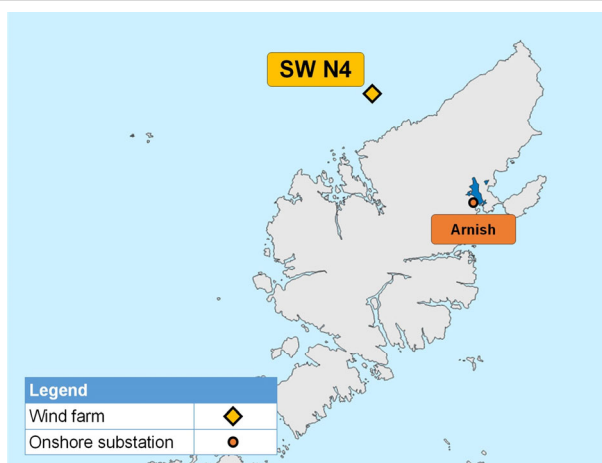
Constraint
4



Built-up areas

The urban area of Halkirk is within the potential cable approach, but there is potential to avoid it.

Constraint
4



Built-up areas

The urban area of Stornoway is located approximately 4 km from the Arnish (Lewis) substation.

4.4.5 Unavoidable environmental constraints


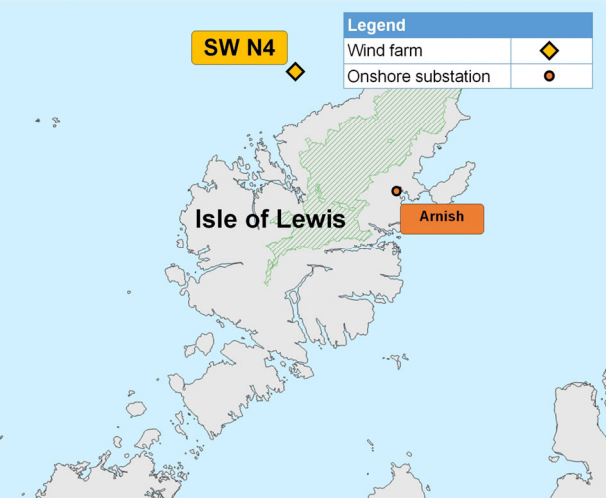

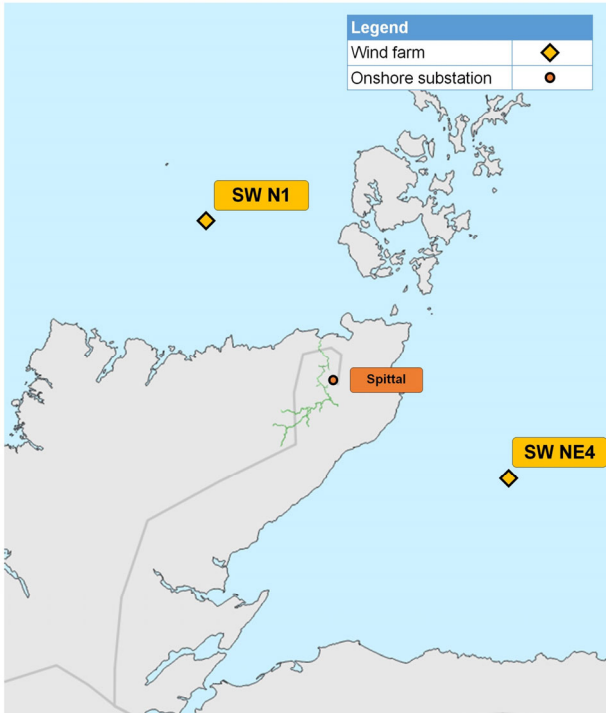
There are some environmental constraints which cover extensive areas or are close to the point of the subsea cables making landfall that are unavoidable due to the locations of wind farms and onshore substations. *Table 31* lists the significant constraints that it is not possible to avoid in the region.

At this strategic route selection stage, the primary method of mitigation was to, as far as was possible, avoid features and/or environmental designations that were identified by the relevant statutory bodies as sensitive to cabling operations. In some instances, these environmental or physical features, or infrastructure, formed linear constraints to cable route corridors, that could not feasibly be circumvented. In these cases, consideration was given as to whether these features

could be feasibly crossed over (e.g., infrastructure) with physical protection or under by directional drilling (environmental areas).

More detailed site surveys, routing and consideration of mitigation measures will be required at the DND stage to further avoid identified specific sensitivities or features within designated areas that have not been avoided, and to identify appropriate crossing locations and techniques. At the detailed design stage further mitigation such as limiting the seasonality of working may also be considered to minimise the potential impacts of cable laying operations in areas that are not practical to avoid. Beyond this, compensatory measures may be required at the DND stage to offset identified impacts.

Table 31 - Unavoidable environmental constraints

Constraint	Map	Description
<p>Constraint 5</p> 		<p>Lewis Peatlands SPA</p> <p>The Lewis Peatlands SPA is designated for the presence of breeding species of Black-throated diver, Dunlin, Golden eagle, Golden plover, Greenshank, Merlin and Red-throated diver. It is not feasible to design a route corridor which avoids the SPA.</p>
<p>Constraint 6</p> 		<p>River Thurso SAC</p> <p>This site is designated for its importance to wintering Atlantic salmon and other fish species such as Grilse. The SAC cannot be avoided within the route corridor for SW_N1. It might be possible to drill beneath it.</p>

While these tables do not describe all the environmental and community constraints in the North Scotland Region, they provide an overview of the significant constraints that influenced the network design, including constraints that are very close to the interface points and those which have been identified by stakeholders as being particularly sensitive to cabling operations, and thus

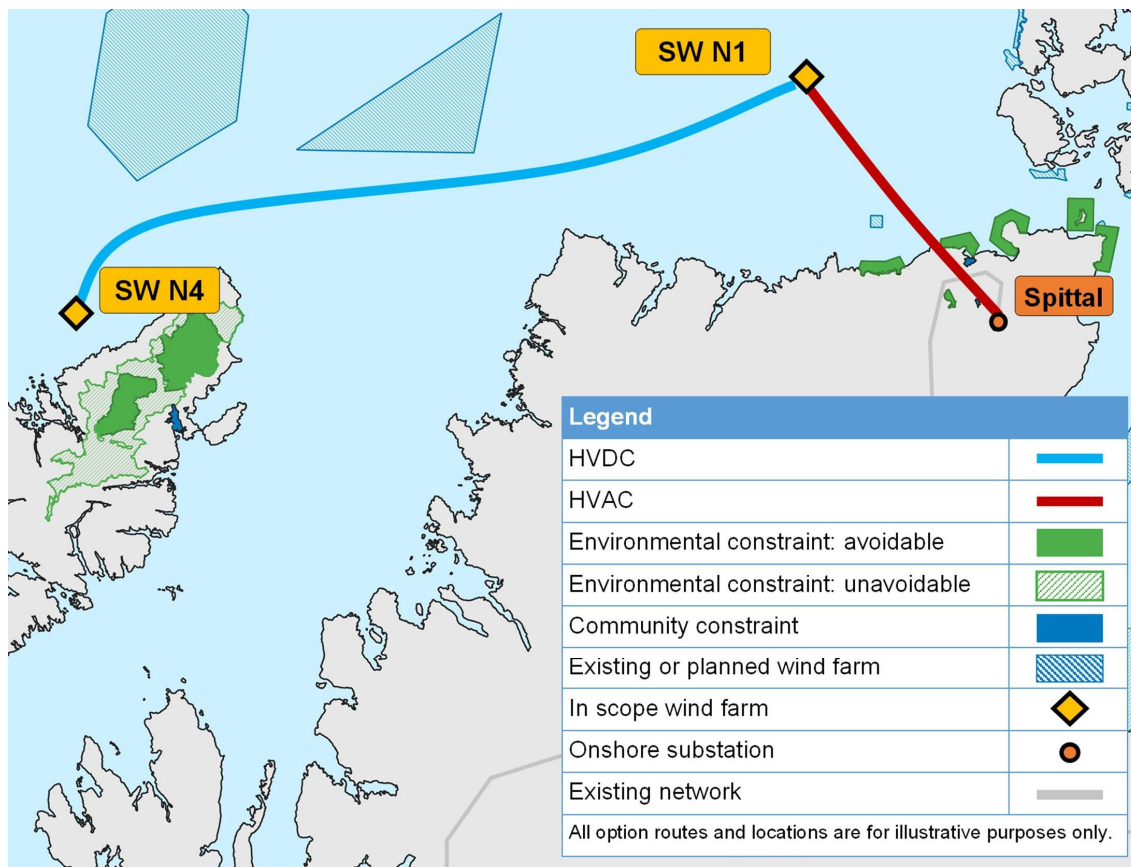
have significant potential to impact the viability of cable routes through the area. These constraints also highlight the sensitive areas that have been identified as difficult to avoid in designing cable route corridors.

5.4.6 Other offshore designs and variations we considered

As part of the HND process, several design options were considered. This section summarises alternative designs that were not selected for the HND. For the North of Scotland region, two alternative options were considered in detail, as well as further design options.

5.4.7 Alternative coordinated design

Figure 23 – Alternative design



This option connects SW_N4 to SW_N1 via a HVDC link. SW_N1 is connected to Spittal via an AC link.

This option would be £1059 million more expensive overall. This is due to the £879 million increase in capital costs, and £180 million increase in constraint costs. The costs and scope of onshore boundary reinforcements are broadly comparable between the two designs. These figures were calculated by changing the recommended design in North Scotland to the alternative coordinated design, but keeping the rest of the offshore design the same as the recommended design.³¹

The higher capital costs in the alternative design result from the HVDC link and associated offshore converter stations. The higher constraint costs would result from effectively connecting

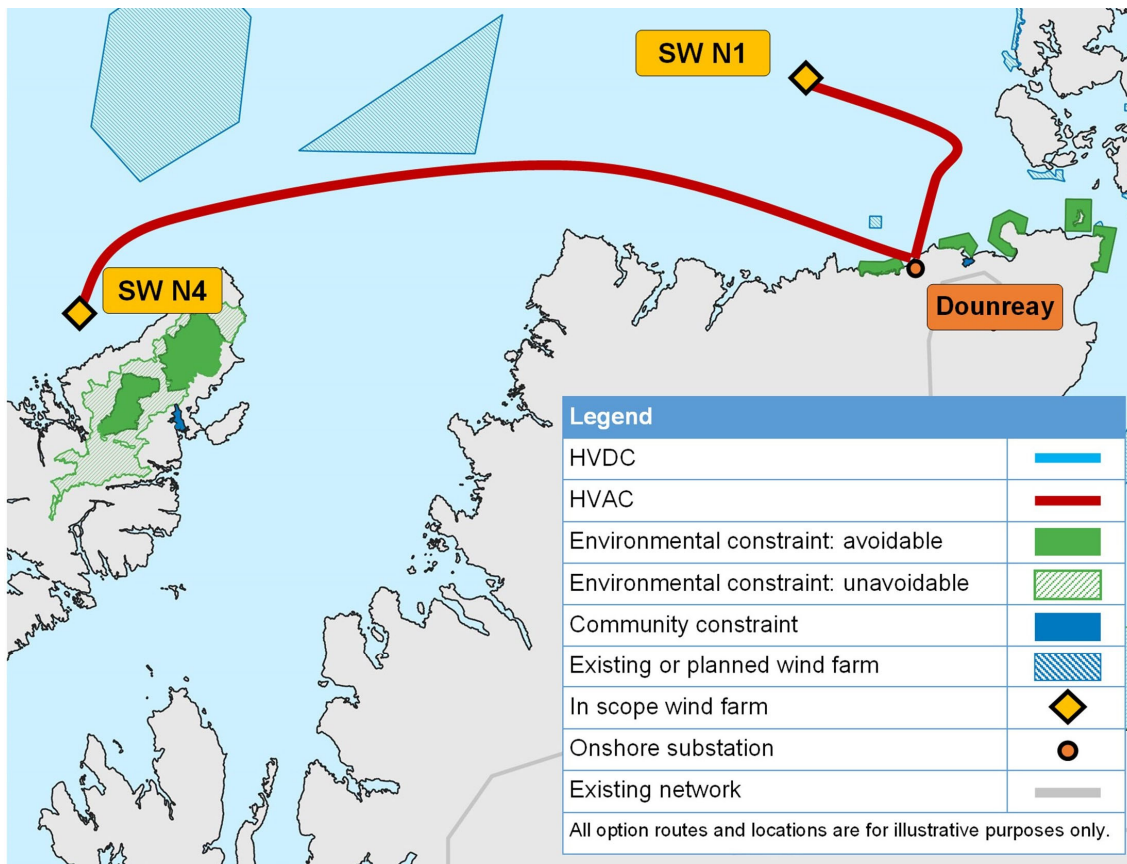
³¹ Infrastructure cost differential corrected on (23.09.2022): this does not change the overall outcome.

the SW_N4 generation further north; this leads to higher constraint costs due to the distribution of generation and demand across Great Britain.

From a deliverability and operability perspective, this design may not be possible to deliver by 2030 due to the HVDC link and the requirement for multiple offshore converter station platforms.

5.4.8 Alternative radial design

The alternative radial design is shown in *Figure 24*. It connects both SW_N1 and SW_N4 to Dounreay substation.



Both connections are predominantly offshore with HVAC connections. This alternative was not chosen as it was deemed more challenging to deliver and not future proof to additional generation sited onshore and offshore on the Western Isles.

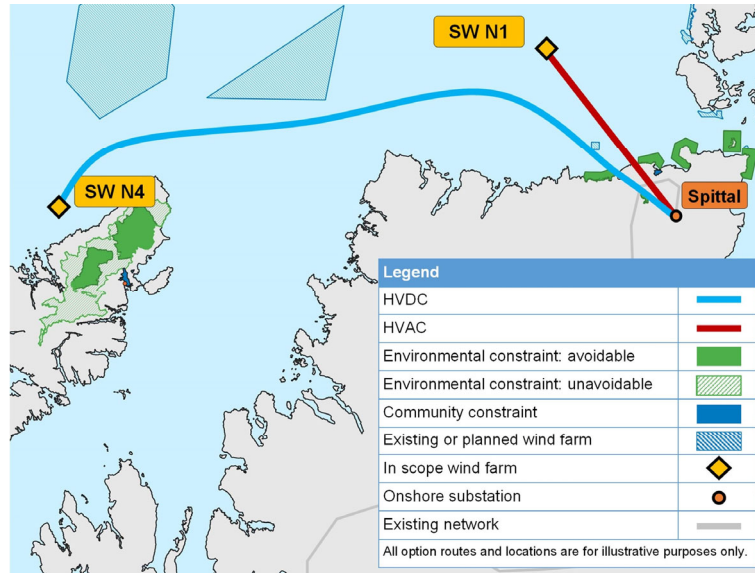
5.4.9 Other design options

These options were considered as part of the design process but were not taken forward for detailed consideration. They are included here to demonstrate the range of designs that were assessed.

Figure 25 – Other designs

SW_N1 to Spittal and SW_N4 to Spittal

Variation This design has radial connections for both wind farms, connecting to Spittal substation.

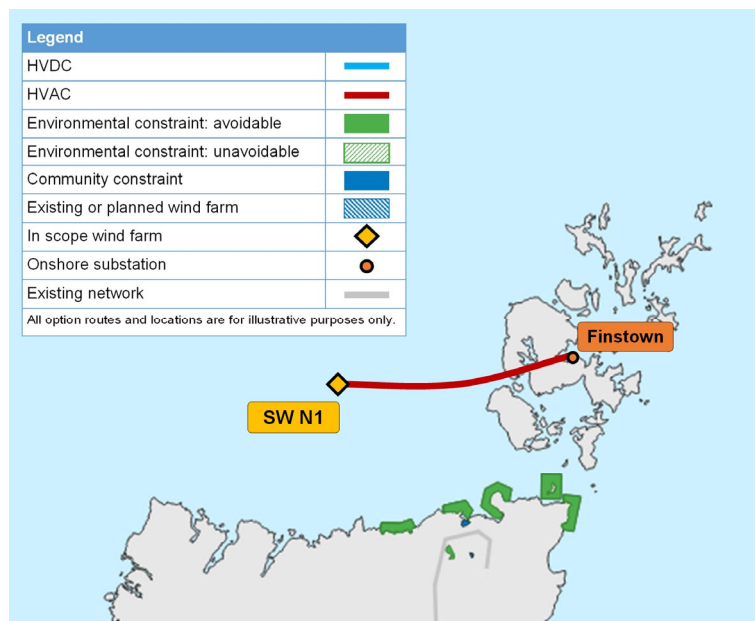


Comparison with chosen design Both connections are radial but to the same substation, unlike the recommended design where SW_N4 is connected to Arnish

Reason for disregarding Due to its longer onshore cable length, this design would have higher total costs and more environmental impact, in comparison to the recommended design.

SW_N1 to Finstown (Orkney)

Variation SW_N1 runs to a different substation, Finstown on Orkney



Comparison with chosen design	There are technical constraints within the cable route corridor around Stromness Port and the rocky seabed to the south of Stromness with strong tidal streams. The alternative overland route from the west of Stromness to Finstown had multiple environmental constraints including the North-west Orkney and Hoy MPAs, the Hoy and Orkney Mainland Moors SPAs and a number of SSSIs. Further analysis would also be required to confirm the deliverability of the upgrade required to provide sufficient capacity on the planned Orkney connection to Dounreay.
Reason for disregarding	More environmental constraints and uncertainty around deliverability made this option less desirable.

5.4.10 Economic and Efficient considerations

From an economic perspective, the recommended design for this region (which is radial) performs better than the alternative (coordinated) design which was considered. The radial design offers savings in the costs of offshore infrastructure (approximately £879 million), and also in constraint costs (approximately £180 million), giving total savings of £1059 million.³²

5.4.11 Deliverability and operability

The recommended design is relatively simple to deliver by 2030 given its radial nature.

It is expected that all radial AC offshore circuits are deliverable by 2030.

5.4.11.1 HVDC

The recommended design does not include HVDC connections to offshore wind farms, but it would require an HVDC connection between the Western Isles and the mainland (which would form part of SSEN's transmission network).

5.4.11.2 Overall complexity

This simple radial design does not introduce significant additional complexity beyond a required HVDC connection between the Western Isles and the mainland.

5.4.11.3 Technical and environmental

Technical issues with offshore cable routing for the region include the predominance of cliffs at the coastline for both potential cable routes, however, there are opportunities to avoid the highest cliffs within the route corridors.

5.4.11.4 Onshore works

All substation interface works are deliverable with an Earliest In Service Date (EISD) of 2030, although some NOA works associated with this option extend out to 2031.

We intend to work with the TOs to accelerate the essential options in order to enable the connections by 2030.

5.4.11.5 Operability

The radial nature of the design is not expected to provide any unusual operability issues.

³² Infrastructure cost differential corrected on (23.09.2022): this does not change the overall outcome.

5.4.12 Stakeholder feedback

Stakeholders were generally supportive of the North Scotland design, and no changes were made in response to stakeholder feedback.

5.4.13 Conclusion and next steps

The recommended design for the North of Scotland connects two wind farms (SW_N4 and SW_N1) using radial connections.

The costs of coordination for the developments off the north coast of Scotland would be high due to the distance between the generation projects which are in scope. No economically justifiable options were identified to link to either the East Coast or the North West Regions.

The recommended design is **economic and efficient**, offering savings of £1059³³ million compared with the coordinated design considered for this region due to lower capital costs and lower constraint costs. The coordinated design would have higher costs, as it would include an HVDC link with associated offshore converter stations between SW_N4 and SW_N1.

The design is **deliverable and operable**, with minimal additional complexity due to the radial connections and no notable supply chain concerns. The HVAC offshore connections and works at the interface point substations are deliverable by 2030. We intend to work with the TOs to accelerate works which are required elsewhere on the network to enable the connections by 2030 in light of the commitments in the *BESS*. The timings and required works for each connection will be determined as part of the connection offer update process.

The design seeks to **minimise the impact on the environment**, as it is expected to be possible to define a route corridor that avoids several onshore and offshore areas of environmental significance on the Isle of Lewis and the Great Britain mainland, such as the North Caithness Cliffs SPA and MPA, the Caithness Lochs SPA, and the Lewis Peatlands SAC.

The design seeks to **minimise local community impact**, as it is expected to be possible to define route corridors that avoid heritage assets and urban areas.

³³ Infrastructure cost differential corrected on (23.09.2022): this does not change the overall outcome.

5.5 System-wide view

The current onshore transmission system has around 25,000 km of high voltage circuits to transmit power from generators to our towns and cities. While this network successfully meets our needs for today, the future requirements for the network, and the ambitious targets set by the Government, necessitate expanding the transmission network to ensure we have a power system capable of delivering on our 2030 offshore wind ambition and the UK's broader net zero target.

This section builds on the regional summaries of onshore works, which look to address specific regional connection drivers, and instead focuses on enabling bulk power flow requirements across the network in the most economic and efficient way while considering environmental and community impacts. This in-depth view articulates the upgrades required on the wider transmission network to not only meet these requirements but also maintain network compliance and ensure we have a transmission system capable of facilitating the connection of 50 GW of offshore wind by 2030.

The 2030 onshore transmission network will look very different to the one we see today. To meet the 2030 ambitions and facilitate the delivery of the offshore wind in scope of the Holistic Network Design (HND), 94 reinforcement projects, totalling £21.7 billion, are required to be delivered by the end of the decade. These range from very small upgrades to large new transmission infrastructure such as new circuits or subsea cables, with the sole purpose of transporting electricity from where it is produced to where there is demand for it.

Of the 94 reinforcements required by 2030, many should be delivered earlier to maximise consumer benefit. *The NOA 2021/22 Refresh* provides this additional insight via an optimal date; ensuring that reinforcements are delivered when they are needed, and that the costs of building them outweigh the costs of managing power flows around the network without them in place.

The NOA Refresh builds on the *NOA 2021/22* published in January 2022, assessing the impact of the HND's recommended offshore network on the power flows on the system. *The NOA 2021/22 Refresh* looks at 2030 and beyond to provide the optimal delivery dates for projects that it recommends and has been used to inform the HND of the necessary network upgrades required for 2030.

The full set of recommendations, which includes additional reinforcements to the 94 outlined in this HND report, can be found in the [NOA 2021/22 Refresh publication](#).

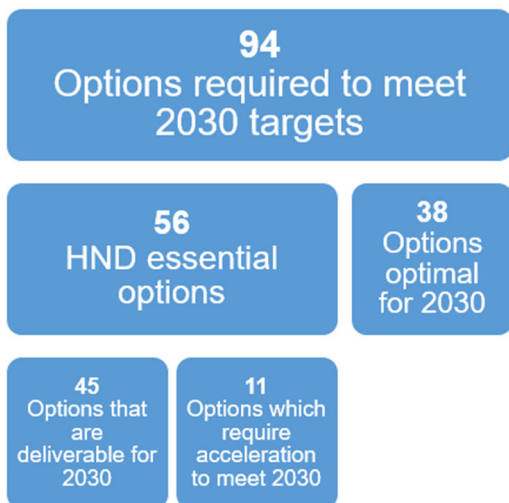
Through the connection assessment process of the HND, a sub-set of these 94 reinforcements were determined to be essential for 2030 to provide a network compliant with the rules we must follow when designing the transmission system. These reinforcement options are often called enabling works, and offer our current, best view, of connection compliance in the context of HND and need to be delivered by 2030 to ensure this. As these reinforcements have been identified as essential for connections, they have not been reassessed through the *NOA 2021/22 Refresh* Cost Benefit Analysis (CBA) as they are all fundamental to delivering a network capable of connecting 50 GW by 2030.

56 options were highlighted as essential for 2030 in the interface point identification stage; however, the NOA has indicated that more than half of these would be optimal, providing significant consumer benefit, if delivered earlier than 2030. In addition to these essential works, the NOA has identified a further 38 reinforcements that are optimal to be delivered on or before 2030, which work together to significantly reduce constraint costs.

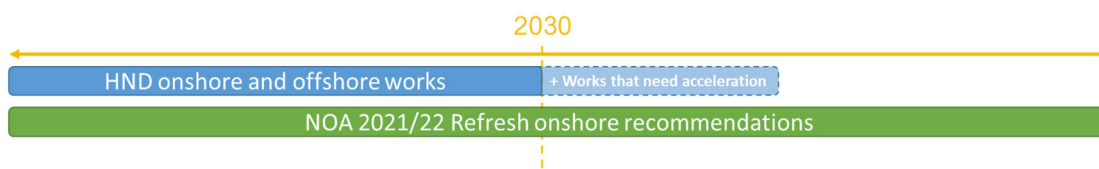
Since the HND is effective from 2030, there's minimal change to the *NOA 2021/22* results prior to 2030. Options which fall into this category have been individually assessed ahead of the *NOA 2021/22 Refresh* analysis, and it was concluded they all justify maintaining their NOA recommendation based on no change to their original driver, and hence inherit their *NOA 2021/22* recommendation.

Almost 90 per cent of the required reinforcements are expected to be delivered and in place by 2030 based on EISDs provided by TOs. However, we have identified 11 that are essential for 2030 but will not be delivered in time under the current regulatory and consenting processes. Accelerating these projects would require the Government intervention as suggested in the April 2022 BESS and equivalent activities in Scotland. For both the onshore and offshore transmission

network, the supply chain will also need to be in place to enable delivery in the required timescales. To emphasise our ambition to accelerate the delivery of onshore works, we have introduced a new term for the *NOA 2021/22 Refresh*: Required in Service Dates (RISDs). The inclusion of RISDs serves to differentiate what is currently achievable from what could be achieved with greater change and intervention. Delivering the onshore reinforcement recommendations in the *NOA 2021/22 Refresh* by 2030 will be challenging but will allow for earlier network reinforcement and drive greater consumer benefit whilst delivering a major milestone in our net zero journey. An illustrative breakdown of the results is shown in *Figure 26* below.



Planning the network and our transition to a zero carbon energy system does not end in 2030. Further to the 94 options required to deliver on 2030 targets, the *NOA 2021/22 Refresh* has provided recommendations for 26 reinforcements beyond 2030. The *NOA 2021/22 Refresh* has found 17 to be economically optimal to deliver and 9 non-optimal at this time. For more detail about network requirements beyond 2030 please refer to the *NOA 2021/22 Refresh* publication. The graphic below illustrates how the wider network reinforcements are considered across the HND and the *NOA 2021/22 Refresh* compare on a timeline *Figure 27*.

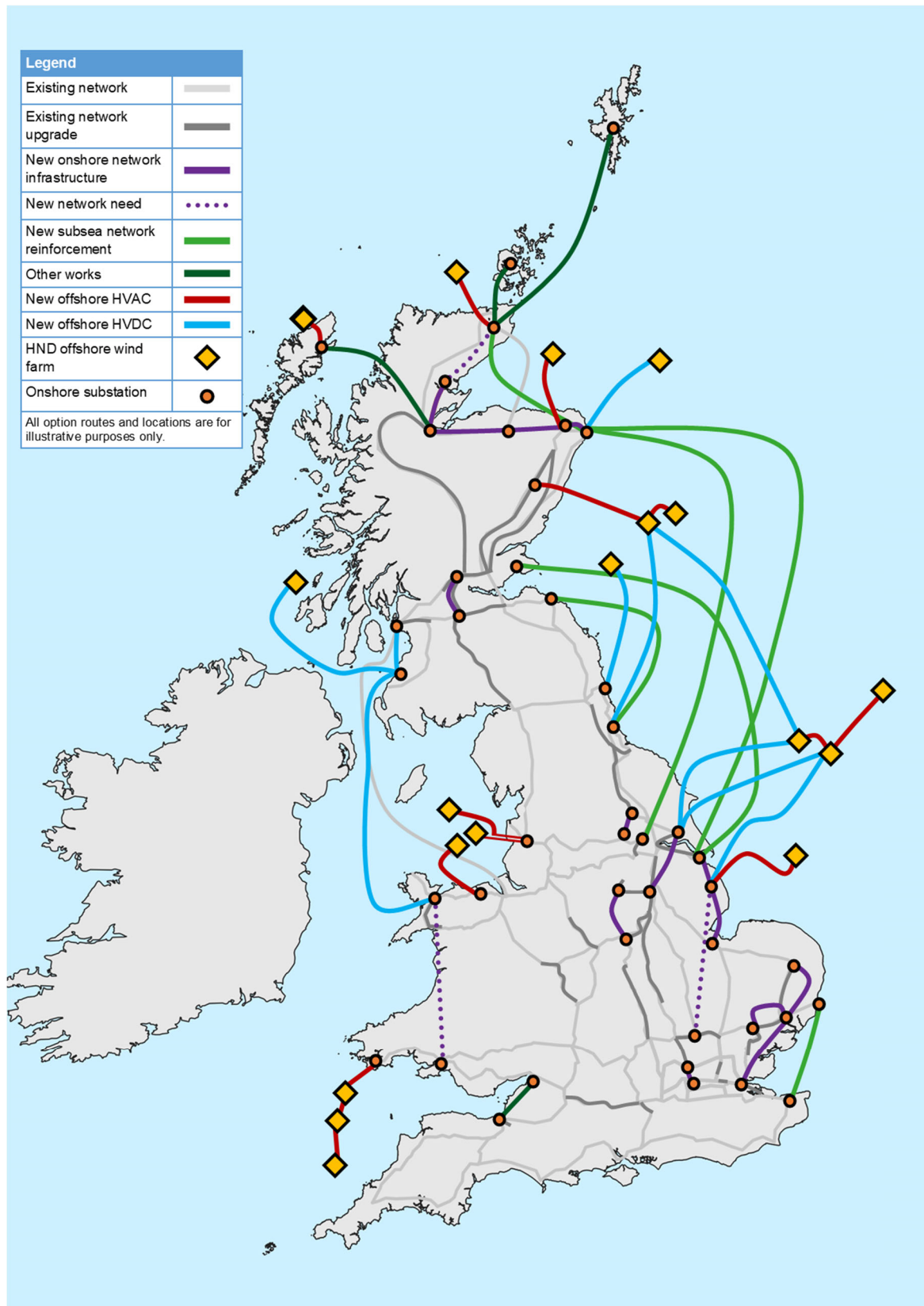


The map below shows the final HND and highlights the key wider transmission system upgrades, alongside the recommended offshore design, required to facilitate the connection of 50 GW of offshore wind by 2030. When considering the development of the transmission system, smaller, incremental reinforcements utilising existing assets are considered first. This begins with reduced and no build options, followed by increasing the capability of existing assets. Once these options are exhausted, larger reinforcement options must be considered. These include the construction of new transmission assets, or longer subsea cables to provide power transfer capability over greater distances. *Figure 28* illustrates this development journey highlighting upgrades to existing assets in pink with new onshore transmission assets in purple and new subsea network reinforcements in green.

Some reinforcement options of significance include the four eastern subsea HVDC links from Scotland to England, which are needed on top of the proposed coordinated offshore network to meet increasing bulk power flow requirements brought on by such vast volumes of low carbon generation. In addition, reinforcement options such as Peterhead to Spittal are proposed to bolster more remote, radial parts of the network in northern Scotland that see high volumes of power export. Travelling further down the network, England requires several new transmission circuits to facilitate power flow towards high demand centres in the south. This includes a route from North Lincolnshire to South Lincolnshire to enable the connection of more offshore wind, and a new network need between North Lincolnshire and Hertfordshire, further reinforcing the network and

offering a new north to south path for power to flow. These are a snapshot of some of the works required to meet our 2030 targets. For the complete list, please refer to Appendix 1.

Figure 28 Final HND GB Map



5.5.1 Economic and efficient

The CBA is carried out using the same basis as the analysis of the offshore network, by comparing the capital expenditure (capex) of reinforcements against the reduction in constraints costs modelled for future years. Through the CBA we determine the optimal set of onshore reinforcements that complements the offshore network and provides the most value to consumers. The onshore reinforcement options used for *NOA 2021/22* were used as the basis for optimising the onshore network to find the optimal offshore network design. This was based on the best information available at the time and following the conclusion of the recommended offshore network design the onshore reinforcements were reassessed through the *NOA 2021/22 Refresh*. The HND's offshore network was fixed in the background for the final stage of onshore reinforcement analysis.

The NOA process provides our recommendations for which reinforcement projects should receive investment during the coming year to facilitate the development of an efficient, coordinated, and economical system of electricity transmission.

The NOA recommends where, when, and whether to invest in network upgrades across the Great Britain transmission system. It weighs up the benefit of investing in upgrading or building new transmission infrastructure against the costs of curtailing generation that would otherwise be incurred due to power transfer capability limitations in the existing network.

The modified Leading the Way scenario from the *2021 Future Energy Scenarios* that was developed for the HND analysis has been used in the *NOA 2021/22 Refresh* analysis. This modified scenario captures the changes in connection location of in scope offshore generators as a result of the recommended offshore network design. This ensures the onshore recommendations made through the *NOA 2021/22 Refresh* align with the HND's offshore network.

To determine the optimal onshore reinforcements for the HND, the *NOA 2021/22 Refresh* subsequently undertook the following analysis:

- We use boundaries to study the power flows on the electricity transmission network. A boundary splits the system into two parts, crossing critical circuit paths that carry power between areas where power flow limitations may be encountered. A boundary becomes constrained if more electricity is planned to cross the boundary than its capacity can handle. How constrained boundaries are varies from hour to hour, throughout the year. Power flow across the system is significantly impacted by changing demand and generation. For more information, visit our Electricity Ten Year Statement (ETYS) webpage.
- For every boundary, the future capability required was calculated by the application of the National Electricity Transmission System (NETS) Security and Quality of Supply Standard (SQSS) Chapter 4 - Economy and Security planning methodologies. We used the criteria stated in the NETS SQSS to produce the future transmission boundary requirements. We then shared these capability requirements and estimates with the TOs so they could identify future transmission options.
- The ESO and TOs completed boundary capability assessments via power system studies and submitted the results of their own boundary studies to us so that we could perform the CBA. We also performed boundary studies in parallel to the TOs for the purpose of verification.
- The CBA compared forecast capital costs and monetised transmission benefits over the project's lifespan, in order to provide an investment recommendation. Our CBA investigated the economic benefits of different combinations of reinforcement options to identify the single combination that provided the most value for the consumer. The CBA also determined the optimal year for delivery for each reinforcement.

5.5.2 Deliverable and Operable

Deliverability and operability of designs were considered for the regions as a whole, including offshore and onshore works together.

In response to the data on boundary capabilities and requirements, the TOs identified and developed multiple credible options that deliver boundary capability increases. The TOs' option

submission included details of not only the uplift in capability for the boundaries it was designed for, but also information on the capital costs, delivery schedule, outage assessment and the development stage. Using the development stage and previous experience in delivering capital projects under the current consenting regime, the TOs submitted EISDs.

The following *Table 32* is used to describe project maturity:

	<i>Scoping</i>	Identification of broad Needs Case and consideration of number of design and reinforcement options to solve boundary constraint issues.
	<i>Optioneering</i>	<i>The Needs Case is firm; a number of design options are being developed so that a preferred design solution can be identified.</i>
Pre-Construction	<i>Design/Development and consenting</i>	Designing the preferred solution into greater levels of detail and preparing for the planning process including public consultation and stakeholder engagement.
	<i>Planning/Consenting</i>	Continuing with public consultation and adjusting the design as required all the way through the planning application process.
	<i>Consents Approved</i>	Consents obtained but construction has not started
Construction		Planning consent has been granted and the solution is under construction.

The HND recommendations outlined in Appendix 1 reflect our current and best view, based on information available today, of a capital delivery programme that maximises the consumer benefit of the projects assessed. As the development of these projects progresses towards delivery, more details will emerge and variations to the designs or delivery considerations may occur due to supply chain, network access or other constraints. Furthermore, combining multiple projects into a single optimised delivery programme could result in currently unforeseen challenges. Therefore, these recommended delivery dates may be subject to change in future.

There is an overarching risk that a large number of onshore projects are required to meet the 2030 targets and that these projects will need careful consideration and optimisation of their delivery programmes. However, the main deliverability risk from an onshore network perspective is the 11 essential works identified whose current delivery estimations exceed the required 2030 date under current regulations. Accelerating these projects will be challenging and will require the UK Government’s intervention suggested in the April 2022 *BESS* and equivalent activities in Scotland. Accelerating these projects as required may also have a knock-on effect on other earlier planned work. This is because the earlier planned work may have to be advanced to create the capacity required to complete the accelerated projects. The options that need acceleration to a 2030 delivery date and their current estimated EISDs are listed below.

Table 33 The 11 NOA Options classified as HND Essential requiring acceleration to 2030

	NOA Code	Description	EISD
1	BLN4	Beauly to Loch Buidhe 400 kV reinforcement	2031
2	BPNC	A new 400 kV double circuit between Blackhillock and Peterhead	2031
3	CGNC	A new 400 kV double circuit between Creyke Beck and the south Humber	2031
4	E4L5	Eastern Scotland to England 3rd link: Peterhead to the south Humber offshore HVDC	2031

5	EDN2	A new Chesterfield to Ratcliffe-on-Soar 400 kV double circuit	2032
6	GWNC	A new 400 kV double circuit between south Humber and south Lincolnshire	2031
7	LRN4	A new network need between Lincolnshire and Hertfordshire	2033
8	PSNC	A new network need between North Wales and South Wales	2037
9	SHNS	Upgrade substation in the south Humber area	2031
10	TGDC	Eastern subsea HVDC Link from east Scotland to the south Humber area	2031
11	TKUP	East coast onshore 400 kV Phase 2 reinforcement (Scotland)	2032

5.5.3 Environmental and community considerations

The environmental and community impacts of the onshore works beyond the interface point have been assessed to different levels depending on where the works are within the TOs’ development process. Further detail on the approach to onshore environmental and community assessment can be found in the methodology section.

The table below sets out, at a high level, the process that TOs follow when developing a project. The HND has a mix of reinforcement projects at different stages in the TO development process. Some projects have been through strategic options appraisals and had a strategic option selected; these projects are now progressing design and development and obtaining consent.

The HND also includes some projects which have recently received a “proceed” recommendation in NOA, or where the requirement has only first been identified within the HND process. These projects are therefore only in the scoping stage or recently passed through the “network need agreed” milestone *Table 34*.

Project Phase	Description of Environmental and Community Assessment
Scoping	Environmental constraints mapping and risk identification
Strategic Optioneering	Environmental constraints mapping, and environmental and community options assessment.
Design, Development and Consenting	Undertake environmental surveys, screening, scoping and prepare environmental impact assessments. Key stakeholder and community pre-application engagement
Planning/Consenting	Submit consent applications, formal consultation, advertising and determination
Construction	Discharge consent conditions (e.g. Construction Environmental Management Plan), undertake pre-construction surveys, establish auditing regime.

Overall, the HND has identified the need for 22 new transmission circuits. Six of these are new subsea HVDC network reinforcements, whose sole purpose is to enable greater power transfer from north to south. The remaining 16 are split into 13 onshore routes and three new network

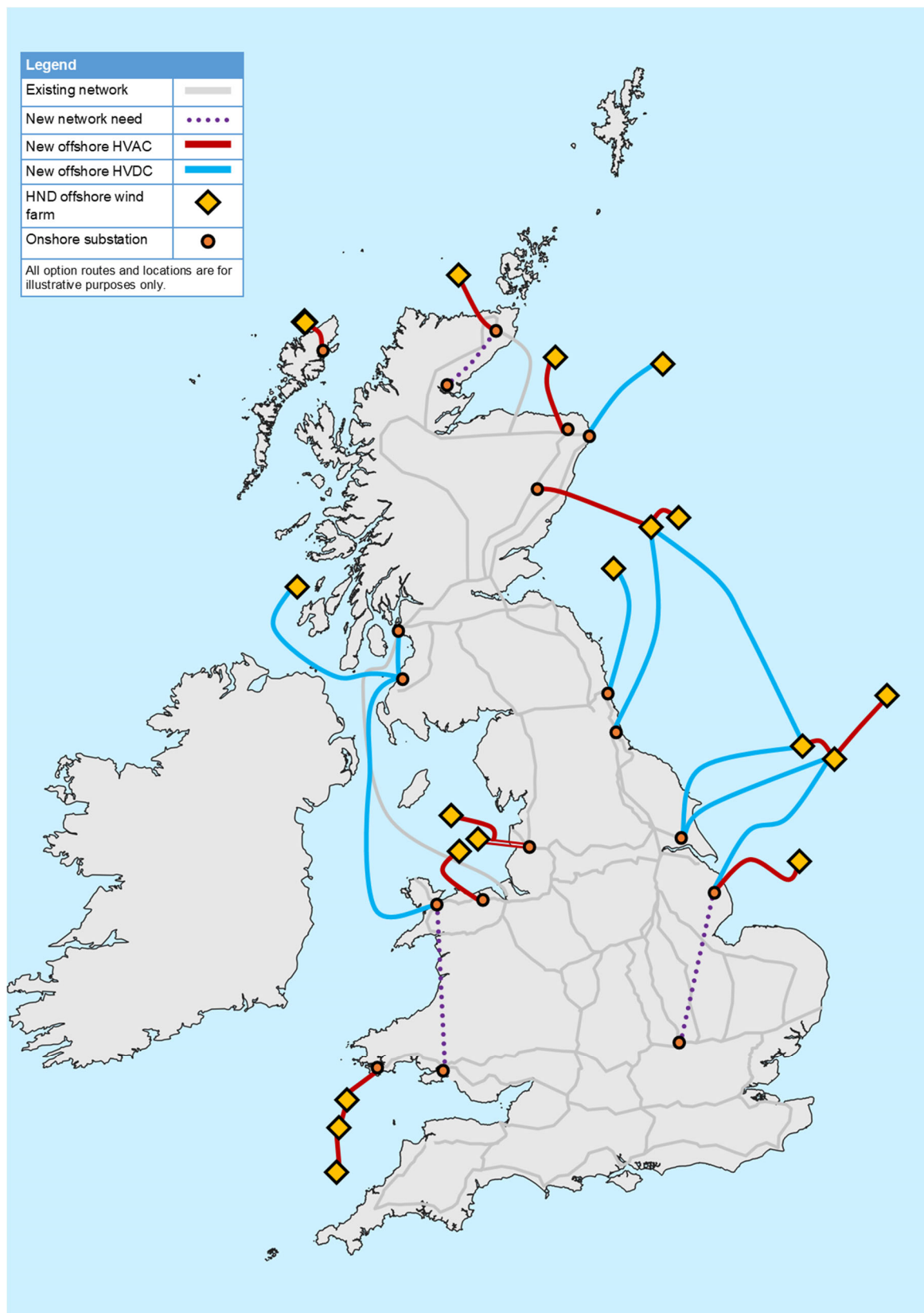
needs, which are in the early stage of development, having never been previously submitted into the NOA and may materialise as routes onshore, offshore or a mix of both.

The three new network needs, which have been identified as essential options for the HND, are:

1. SLU4 – A new network need in Scotland between Loch Buidhe and Spittal
2. PSNC – A new network need in Wales between North Wales and South Wales
3. LRN4 – A new network need in England between North Lincolnshire and Hertfordshire

These options are still in the early stages of development and were submitted into the NOA 2021/22 Refresh, which has recommended the continued development of options with similar capabilities. As these options have been shown to provide significant benefit, further detailed design assessments will need to be undertaken to ensure a solution which balances the needs of the electricity system, environment and cost to energy consumers is taken forward. These new network needs are highlighted on the map below in *Figure 29*.

Figure 29 GB Map showing new Network needs



To provide further details on the level of environmental and community assessment that has been completed on all the onshore reinforcement works within the HND, the works have been classified depending on their stage of development in *Appendix 1*. below shows the level of assessment undertaken at each stage within the development process.

It is worth noting that the mapping of milestones and development stages may not be precise. Depending on the particular project, the TOs might need to develop and undertake activities which fall into the design and development phase before a strategic solution can be selected. In most cases however, it is expected that a strategic solution will have been selected after completing strategic optioneering.

6. Overall conclusions and next steps

The UK Government's target for offshore wind means more network infrastructure is needed to connect the generation capacity to shore. The Holistic Network Design (HND) uses a coordinated approach to connection to balance the needs of consumers, developers, communities and the environment.

6.1 Design process

We have developed an HND which supports the Government's offshore wind targets of 50 GW by 2030 for Great Britain, including 11 GW in Scotland. Our proposed HND is economic and efficient, deliverable and operable, minimises the impact on the environment, and minimises the impact on local communities.

We have studied different options for offshore infrastructure including high voltage alternating current (HVAC) and high voltage direct current (HVDC) equipment as well as electrical connections between wind farms and onshore landing points. Our recommendations include potential locations of infrastructure and onshore landing points.

We determined an appropriate methodology for the HND, which was agreed with the Central Design Group (CDG) and published in February 2022.

We developed a counterfactual design which uses individual radial connections for each project. We compared the recommended design with the radial counterfactual in order to validate the value of a coordinated approach.

6.2 Recommended design

Offshore wind requires network infrastructure to transport its output to consumers. The HND balances the four network design objectives of being economic and efficient, deliverable and operable and considering environmental and community impacts on an equal footing in setting out a recommended design to do this.

The HND recommends an onshore and offshore transmission system design which is more economic and efficient than a radial design and ensures that required carbon emission reductions can be delivered. The recommended design includes additional offshore cable routes to deliver these emission reductions.

We have recommended a design which connects the 18 in scope wind farms to the National Electricity Transmission System (NETS), using 15 landing points to shore (including the T-point as an onshore landing point).

Our recommendations come in the form of a network topology which sets out a requirement for points of interconnection and the capability we assumed in arriving at our optimal suite of options. The design will need to be optimised appropriately at each stage and the final implementation will be shaped by the detailed decisions made by the parties responsible for construction.

The recommended design considers the four network design objectives:

Economic and Efficient

Our recommended design is economic and efficient. The total costs of our recommended design are estimated to be £5.5 billion lower than the costs of an optimised radial design. Although the recommended design has capital costs which are estimated to be £7.6 billion higher than the optimised radial design, constraint costs are estimated to be £13.1 billion lower in the recommended design.



Deliverable and Operable

The design is deliverable, operable, and provides the opportunity for wind farms to be able to connect by 2030. The longer, and more complex HVDC links in the design are unlikely to be complete by 2030 in the absence of major acceleration in the supply chain. However, the design offers the potential to get generation connected by 2030, and increase capacity progressively, given timely allocation of responsibilities, delivery of the commitments in the British Energy Security Strategy (*BESS*) and a coordinated and concerted effort from all parties. Our analysis has not identified any significant new operability challenges, although the detailed network design (DND) will explore this further. The timings and essential works for each connection will be determined as part of the connection contract update programme.

The HND has aimed to balance the complexity of the design against technology readiness and supply chain availability. It is recognised that the recommended design is more complex than a radial solution both due to the additional HVDC technology and also due to the commercial and technical complexity introduced through coordination.

To facilitate the delivery of the HND and enable government wind generation targets in consideration of community or environmental impacts, the following steps are required:

- A step change in supply chain capacity and rapid development of technology to support larger offshore connections.
- Acceleration and a more holistic approach to project development and consenting timelines.
- Better coordination and collaboration between project promoters.



Environmental impact

The design takes account of environmental constraints and seeks to minimise the impact on sensitive habitats through the coordination of wind farm connections to shore. Cable route corridors can avoid many of the identified environmentally sensitive features, however this is not possible in all cases. Further consideration will need to be given to cable routing in the DND stage to minimise environmental and consenting risks. While the environmental mitigation hierarchy should be followed, it is likely that environmental compensation measures will be required, assuming no viable alternatives are identified in the DND stage. This might include measures at a regional or national level. However, in the first instance measures to alleviate pressures on and protect sensitive habitats both within and outside MPAs should be considered, and compensation seen as a last resort.

The recommended design uses more cable (4%) than the optimised radial design, largely due to the long-distance cables used between wind farms offshore, although the designs cannot be compared on equal terms. The long HVDC links are needed because they minimise network constraints, enabling more zero carbon wind energy to be utilised, and offset the need for less environmentally friendly energy generation. Compared to the optimised radial design, the recommended design would reduce cumulative CO₂ emissions from gas powered generation between 2030 and 2032 by 2 million tonnes of CO₂. The long HVDC links also reduce the need for future infrastructure which would be needed to achieve the same emission reductions and does this while minimising environmental impact through designing the offshore network in a coordinated way.

The recommended design would lead to a reduced impact on the environment and communities, with up to a third fewer cables laid in each cable corridor to shore as a result of the increased use of HVDC technology, reducing the impact on the seabed.

The recommended design provides the following environmental benefits:



Avoiding Morecambe Bay Special Area of Conservation (SAC) by recommending a shared cable corridor to Penwortham.



Not recommending further connections at this time into East Anglia beyond those already planned. This avoids impacts on the Haisborough, Hammond and Winterton Special Area of Conservation (SAC), and Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ).



Minimising environmental impacts by coordinating landfall for the ScotWind East Zone wind farms at Fetteresso.



Providing additional North to South power flow capability on the East and West coasts. These links minimise network constraints, enabling more zero carbon wind energy to be utilised. They also reduce the need for future infrastructure.



Community impact

The rapid development of offshore wind is already having an impact on coastal communities. The HND has sought to minimise the impact on communities in balance with the other three design objectives.

The recommended design reduces the impact on local communities, for example, relating to the volume of transmission network infrastructure in some areas, the cumulative impact associated with multiple connections, and onshore transmission reinforcements that are driven by the offshore network. There is also the potential for the route corridors to avoid many of the identified community constraints; specific route corridors will be defined as part of the DND.

While the HND has tried to reduce community impacts and reduce the number of cable routes to shore, it is not possible to fully eliminate community impacts. At Peterhead and Creyke Beck there is a significant amount of new infrastructure being proposed in addition to the HND, which will have a cumulative impact on communities in these regions. There are also new coastal sites being proposed on the west coast of Scotland and in Lincolnshire which will impact on coastal communities.

The recommended design provides the following community benefits:



A reduced number of connection locations in the North West England Region by avoiding Middleton and instead proposing a shared cable corridor to Penwortham.



Reducing the number of connection locations for ScotWind East Zone projects by recommending a coordinated connection to Fetteresso.



Not recommending further connections at this time into East Anglia beyond those already planned, as there is already significant planned and existing offshore transmission network infrastructure in this region.

6.3. Next steps

6.3.1 Asset categorisation

Ahead of the start of the detailed network design (DND) and consenting process, an exercise will need to be undertaken by Ofgem to determine which of the transmission assets in the HND will be regulated and developed as 'onshore transmission' and which will be 'offshore transmission'. This will be determined from both a legal and a technical perspective based on their function within the transmission network, rather than where those assets are spatially. For example, there can be 'onshore transmission' in the sea and 'offshore transmission' on land. This exercise will help identify who will be responsible for the DND and consenting process for each of the recommended transmission assets within the HND.

For any 'offshore transmission', it will then be necessary to establish which of those assets are radial and which of those assets are non-radial in line with Ofgem's May 2022 Minded-to Decision on offshore delivery models³⁴. This is because there are expected to be different arrangements for the delivery of radial offshore transmission assets within the HND than there are for non-radial offshore transmission assets within the HND.

Ofgem's publication states that where the HND recommends a radial solution, either the generator build model or the OFTO build model is available (as per the existing OFTO regime). For situations where the HND recommends a coordinated (non-radial) solution, Ofgem's minded to decision is for developers to design and build the infrastructure. Ofgem has stated they will work with the ESO and developers to agree how any non-radial offshore transmission system will be delivered once the HND is finalised.

Onshore transmission will be delivered via the usual onshore arrangements (via the incumbent TO under their price control arrangements, or subject to onshore competition).

6.3.2 Detailed Network Design (DND) and consenting process

The information provided in the HND will inform the DND, which will set out the next level of detail for the required network assets. The DND and consenting process will be progressed by the party responsible for delivering each asset.

The HND includes high-level indications of the potential location of infrastructure and technology choice, but it does not limit the ability of the parties undertaking the DND to exercise their engineering judgement or limit their ability to discharge their detailed planning and consenting obligations.

The DND and consenting process will develop the HND recommendations further to determine technology choices, route corridors, and the locations of cable landfalls, substations, offshore platforms and converter stations. Important assumptions and parameters from the HND will be confirmed in the DND phase. The DND will be informed by the feedback received to date, and there will be an opportunity for further stakeholder input as part of the consenting process.

The parties responsible for the DND will undertake the necessary environmental assessment and consenting processes including Habitats Regulations Assessments (HRA) and, depending on the outcome of the current Department for Environment, Food & Rural Affairs (Defra) consultation, providing Biodiversity Net Gain where appropriate. Biodiversity Net Gain is an approach to development which means that habitats for wildlife must be left in a measurably better state than they were in before the development.

It is worth noting that the capital cost differentials quoted are based on high-level cost assumptions. The costs of each of each part of the design are expected to change as the design is developed in more detail during the DND stage.

³⁴ https://www.ofgem.gov.uk/sites/default/files/2022-05/Minded-to-Decision%20and%20further%20consultation%20on%20Pathway%20to%202030_Final1652962587083.pdf

6.3.3 Connection contract updates

In parallel to the DND, the HND recommendations and the Ofgem Minded-to Decision on offshore delivery models for the HND need to be brought together and translated into connection contract updates for in scope developers. This is to identify the works to be delivered by each party, the works each party is dependent upon prior to their connection, the delivery date of those works and other required information. In addition, there are risks and uncertainties that need to be managed via the connection contracts. We will work with Ofgem and developers to agree how coordinated elements of the HND will be delivered so that connection contracts can be updated as soon as practicable.

6.3.4 HND follow up

We are also currently developing the HND follow up process, which aims to provide in scope developers with recommendations in Q1 2023. We will start this process following this publication in July 2022. This will include the remaining ScotWind leaseholders and any capacity made available through the ScotWind clearing process. It is also expected to include approximately 4 GW of Celtic Sea capacity.

The details of the follow up process, including confirmation of scope, a more detailed timeline and other key aspects, such as the methodology to be used for the process, will be communicated in the summer.

6.4 How we met the Terms of Reference (ToR)

The *table 35* below lays out the key requirements from the terms of reference for the HND and how these have been met as well as which section of the report provides the relevant detail on each of the key ToR requirements.

Table 35 - How we met the Terms of Reference

HND Terms of Reference Requirement	How this has been met
Purpose: To support Government offshore wind targets of 40 GW by 2030 for Great Britain, including 11 GW by 2030 for Scotland, as well as net zero by 2050 for Great Britain and by 2045 for Scotland.	The HND balances the four network design objectives to provide a design which facilitates the connection of 23 GW of offshore wind (including 11 GW of ScotWind generation) to enable 50 GW of offshore wind to be connected by 2030. The HND sets out the onshore and offshore network required to achieve this, and we note that changes will be required to existing transmission planning and consenting processes.
The HND must identify the requirements for network capacity on the NETS across Great Britain and in offshore waters.	The HND identifies requirements for capacity across the NETS. Section 4.4 of this report sets out the requirements for the offshore network and section 4.5 sets out the requirements for the onshore network.
The HND should as far as reasonably possible include indications on the potential location of infrastructure such as onshore landing points and locations of new substations, as well as technology type (e.g. AC vs. DC) and other key parts of the specification. It should provide developers with potential connection points and connection dates.	The HND recommends interface points, substations where the offshore network is proposed to connect to the onshore network, giving a high-level indication of onshore landing points. It provides a topology for the offshore network (as shown in <i>Figure 7</i>), showing where each wind farm will connect. It also identifies preferred technology types for the offshore network. The HND identifies the works essential to enable generation in each region to connect, and connection dates for each developer will be confirmed as part of the connection offer update process.
The HND needs to consider the Network Design Objectives cost, deliverability and operability, environmental impacts, and community impacts on an equal footing.	The four design objectives in the HND have been considered on equal footing in the strategic options appraisal process. The <i>HND methodology</i> document and section 3 provide more detail on our approach to this assessment.
The HND should provide a sufficient level of detail to allow the parties undertaking the DND to make decisions about the specific Network Assets that would fulfil the requirements of the HND. The HND should include a number of “fixed” design components, but it should not limit the ability of the parties undertaking the DND to exercise their engineering judgement or limit their ability to discharge their detailed planning and consenting obligations.	The HND sets out a high-level network design for each region, identifying network requirements and potential route corridors. While indicative route corridors have been identified to determine feasibility, the design does not define cable routes, onshore substation or offshore platform design. The HND does not limit the ability of the parties undertaking the DND to exercise their engineering judgement or limit their ability to discharge their detailed planning and consenting obligations. Aspects such as technology choice, detailed cable route corridors, landfalls and locations of new substations will be considered further in the DND stage, which will be informed by the feedback received to date.
How the third output of the terms of reference will be met (recommend changes to industry technical and commercial codes required in respect to the HND).	Alongside this document, we have published an <i>Industry Code, Standard and Licence Recommendation Report</i> as part of the HND publication package. This will include our initial views and planned next steps in relation to where changes to industry codes, standard or licences may be required to facilitate the HND recommendations.
The HND should take account of the views of developers and as already stipulated by individual licences, environmental and community stakeholders, as far as is appropriate and reasonably practicable.	Alongside this document, we have published the <i>Stakeholder Approach, Engagement and Feedback Report</i> as part of the HND publication package. This report provides an overview of how we have engaged, who with, and what we have done with feedback provided during the development of the HND.

7. Optimised radial design

This section sets out the optimised radial design, which was developed to enable the evaluation of the benefits of a coordinated design relative to an optimised radial design.

7.1 North West Region

The wind farms within the scope of the Holistic Network Design (HND) for this region are within the Irish Sea (R4_4, R4_5 and R4_6) and off the West Coast of Scotland (SW_W1).

The connections used in the North West radial design are as follows *Table 36*:

Generation	Interface site	Circuit capacity (MW)	Technology ³⁵	Distance (km) ³⁶
R4_4	Bodelwyddan	1500	AC 3-4 cables	75
R4_5	Middleton	480	AC 1-2 cables	60
R4_6	Penwortham	1500	AC 3-4 cables	95
SW_W1	Pentir	2000	DC 525 kV XLPE pair with co-axial metallic return	410

The significant environmental constraints in this region include the Morecambe Bay SAC, Ribble and Alt Estuaries SPA and the Liverpool Bay SPA, which cannot be completely avoided. These have been identified by Natural England (NE) and the Joint Nature Conservation Committee (JNCC) as being sensitive to cabling and therefore present significant consenting risks that cannot be resolved at the strategic level.

The significant community constraints in the region include the major settlements of Blackpool, Lytham St Annes, Warton and Abergele, Towyn, Bodelwyddan and St Asaph.

There are several constraints around the Penwortham area which make it difficult to find a cable corridor that avoids all constraints. The constraints are both environmental and community, and may present technical constraints on cable-laying operations.

7.2 South West Region

For the South West region, it would be premature to propose a finalised design before more certainty on the Celtic Sea leasing round is known. For the purposes of this iteration of the HND, 1 GW of Celtic Sea floating wind has been assumed, split into 2 x 300 MW wind farms and 1 x 400 MW wind farm. This assumption was based on the ambitions for the region at the time that the scope for the HND was defined, as well as the size of projects that were being developed. The design will be updated once more detail is known about the capacity and location of seabed leases in the Celtic Sea.

³⁵ AC cable numbers assume 500 MW is possible at 275 kV. Longer distances may require an additional parallel cable to account for reactive power losses.

³⁶ The distances shown relate to an indicative route. For the recommended design, route corridors will be determined as part of the Detailed Network Design process

The connections used in the South West radial design are as follows *Table 37*:

Generation	Interface site	Circuit capacity (MW)	Technology³⁷	Distance (km)³⁸
CS_FW_1	Pembroke	300	AC 1-2 cables	45
CS_FW_2a	Baglan Bay	300	AC 1-2 cables	130
CS_FW_2b	Baglan Bay	400	AC 1-2 cables	160

Our analysis shows that Pembroke is the best radial connection site for CS_FW_1. However, our economic analysis shows that for the other notional wind farms considered, the overall costs associated with connecting to the South West Peninsula (e.g. Alverdiscott) and South Wales are very similar.

The radial design in this region has significant environmental constraints. These include Natural Resources Wales (NRW) key sensitive habitats, such as mudflats and sandflats not covered by seawater, reefs and sandbanks, as well as the Limestone Coast of South West Wales/Arfordir Calchfaen de Orllewin Cymru SAC.

There is limited scope to avoid the NRW identified areas of mudflats and sandflats not covered by seawater, and reefs. The Bristol Channel Approaches SAC and the Northwest of Lundy MCZ also cannot be avoided.

For this region most community constraints can be avoided. The significant community constraints include scheduled monuments and the urban regions of Sandfields, Rhoscrowther, Port Talbot and Baglan Energy Park. Most of these constraints can be avoided within a cable route corridor, with the exception of the Baglan Energy Park in the routes to Baglan Bay substation, which may be considered part of the substation.

³⁷ AC cable numbers assume 500 MW is possible at 275 kV. Longer distances may require an additional parallel cable to account for reactive power losses.

³⁸ The distances shown relate to an indicative route. For the recommended design, route corridors will be determined as part of the Detailed Network Design process

7.3 East Coast Region

The wind farms within the scope of the *HND* for this region include wind farms off the east coast of Scotland (PA_2, SW_E1a, SW_E1b, SW_NE4 and SW_NE7) as well as off the east coast of England (PA_1, R4_1, R4_2 and R4_3).

Table 38 - The connections used in the East Coast radial design are as follows:

Generation	Interface site	Circuit capacity (MW)	Technology ³⁹	Distance (km) ⁴⁰
PA_2	Branxton	1800	AC 4-5 Cables	60
SW_E1b	Peterhead	1200	AC 3 cables	135
SW_NE7	Peterhead	1500	DC 525 kV XLPE bundled pair	135
SW_NE4	New Deer	1500	AC 3-4 cables	90
SW_E1a	Blyth	1500	DC 525 kV XLPE bundled pair	180
R4_1	Creyke Beck	1500	AC 3-4 cables	160
R4_2	Creyke Beck	1500	AC 3-4 cables	180
R4_3	Lincolnshire connection node	1500	AC 3-4 cables	105
PA_1	Hawthorn Pit	1320	DC 525 kV XLPE bundled pair	280

The significant environmental constraints in Scotland include the Outer Firth of Forth and St Andrews Bay Complex SPA, Firth of Forth Complex MPA, Annex I Reefs, Berwick to St Mary's MCZ, Coquet to St Mary's MCZ, Northumberland Marine SPA, Northumberland Coast SSSI, Buchan Ness to Collieston Coast SPA and MPA, Rosehearty to Fraserburgh Coast SSSI, and the Southern Trench MPA. It is not expected to be possible to define a set of radial route corridors which avoid all of these constraints.

The east coast of England has many environmental sensitivities and designations that are constraints to offshore cabling, with no route options on the east coast managing to avoid all designated sites. The significant environmental constraints include Dogger Bank SAC, Berwickshire and North Northumberland coast SAC, Berwick to St Marys MCZ and the Coquet to St Marys MCZ, all of which have been identified as being sensitive to cabling by JNCC/NE. It is not expected to be possible to define a set of radial route corridors which avoids all of these SACs and MCZs.

The significant community constraints in Scotland include urban areas and scheduled monuments, however there is the potential to avoid these constraints in potential cable corridors.

³⁹ AC cable numbers assume 500 MW is possible at 275 kV. Longer distances may require an additional parallel cable to account for reactive power losses.

⁴⁰ The distances shown relate to an indicative route. For the recommended design, route corridors will be determined as part of the Detailed Network Design process

The significant community constraints in England include the major settlements/urban areas of Seaham, Dawdon, Murton, South Hetton, Easington Lane, Blyth, Bedlington, Sutton on Sea, Sandilands, Long Riston, Skirlaugh, Woodmansey and Kingswood and Hornsea. However, there is the potential to define route corridors which avoid these constraints.

7.4 North Scotland Region

The radial design for the North Scotland Region is the recommended design. This design is described in the main body of this report.

A1 - Appendix 1 Onshore and Offshore List of Works

This [link](#) provides a comprehensive list of onshore and offshore network recommendations, including offshore works and onshore connections and wider (NOA) works

A2 Appendix 2 Community and Environmental Assessment Approach

A2.1 Introduction

A2.1.1 Purpose

The purpose of this appendix is to provide an overview of the how the Environment and Community network design objectives have been appraised in arriving at the recommended HND. This appendix also provides a summary of how the cable routing assessments were undertaken. These assessments were used to inform the selection of grid connection locations (also referred to as interface point sites) within the HND.

The purpose of the Holistic Network Design (HND) is to provide a coordinated onshore and offshore design for a 2030 network to meet government objectives of connecting 40 GW of offshore wind in Great Britain by 2030, including 11 GW in Scotland.

The HND has been developed in accordance with the OTNR⁴¹ HND terms of reference⁴² (ToR) that have been agreed with the OTNR partners. The ToR set out that the HND should provide the following:

The HND should ensure an economic, efficient, operable, sustainable and coordinated National Electricity Transmission System (NETS) (including onshore and offshore assets required to connect offshore wind) to present options, and a recommended HND for offshore connections works. This includes connections and associated strategic onshore infrastructure necessary to connect offshore generation in order to facilitate the pace and certainty required to deliver the 2030 offshore wind targets and the 2045 and 2050 net zero targets.

The HND ToR set out four network design objectives, which are to be considered on an equal footing:

- **Economic and efficient costs** – the network design should be economic and efficient.
- **Deliverability and operability** – the network design should be deliverable by 2030 and the resulting system should be safe, reliable and operable.
- **Environmental impact** – environmental impacts should be avoided, minimised or mitigated by the network design, and best practice in environmental management incorporated in the network design.
- **Local communities impact** – impacts on local communities should be avoided, minimised or mitigated by the network design.

The methodology used to develop the HND incorporating all of the design objectives has been set out in the HND Methodology (February 2022)⁴³.

A2.1.2 Background

Offshore wind has been identified as a critical technology in achieving net zero greenhouse gas emissions by 2050. In order to realise this target, a step-change in both the speed and scale of deployment of offshore wind is required. Delivering the ambition for offshore wind deployment in the timescales required will be a challenge and will rely on an offshore and onshore transmission network that enables this growth. The transmission network needs to be expanded in a way that is efficient for consumers, and considers the impacts on communities and the environment.

The potential effects of the cables, substations, and other electrical transmission infrastructure to on the marine and terrestrial environment and on coastal communities is recognised. A number of statutory and non-statutory environmental bodies have published advice seeking to avoid or reduce

⁴¹ <https://www.gov.uk/government/groups/offshore-transmission-network-review>

⁴² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1059676/otnr-central-design-group-network-design-tor.pdf

⁴³ <https://www.nationalgrideso.com/document/239466/download>

environmental effects from cabling operations^{44,45,46}. The ESO Phase 1 Offshore Coordination report reported the concerns of local councils over the local community impacts particularly in respect of disruption during construction, long term impacts from some of the large structures required, lack of coordination and inadequate mitigation and compensation⁴⁷. The potential to reduce disruption, cumulative environmental impacts and impacts on coastal communities through greater coordination has been recognised in emerging national policy⁴⁸.

It has also been recognised that some areas of the GB coastline may be subject to particular pressure. This may arise from any one or a combination of: the physical or man-made features of the coastline (e.g., cliffs or urban development); environmentally sensitive habitats and/or designations; the pattern of previous coastal developments including existing and planned offshore wind transmission systems, interconnectors, sub-sea pipelines and telecommunication cables; and the location of the offshore wind development proposed to meet current targets.

The HND recommends the optimal transmission network based on the four network design objectives to both connect the offshore wind farms to the transmission network and transport their power to where it is needed, but route corridors and siting are not defined at this stage. It has been developed to provide a sufficient level of detail to enable a Detailed Network Design (DND), which will make decisions about specific network assets. The HND contains recommendations on the potential location of infrastructure, including cable route corridors and the locations of new substations, as well as technology choices for the offshore network. At the same time, the HND does not limit the ability of parties undertaking the DND to exercise their engineering judgement or discharge their detailed planning obligations.

We have sought to achieve the environment and community objectives of the ToR by applying the mitigation hierarchy of avoid, reduce, mitigate to the environmental and community designations, constraints and features identified to inform the HND. This includes, as far as possible, avoiding constraints with features expected to be sensitive to impacts from cabling or infrastructure, where the risks of cabling or siting would be significant.

In some cases, economically better design solutions have not been included on environmental and community grounds, but it has not been possible to avoid all designated sites or other features of importance. The route corridors that have been identified will be confirmed in the next stage of detailed network design. At this stage, construction methods, the assessment of effects and mitigation will also be examined. Where effects on designated sites cannot be avoided, reduced or adequately mitigated they may need to be compensated for. Although this is the last resort of the mitigation hierarchy, it is likely that environmental compensation measures will be required, which might include measures at a regional or national level. The need for further consideration of such measures to deliver the UK's ambitions for more power generation from wind is acknowledged in the British Energy Security Strategy (*BESS*).

⁴⁴ Natural England and JNCC advice on key sensitivities of habitats and Marine Protected Areas in English Waters to offshore wind farm cabling within Proposed Round 4 leasing areas, September 2019.

⁴⁵ Sensitivity of marine ecology receptors to cabling activities in Wales, Natural Resources Wales, 2019.

⁴⁶ Sectoral Marine Plan for Offshore Wind Energy, Scottish Government October 2020

⁴⁷ Offshore Coordination Phase 1 Final Report, Summary of findings - Community and Social, National Grid ESO, December 2020.

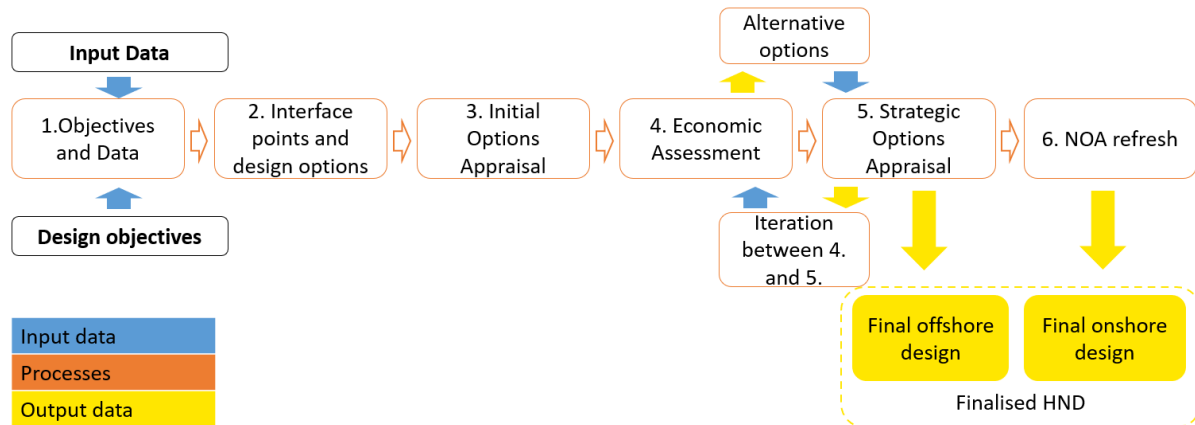
⁴⁸ Draft Overarching National Policy Statement for Energy (EN-1), BEIS, September 2021.

A2.2 Holistic Network Design Appraisal Process

A2.2.1 Overview of process

A structured appraisal process was developed to consider the design objectives set out in the HND ToR which is detailed in the HND Methodology. This is summarised in *Figure 30* below.

Figure 30 - Overview of HND process



Each of these steps is described in more detail in the HND Methodology, and the outcomes including the recommended design are set out in our suite of HND publications (as published in July 2022). The design is described in detail in the *Holistic Network Design* report, and a high-level summary can be found in the *Pathway to 2030* document.

We appointed RPS as specialist cable routing consultants to assist us with identifying cable route corridors and infrastructure options that met the environment and community design objectives. The following sections set out how these objectives were taken into account at each stage of the process.

A2.2.2 Establishment of HND data set

The first step in developing the HND was to establish the scope of the study and the background data sets required. This included establishing the offshore generation in scope which would determine the spatial scope of the environmental and community data required to support the design. How the scope was defined is set out in the HND Methodology. The projects in-scope were primarily those that secured seabed leases in The Crown Estate Leasing Round 4⁴⁹ and those successful in the ScotWind⁵⁰ leasing round as well as other spatially relevant wind farm developments that fitted with the Pathway to 2030 criteria. 1 GW of offshore wind within the Celtic Sea⁵¹ was also considered.

The data required to support the appraisal of the environment and community objectives therefore extended to almost all of GB waters within the jurisdiction of the Exclusive Economic Zone, and the land of GB onshore, but excluding Northern Ireland.

Environmental and community data sources were identified and evaluated that were relevant to meeting the design objectives and available at GB scale. In most cases these were created and made available by the relevant agencies of the administrations of England, Scotland or Wales. As far as possible these were organised to achieve consistency across the HND dataset, so the planning factors used in developing the HND were consistent across GB and its waters. Relevant technical data such as seabed depths, seabed types, vessel density and cliff heights, were acquired from national or commercial data sources depending on the best quality of data available.

⁴⁹ <https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/offshore-wind-leasing-round-4/>

⁵⁰ <https://www.crownstatescotland.com/what-we-do/marine/asset/offshore-wind/section/scotwind-leasing>

⁵¹ <https://www.thecrownestate.co.uk/en-gb/media-and-insights/news/the-crown-estate-to-create-new-floating-wind-leasing-opportunity-in-the-celtic-sea/>

The data obtained is listed in Appendix A of this document. Each dataset was also classified according to the degree of constraint and/or risk it posed to cable routing or infrastructure siting. The classification was Black/Red/Amber/Green defined as set out in the table below. This became known as the BRAG Ranking.

Table 39 - BRAG Ranking Table

Rank	Environment/Community	Technical
Black	Features or designations which affect the likelihood of an option being achievable to such a degree that the option should not be considered as part of the HND.	Features or constraints that are likely to affect the feasibility of construction and/or buildability of the HND to such a degree that the option should not be considered as part of the design.
Red	Features or designations that are so significant or pose such a high degree of risk to the design that they should be avoided ⁵² , except in exceptional cases which include where potential mitigation (or compensation) is known; where the potential benefits to the design would clearly outweigh the potential harm and/or impacts; or where there are no alternatives.	Features or constraints that are likely to affect the feasibility of construction and/or buildability of the design to such a degree that options affecting them should not be included in the HND without potential solutions to the issues raised.
Amber	The most protected features and/or areas that are likely to require detailed assessment and/or mitigation and should be avoided if possible.	Significant technical constraints that may cause cost increases and/or significant schedule delays; not ideal but likely to be achievable and/or capable of resolution.
Green	Features or designations to be taken into account in constraint assessment/study but which are likely to be capable of resolution.	Informative of approach but medium to low likely technical constraint causing significant cost increase and/or significant schedule delays.

The data in the BRAG ranking was collated in a Geographical Information System (GIS). The GIS dataset developed for the appraisal therefore consisted of a GB-wide environment and community dataset that included:

- GIS maps;
- Environmental constraint data;
- Community constraint data;
- Technical constraint data;
- BRAG rankings
- NETS substations/interface points.

In addition, data was also collated to inform the appraisal on:

- Other plans and projects that might affect HND options, including network reinforcements in our *Network Options Assessment (NOA)*.
- Typical forms of development for the purposes of appraisal e.g. cable types and spacing required, and the size of substations and converter stations used in offshore transmission systems.

⁵² To be avoided except for linear constraints - being point to point features, where it may not be possible to avoid crossing these constraints.

A.2.2.3 Identification of offshore design options and interface points

Once the study area and input data had been finalised, offshore designs and potential interface points for the connection of in-scope generators connecting to the NETS were developed. We worked with the Transmission Owners to identify potential interface points where in-scope offshore generators could connect to the onshore NETS.

The potential interface points with the NETS were initially identified by proximity to the coast and the location of the windfarms. Other relevant data, including planned network developments and known limitations of the network, were also considered. Appendix B of this section of the report provides a case study for North West England covering the identification of interface point sites.

This process identified a long list of options for interface points and offshore designs that were subject to a high-level appraisal process to refine them into a short list of options. Potential options included both existing onshore NETS substations and potential new locations.

A2.2.4 Initial options appraisal process

The high-level community and environmental constraint mapping then overlaid with the offshore generators and the potential interface points.

The high-level environmental and community constraints were considered alongside technical routing, onshore grid technical factors and deliverability considerations, to produce a long list of potential interface points for initial appraisal. Interface points likely to be subject to constraints were avoided where possible. However, if the design objectives could not be met without including them, some options with constraints were taken forward to be considered in more detail at the initial appraisal stage. Most of the sites where technical constraints indicated routes to access them were clearly not buildable or deliverable within the timeframes for the HND, were not taken forward. The options that were taken forward for appraisal were mainly those where there was good potential for a technically deliverable grid connection within reasonable proximity of the coast.

A2.2.5 Cable Routing and Siting Assessment

For infrastructure siting and cable routing, the objective of this stage of the appraisal was to identify feasible cable routes from the generators to the interface points and to provide an initial appraisal of the environmental and community effects, to enable each option to be assessed against all four network design objectives on an equal footing.

For each potential option, a cable route corridor was defined which avoided the principal constraints in the BRAG data set as far as possible. An initial appraisal was then completed for each cable route corridor. An example initial appraisal is given at Appendix C of this section of the report.

These initial appraisals were completed for each potential cable route corridors and were refined and amended to avoid or reduce potential impacts where possible. In total initial appraisals were completed for approximately 170 potential cable route corridors.

A2.2.6 Strategic options appraisal

The strategic options appraisal followed a similar process as the initial options appraisal process but incorporating a more detailed assessment using the cable routing and siting BRAG assessments and the results of the economic and deliverability assessments.

The appraisals of environmental and community effects of options for connecting the generators to the NETS were considered on an equal footing together with the other design objectives.

The relevant factors against each objective were weighed up between multiple options in the strategic appraisal and each overall option given a BRAG status. Where options performed poorly against one objective such that the design objectives as a whole would not be met (black rating), they were removed. Where options performed comparatively well across objectives, additional analysis was carried out in order to differentiate between them and enable a recommendation to be made.

In balancing the four network design objectives, the relevant factors in each area were part of the decision-making process and considered equally alongside other factors based on expert judgement.

The weighting attached to any of the factors depended on the magnitude of the issue in the context of all factors affecting the decision being made at the time.

This process was carried out for the radial and coordinated designs, although where a route corridor or initial option combination used in the coordinated design was very similar to one that had already been appraised for the radial design, the radial design appraisal was also used in the appraisal of the coordinated design rather than being repeated.

Option Appraisal Summary Tables (OASTs) were completed for the short-listed radial and coordinated design options in each region. From the comparison of radial design options, a preferred radial design was selected. The short-listed coordinated designs and the preferred radial designs were then compared in the coordinated OASTs to select the recommended option for each region.

A2.3 Conclusions

The conclusions of the appraisals and the recommended HND are set out in our July 2022 suite of HND publications.

A summary of the environmental and community appraisal for each element in the recommended design is given in the tables below.

Table 39 - Offshore Transmission Summary Appraisal of Recommended Option By Wind Farm Location

Offshore Wind Farm	Recommended Interface Point (or end point)	Technology [2]	Capacity (GW)	No. of Cables [2]	Route Corridor Length (km) [1]	BRAG Rating			
						Technical Offshore Cabling	Offshore Environmental	Onshore to Substation Environmental	Onshore to Substation Community
R4_4	Bodelwyddan	HVAC	1.5	3-4	75				
R4_5	Penwortham	HVAC	0.48	1	60				
R4_6	Penwortham	HVAC	1.5	3	96				
SW_W1	T-Point	HVDC	2	2	180				
T-Point	Pentir	HVDC	2	2	315				
T-Point	Hunterston	HVDC	2	2	55				
SW_N4	Arnish (Lewis)	HVAC	0.74	2-3	40				
SW_N1	Spittal	HVAC	2.25	4-6	65				
SW_NE4	New Deer	HVAC	1.5	3-4	90				
SW_NE7	Peterhead	HVDC	1.5	2	135				
SW_E1a	Hawthorn Pit	HVDC	1.8	2	225				
SW_E1a	Fetteresso	HVAC	2	4-5	115				
SW_E1a	SW_E1b	HVAC	1.2	3-4	80			N/A	N/A
PA_2	Blyth	HVDC	1.8	2	145				
R4_1	SW_E1a	HVDC	1.8	2	285			N/A	N/A
R4_1	R4_2	HVAC	1.5	3-4	30			N/A	N/A
R4_1	Creyke Beck	HVDC	1.8	2	160				
R4_2	Creyke Beck	HVDC	1.8	2	180				
R4_2	Lincolnshire Connection Node	HVDC	1.8	2	210				
R4_2	PA_1	HVAC	1.32	3-4	85			N/A	N/A
R4_3	Lincolnshire Connection Node	HVAC	1.5	3-4	105				

Offshore Wind Farm	Recommended Interface Point (or end point)	Technology [2]	Capacity (GW)	No. of Cables [2]	Route Corridor Length (km) [1]	BRAG Rating			
						Technical Offshore Cabling	Offshore Environmental	Onshore to Substation Environmental	Onshore to Substation Community
CS_FW1	Pembroke	HVAC	1	2-3	45				
CS_FW2a	CS_FW1	HVAC	0.7	2	35			N/A	N/A
CS_FW2b	CS_FW2a	HVAC	0.4	1-2	45			N/A	N/A

[1] The HND recommends the optimal transmission network based on the four network design objectives to both connect the offshore wind farms to the transmission network and transport their power to where it is needed, but route corridors and siting are not defined at this stage. Detailed Network Design (DND) will make decisions about specific network assets.

[2] The choice between AC and DC cabling becomes less clear cut in the upper length range for AC cables (150-200 km) and will depend on other project specific factors, including environmental, technical and community constraints. The final choice of technology will be made as part of the Detailed Network Design phase. AC cable numbers assume 500 MW is possible at 275 kV and AC marine cables have three phases together in one cable or bundle.

[3] Two alternative route corridors were considered for the approach to Pentir with an HVDC connection at the Strategic Options Appraisal stage. One route corridor (296km) approached from the north and west but its feasibility was uncertain because of potential effects on the Menai Strait and Conwy Bay SAC and habitats sensitive to cabling operations, or technical constraints of limited space and rocky terrain with an onshore route (or both). The approach from the South was ultimately included in the HND to avoid these constraints but is longer. We would expect the route to be reviewed again at the DND stage.

[4] The route corridor originally developed from SW_NE7 to Peterhead was an AC route corridor overland from the north because of limitations on the space available for cable laying directly into Peterhead from the sea. The final recommended design is for an HVDC connection from SW_NE7. This might allow an opportunity to access Peterhead from an alternative landfall reducing to the cable route to c.110km

[5] Two alternative route corridors were considered for the final design. One that runs to the north of Triton Knoll offshore wind farm and so avoids the Inner Dowsing, Race Bank and North Ridge SAC, and an area of steep seabed gradient known as the Silver Pit. The other route takes a route to the south of Triton Knoll but overlaps with part of the SAC; the impact of this route would need to be determined through a more detailed EIA (Environmental Impact Assessment). The first route is 105km, the second is 95km and the first also requires more crossings of other pipeline and existing cable route infrastructure. It is recommended that the advantages and disadvantages of both alternatives are considered as part of the route selection for the Detailed Network Design, when further information on likely cable burial and protection measures will also be available.

Appendix A – Environment and Community Appraisal Data and Ranking

Table 40

Theme	Data displaying	Offshore cables	Offshore platforms	Landfall	Onshore cables	Onshore stations
National Parks	UK National Parks	N/A	N/A	A	A	R
Areas of Outstanding Natural Beauty (AONBs)	England and Wales AONB and Scotland NSAs	N/A	N/A	A	A	R
Heritage Coasts	England and Wales Heritage Coasts	N/A	N/A	A	A	R
National trails	England and Wales National Trails, and Scotland's Great Trails	N/A	N/A	A	A	A
Special Areas of Conservation (SAC)	Onshore and offshore UK SACs - identified as having sensitive features	R	R	R	R	R
	Onshore and offshore UK SACs - not identified as having sensitive features	A	A	A	A	R
Special Protection Areas (SPA)	Onshore and offshore UK SPAs - identified as having sensitive features	R	R	R	R	R
	Onshore and offshore UK SPAs - not identified as having sensitive features	A	A	A	A	R
pSPAs	England and Scotland proposed SPAs	A	A	A	A	R
cSACs	UK candidate SACs	A	A	A	A	R
SCI	Sites of Community Importance	A	A	A	A	R
Ramsar sites	UK RAMSAR sites	A	A	A	A	R
Proposed Ramsar sites	UK Proposed Ramsar sites	A	A	A	A	R
SSSIs	UK SSSIs	A	A	A	A	A
National Nature Reserves (NNRs)	UK National Nature Reserves	A	A	A	A	A
Biosphere Reserves	UK Biosphere Reserves	G	G	G	G	G
Marine Protected Areas	UK Marine Protected Areas	A	A	A	N/A	N/A
Marine Conservation Zones	UK Marine Conservation Zones - identified as having sensitive features	R	R	R	N/A	N/A
	UK Marine Conservation Zones - not identified as having sensitive features	A	A	A	N/A	N/A
Ancient Woodlands	UK Ancient Woodlands	N/A	N/A	A	A	R
Important Bird Areas	UK Important Bird Areas	G	G	G	G	A
RSPB Reserves	UK RSPB Reserves	G	G	G	G	A
Seabird At Sea Density (Summer/Winter)	UK Seabirds at Sea Density	G	G	N/A	N/A	N/A

Theme	Data displaying	Offshore cables	Offshore platforms	Landfall	Onshore cables	Onshore stations
Annex 1 Sandbanks	UK Annex 1 Sandbanks	A	A	A	N/A	N/A
Annex 1 Submarine Structures	UK Annex 1 Submarine Structures	A	A	A	N/A	N/A
Annex 1 Saltmarsh	UK Annex 1 Saltmarsh	A	A	A	N/A	N/A
UK Grey Seals	UK Grey Seal - High density	G	G	A	N/A	N/A
UK Harbour Seals	UK Harbour Seal - High density	G	G	A	N/A	N/A
SCANS 3 (marine mammal densities)	UK Marine Mammal densities	G	G	G	N/A	N/A
Fish spawning grounds	UK Fish spawning grounds 2010	G	G	N/A	N/A	N/A
Fish nursery grounds	UK Fish Nursery grounds 2010	G	G	N/A	N/A	N/A
World Heritage Sites (WHS)	UK World Heritage Sites	R	R	R	R	B
Scheduled Monuments	UK Scheduled Monuments	R	R	R	R	R
Listed Buildings	UK listed buildings (Grade I, II* and II listed buildings)	N/A	N/A	A	A	R
Registered Parks and Gardens & Gardens and Designed Landscape	Registered Parks and Gardens & Gardens and Designed Landscape	N/A	N/A	A	A	R
Wreck locations	UK wreck locations	R	R	R	N/A	N/A
Protected wrecks	England and Wales protected wrecks	R	R	R	N/A	NA
Ship Hulk	Ship Hulk	R	R	R	N/A	NA
Registered Battlefields	England and Scotland Registered Battlefields	N/A	N/A	A	A	B
Historic marine protected areas	Scotland Historic Marine Protected areas	R	B	R	N/A	NA
Air Quality Management Areas (AQMAs)	UK Air Quality Management Areas	NA	NA	NA	G	G
Major Settlements	UK Major Urban Settlements (for noise, see also Socio-Economics)	N/A	N/A	G	G	A

Theme	Data displaying	Offshore cables	Offshore platforms	Landfall	Onshore cables	Onshore stations
Geoparks	UK Geoparks	N/A	N/A	G	G	G
Water- lakes	Lakes and large water bodies for GB	N/A	N/A	N/A	A	B
Water- rivers	Rivers for GB	N/A	N/A	G	G	R
National Flood Zones/Areas Benefiting from Defences	3 National Flood Zones & 3 Areas benefiting from defences	N/A	N/A	G	G	A
Former landfill sites	England and Wales former landfill sites	N/A	N/A	A	A	A
Major settlements/Urban Areas	UK Major Urban Settlements	N/A	N/A	R	R	R
National Trust Land	National Trust Open Land and Limited Access Land	N/A	N/A	A	A	R
Trans-European Networks (roads or national/European walking/cycling routes)	Roads and Railway	N/A	N/A	G	G	R
Military Airfields/ Sites/ Practice Areas	Military Areas - Onshore sites and Offshore live firing areas	A	R	A	G	R
Passenger Airports	Airports	N/A	N/A	A	A	R
Major onshore utilities and other installations	Includes electrical and gas but not telecoms	N/A	N/A	A	A	B
Port Lands		R	R	R	R	R
Harbour Areas		G	A	G	N/A	N/A
RYA marinas	RYA marinas - check buffer	R	R	R	N/A	N/A
RYA sailing and racing areas	RYA Boating Areas	G	A	G	N/A	N/A
Dredging	UK Dredging Navigation	A	R	A	N/A	N/A
	UK Aggregate Dredging Extraction	R	R	R	N/A	N/A
Dredge and Spoil Dumping Sites	UK Dredge Spoil Dumping Sites	R	A	N/A	N/A	N/A
Offshore energy generation and cable routes	UK Offshore Energy Generation Sites - Existing	R	R	N/A	N/A	N/A
	UK Offshore Energy Generation Sites - Proposed	G	A	N/A	N/A	N/A
	UK Offshore Energy Cable Routes - Existing	A	A	R	N/A	N/A
	UK Offshore Energy Cable Routes - Proposed	G	A	G	N/A	N/A

Theme	Data displaying	Offshore cables	Offshore platforms	Landfall	Onshore cables	Onshore stations
Offshore Infrastructure	Offshore Telecom Cables	A	A	A	N/A	N/A
	Offshore Power Cables	A	A	A	N/A	N/A
	Offshore Pipelines	A	A	A	N/A	N/A
	UK Oil and Gas Wells & Diffusers	R	R	N/A	N/A	N/A
	UK Offshore Oil and Gas Installations	R	R	R	N/A	N/A
	UK Offshore Carbon Capture and Storage Site Agreements	A	A	N/A	N/A	N/A
	UK Offshore Meteorological and Oceanographic Equipment Agreements	A	A	N/A	N/A	N/A
Other planned infrastructure (e.g. coastal development near potential landfall areas)	-	A	A	A	A	A
Traffic separation zone	Traffic Separation Zones	A	B	N/A	N/A	N/A
Shipping lanes	Shipping lanes	A	B	A	N/A	N/A
AIS Vessel Density Grid	UK AIS Vessel Density grid - High density shipping areas	A	A	A	N/A	N/A
Designated anchorage areas	Designated anchorage areas	R	R	R	N/A	N/A
Bathing waters	Bathing Water	G	R	G	N/A	N/A
Shellfish waters	Shellfish Waters	G	A	G	N/A	N/A
Fishing activity	UK Fishing Activity - Areas of high intensity fishing effort	G	G	G	N/A	N/A
Marine Fish Farms	UK Marine Finfish	A	R	A	N/A	N/A
Bathymetry	Slope 10 - 15%	G	G	G	N/A	N/A
Bathymetry	Slope >15%	R	B	R	N/A	N/A
Bathymetry	Depth <10m	G	N/A	N/A	N/A	N/A
Bathymetry	Depth <20m & Depth >50m	N/A	B	N/A	N/A	N/A
Cliff Shoreline	>15m	N/A	N/A	R	N/A	N/A
Average Wave Height (sig wave 50%tile)	>2.5m	N/A	R	N/A	N/A	N/A
Topography - Uplands	>200m	N/A	N/A	N/A	G	R
Topography - Slope	Slope >57% (30 degrees)	N/A	N/A	N/A	R	R

Theme	Data displaying	Offshore cables	Offshore platforms	Landfall	Onshore cables	Onshore stations
Areas of mobile sediment- from sand or Rock/ other substrata part of this data	Offshore Sand	G	G	G	N/A	N/A
Known geological constraints Offshore – e.g. boulder fields, exposed bedrock	Offshore Rock	A	A	A	N/A	N/A
Known geological constraints Onshore – e.g. Shallow soils, exposed rock	Shallow soils and exposed rock	N/A	N/A	A	A	G

Appendix B - Case Study North West England Interface Point Identification

The generation considered in the North West Region, included the generators in scope of the HND listed in *Table 40* and on *Figure 37* below. The principal environmental and community constraints in the region are shown in *Figure 38*.

Table 40 - Generation Scope considered for radial design for the North West Region

Generator Ref	Capacity (MW)	Number of Submarine cables assumed
R4 4	1500	3-4 HVAC Cables
R4 5	480	1-2 HVAC Cables
R4 6	1500	3-4 HVAC Cables

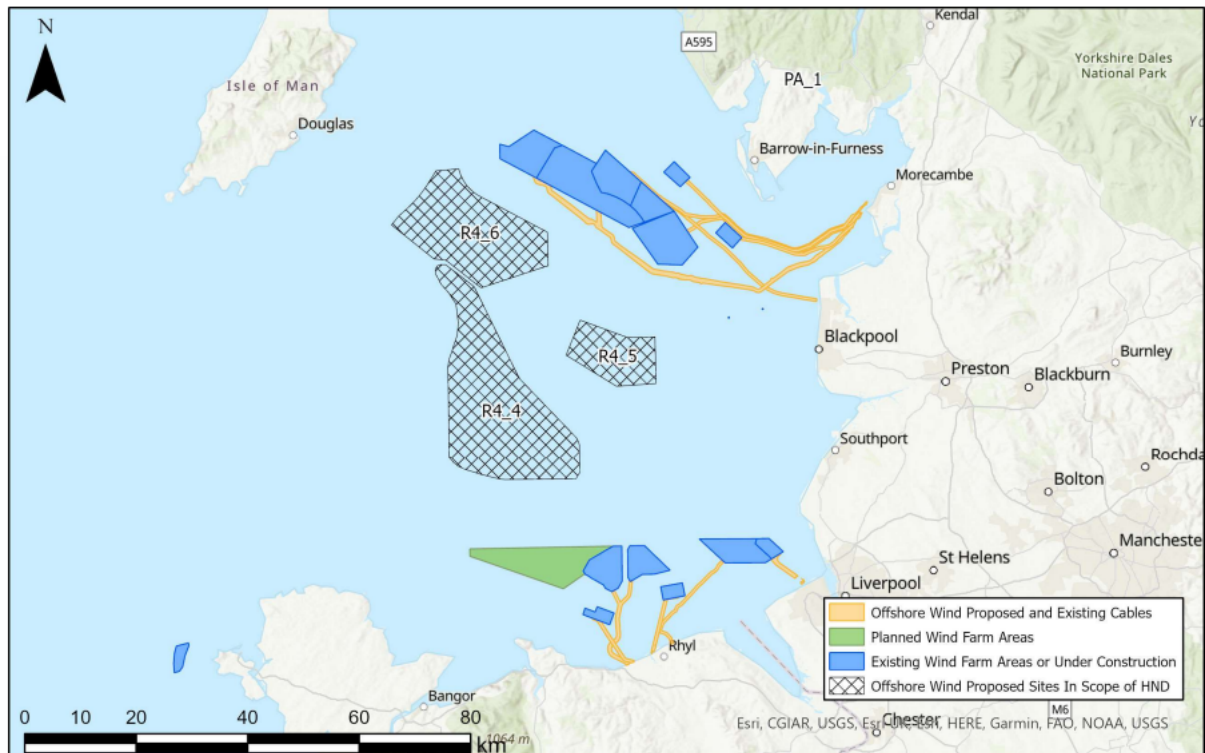


Figure 31 - Generation Scope Considered for North West Radial HND

The potential interface points with the NETS in the North West Region were identified by proximity to the coast between the northern extent of Morecambe Bay in the north, and Anglesey in the south and west. These limits were determined by the location of the generators in scope within the region and other relevant data in the HND dataset including forecast network demand, planned network improvements and other known limitations of the network. Energy demand was biased towards the south of England.

The network map of existing NETS substations and principal environmental constraints are shown on *Figure 32*.

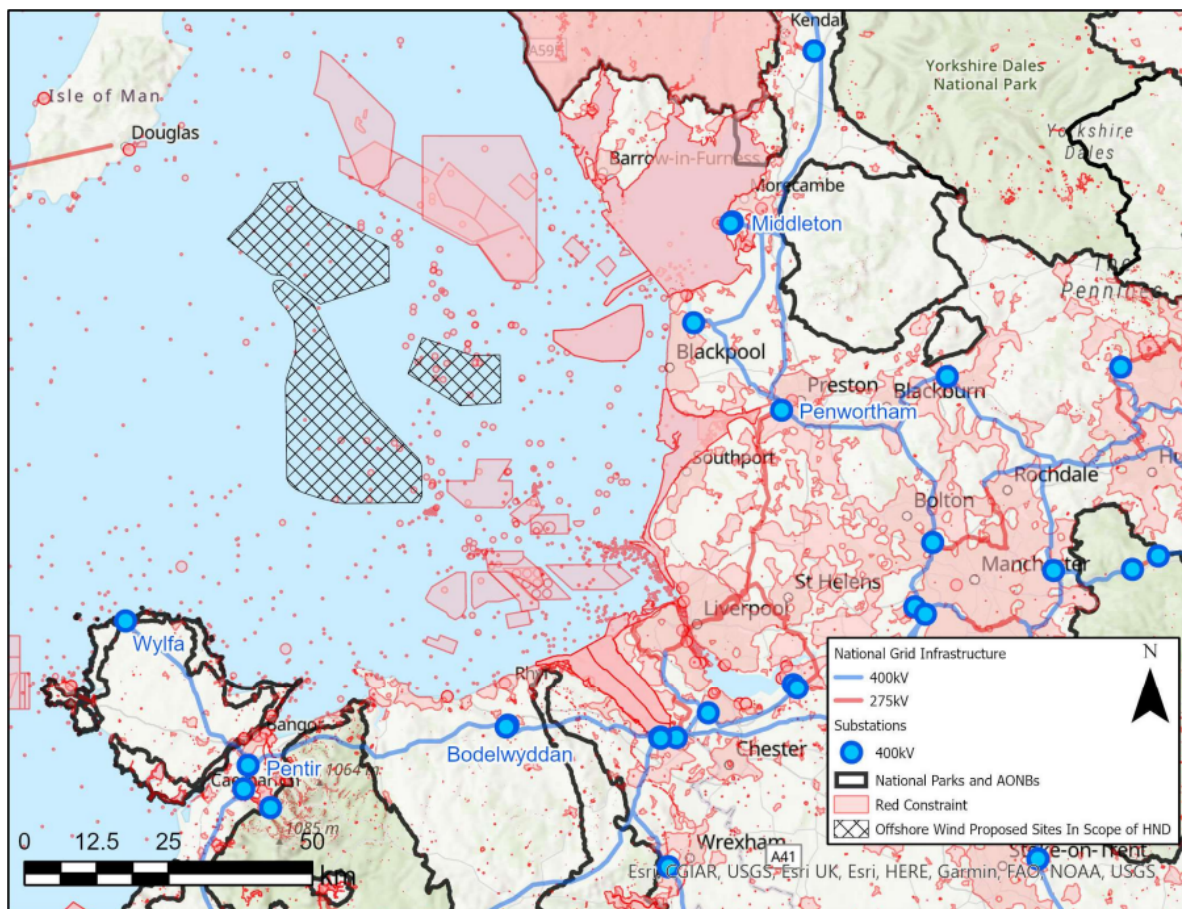


Figure 32 - High-Level Environmental and Community Constraints for North West

Potential interface point sites were initially ranked in terms of potential capacity (including planned capacity) to accept new generation inputs using information provided by the Transmission Owners (TOs).

This exercise included all existing and planned substations on the 400kV and 275kV network in the region and the study area was based on TO network information and the economic advantages of connecting close to the coast where possible. This did not preclude potential interfaces at new substation sites. It was noted at the outset that no new planned or potential substation locations were identified, and that these could be added if constraints to existing substations, or merits of potential new locations, warranted the consideration of new interface points.

The principal constraints in the North West Region were the environment constraints on the offshore transmission cable routes and landfalls, and no distinct advantages of new substation locations were identified. The interface points considered therefore remained focused only on existing substation sites in the region.

These locations, and all other potential interface points, were considered at a 'high level' (i.e. principal considerations) in a workshop in terms of deliverability (Objective 2) and environment and community constraints (Objectives 3 and 4). Environmental and community constraints were presented to focus on the highest level (Red in the BRAG dataset) at this stage, although information on characteristics behind these constraints, and other constraints, were also available.

The main environmental and community factors in the region are shown on *Figure 33*

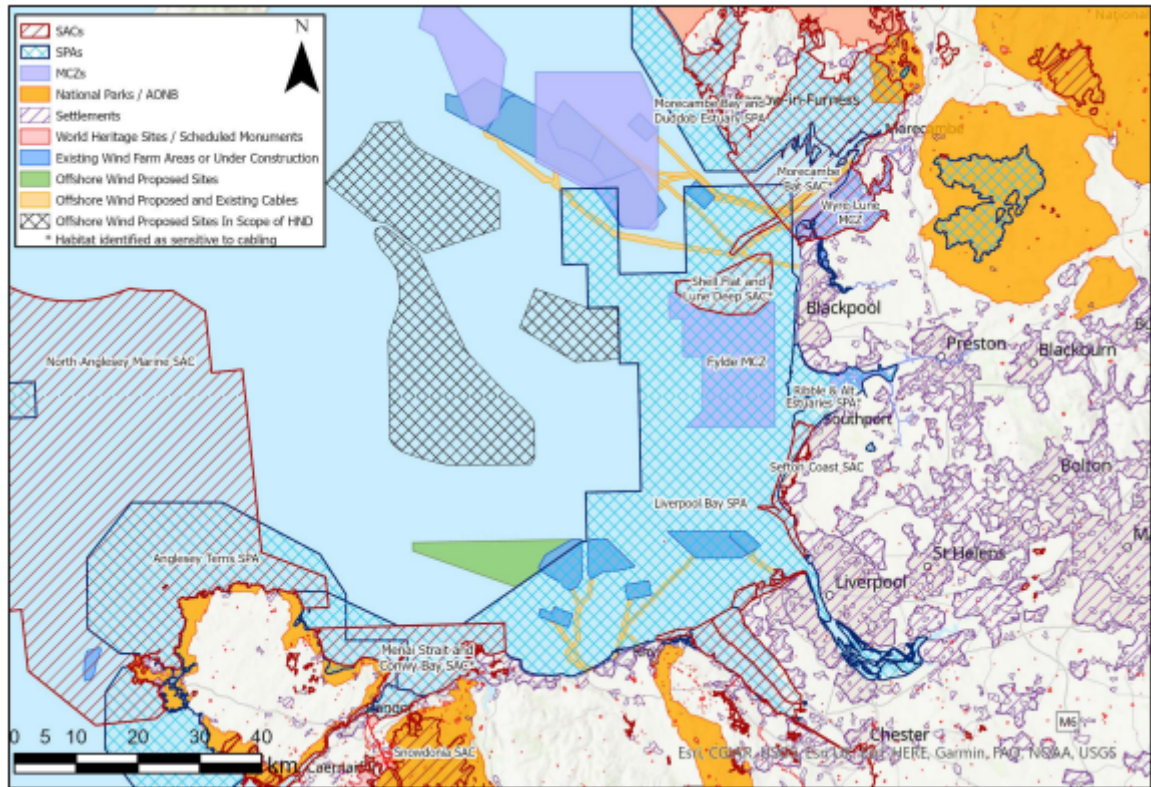


Figure 33 Principal High Level Environmental and Community Designations for North West

The interface sites selected for further consideration for both the radial and coordinated designs in the North West Region were Middleton, Penwortham, Bodelwyddan and Pentir.

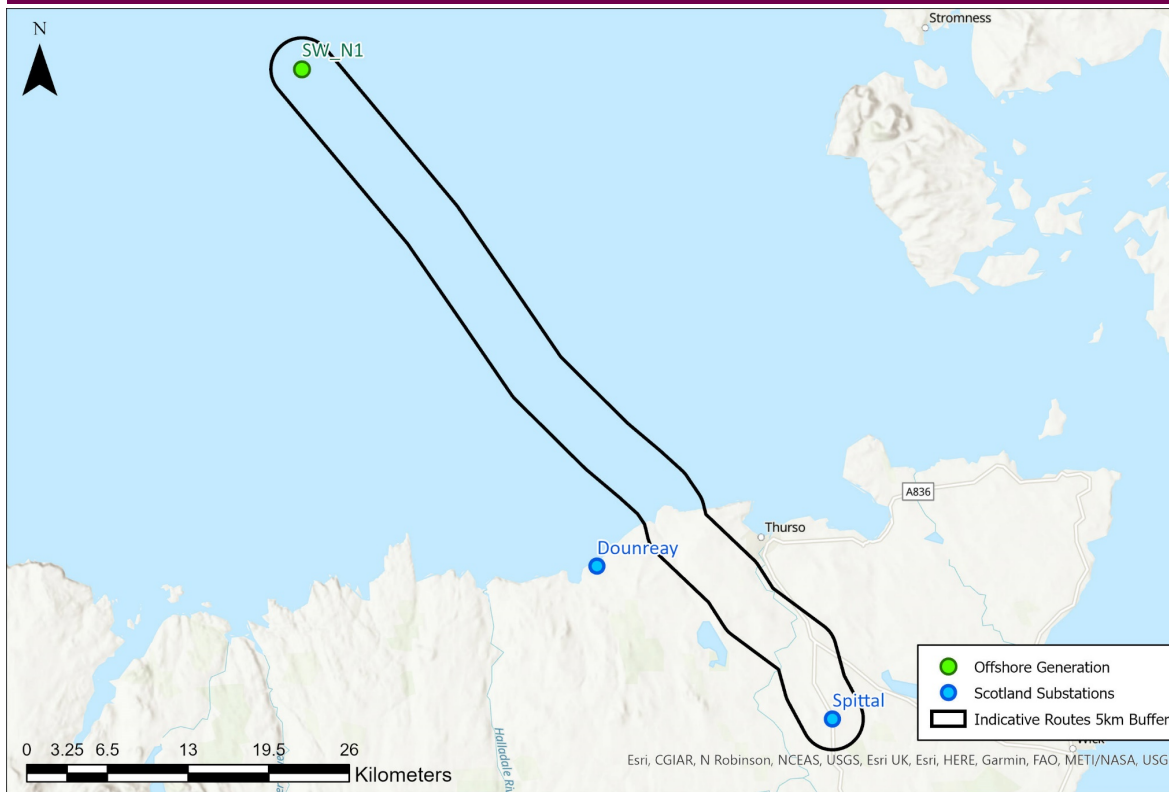
North Scotland Region – NS2 - SW_N1 – Spittal				
Offshore Generation	Onshore Station	Route No.	Option No.	Revision
SW_N1	Spittal	NS2	2,3	F01
Author	Reviewed	Approved	Date	
BM	KC/MB/LMcA	DC	31/01/2022	

Route Description

The identified offshore route corridor from SW_N1 (West of Orkney) to Spittal substation extends SE for 46km avoiding the Highland Wind windfarm and nearby telecom cables before it makes landfall, at which point it continues for 22.5km SE before approaching the onshore substation from the NW.

Route Length - Total	Route Length - Offshore	Route Length - Onshore
66.4 km	45.7 km	20.7 km
SW_N1; 2,250 MW AC	4 to 6, 3 core submarine cables	4 to 6 underground cable circuit trenches

Route Overview Map – NS2 - SW_N1 – Spittal



Summary of Appraisal – NS2 - SW_N1 – Spittal

Technical

The technical constraint along the route corridor SW_N1 (West or Orkney) to Spittal is the predominance of cliffs at coastline many of which are > 15m in height. However, within the route corridor, there is some potential to avoid the highest cliffs to either side of Ushat Head at Crosskirk or Brims Ness.

Environmental

There are significant environmental constraints within the route corridor, but it should be possible to avoid these with cable routing. The corridor does clip the western edge of the North Caithness Cliffs SPA, cross the Thurso River SAC and include the Ushat Head, Loch Lieurary, Spittal Quarry, Achanarras Quarry, Banniskirk Quarry, Newlands of Geise Mire and River Thurso SSSIs, all of which can be avoided.

Community

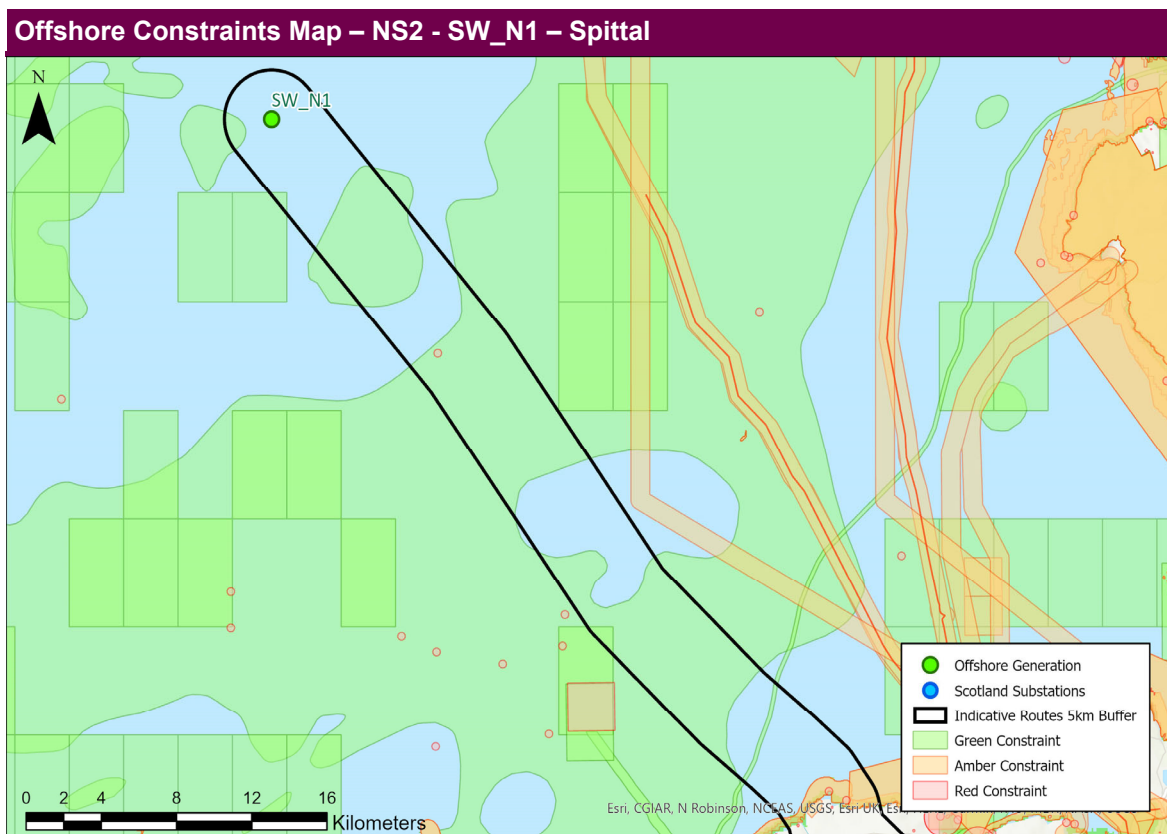
The community constraints along the route corridor SW_N1 to Spittal include the urban area of Halkirk, which can be avoided.

Conclusion

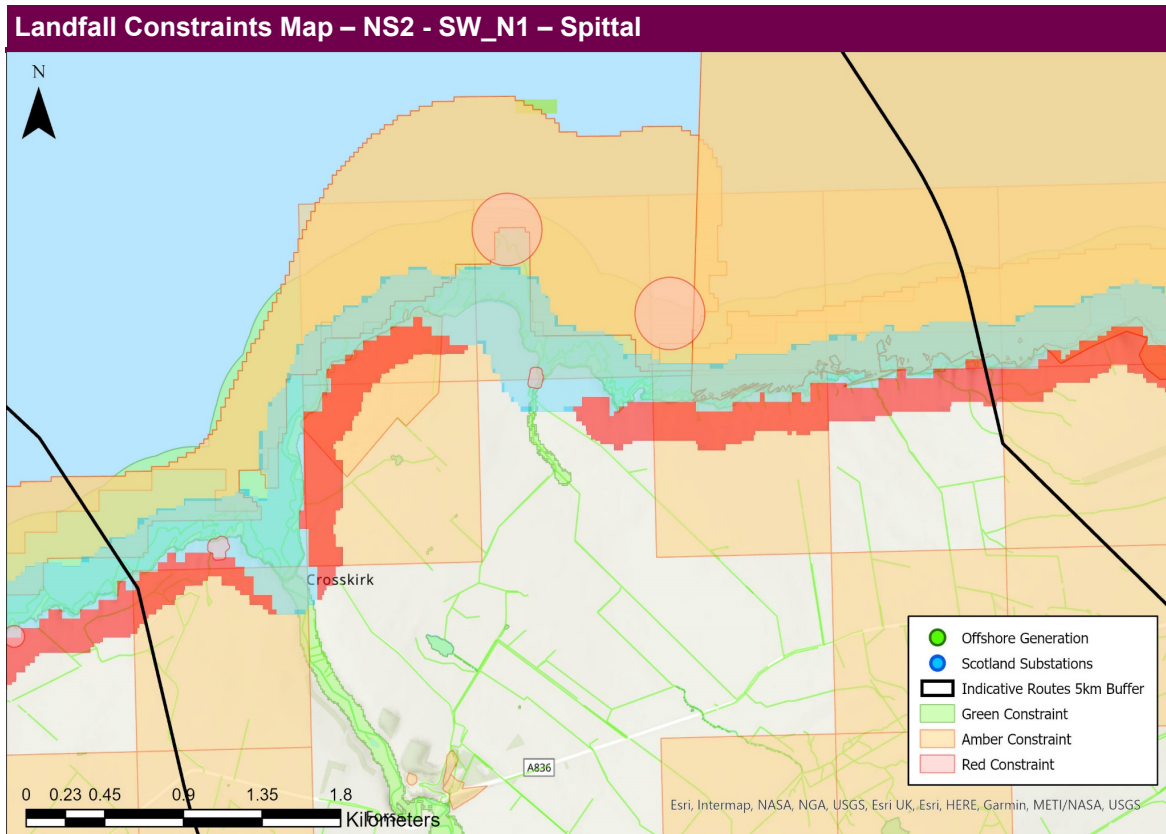
Overall, the NS2 route is lightly to moderately constraint as all significant constraints have the potential to be avoided both onshore and offshore.

Constraint Ranking	Technical	Environment / Community
Black	Features or constraints that are likely to affect the feasibility of construction and/or buildability of the HND to such a degree that the option should not be considered as part of the design.	Features or designations which affect the likelihood of an option being achievable to such a degree that the option should not be considered as part of the HND.
Red	Features or constraints that are likely to affect the feasibility of construction and/or buildability of the design to such a degree that the option affecting them should not be included in the HND without potential solutions to the issues raised.	Features or designations that are so significant or pose such a high degree of risk to the design that they should be avoided*, except in exceptional cases which include: where potential mitigation (or compensation) is known; where the potential benefits to the design would clearly outweigh the potential harm and/or impacts; or where there are no alternatives.
Amber	Significant technical constraints that may cause cost increases and/or schedule delays; not ideal but likely to be achievable and/or capable of resolution.	The most protected features and/or areas that are likely to require detailed assessment and/or mitigation and should be avoided* if possible.
Green	Informative of approach but likely technical constraint causing significant cost increase and/or schedule delays.	Features or designations to be taken into account in constraint assessment/study but which are likely to be capable of resolution.

*To be avoided except for linear constraints - being point to point features, where it may not be possible to avoid crossing these constraints.



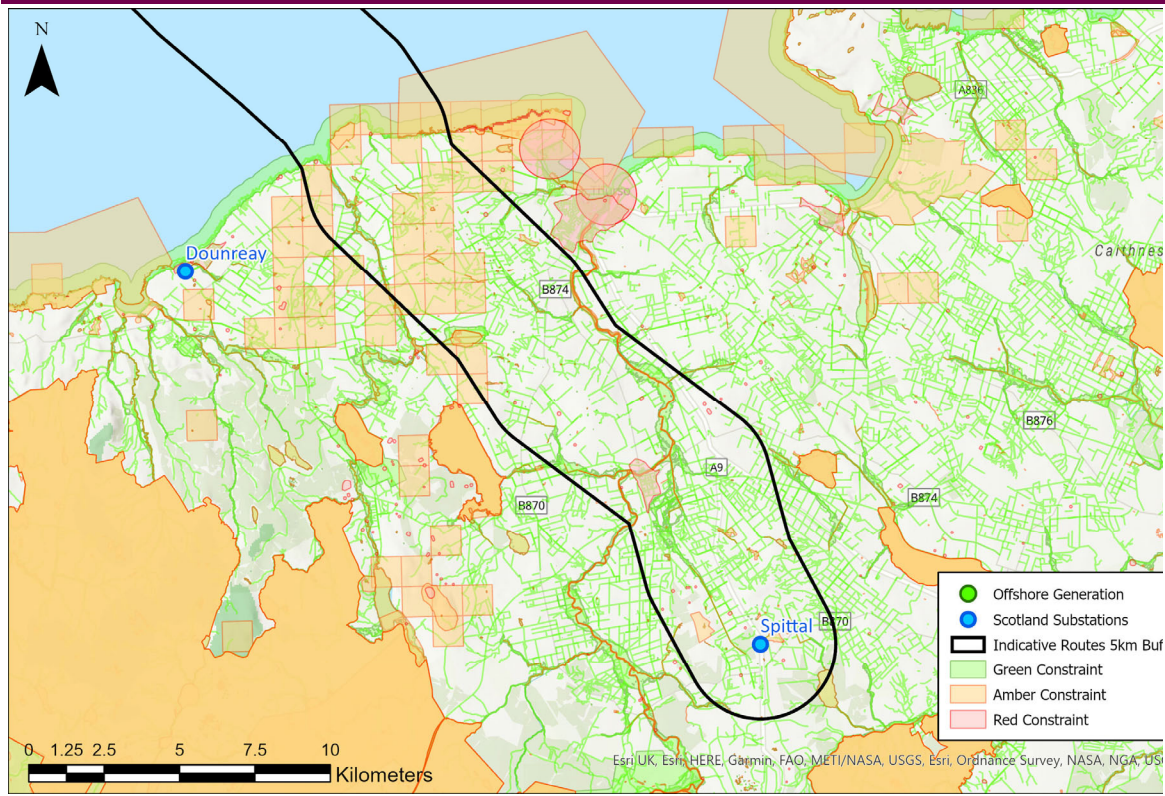
Feature/Constraint	Name	Description/Features/ Potential Effects (adverse and beneficial)	Ranking	Mitigation Identified/Residual Effects	Ranking with Mitigation
Technical and Construction Constraints – Offshore					
Offshore rock	Offshore rock	There is an area of identified offshore rock at the coastline, north of Crosskirk, that spans the approximate width of the corridor.		Cannot avoid these areas of offshore rock within the route corridor.	
Offshore energy generation and cables	Proposed electric cable	There is a proposed electrical interconnector from SSEN Transmission (to Orkney) within the route corridor.		Cannot avoid crossing the proposed cable route.	
Bathymetry	Depth <10m	There is an area offshore with a depth of <10m.		Cannot avoid passing through an area of depth <10m.	
Offshore sand	Offshore sand	There are large areas of offshore sand all along the route corridor.		Cannot avoid offshore sand within the route corridor.	
Environmental Constraints – Offshore					
SPA	North Caithness Cliffs SPA	This site is designated for its very large populations of breeding seabirds such as the Peregrine and Guillemot. The site intersects with a 2.5km ² area of the route corridor on the coastline.		There is a potential to avoid the SPA within the route corridor.	
Annex 1 Reefs	Annex 1 Reefs	There are scattered areas of reef that span the width of the route corridor at the coastline, just offshore of Crosskirk.		Cannot avoid the annex 1 reef within the route corridor.	
Community Constraints – Offshore					
Wreck locations	Wreck locations (2)	There are two wrecks within the route corridor.		There is the potential to avoid wreck locations within the route corridor.	
Fishing activity	Fishing intensity	There is an area of high fishing intensity within the route corridor.		Potential to avoid passing through areas of high intensity fishing activity.	



Feature/Constraint	Name	Description/Features/ Potential Effects (adverse and beneficial)	Ranking	Mitigation Identified/Residual Effects	Ranking with Mitigation
Technical and Construction Constraints – Landfall					
Cliff shoreline	Cliffs > 15m in height	Along the majority of the coastline the cliffs are > 15m in height. Two lower sections of cliff provide circa 1.3km of coastline for landfall.	Red	There is limited potential to avoid areas of the cliff within the route corridor.	Green
Offshore rock	Offshore rock	There is an area of identified offshore rock north of Crosskirk that spans the width of the corridor.	Amber	Cannot avoid these areas of offshore rock within the route corridor.	Amber
Shallow soils and exposed rock	Shallow soils and exposed rock	There are areas of identified clastic rocks with limestone, sandstone and mudstone located within the route corridor.	Amber	Cannot avoid these areas of shallow soils and exposed rock within the route corridor.	Amber
Rivers	Rivers	There are a number of rivers located within the route corridor.	Green	Rivers will need to be avoided or crossed within the route corridor.	Green

Roads	Roads	There are a number of roads located within the route corridor.		There is potential to avoid the roads within the corridor.	
National Flood Zones	National Flood Zones	Areas of National Flood Zones.		Areas of flood zones cannot be avoided within the cable route corridor.	
Environmental Constraints – Landfall					
SPA	North Caithness Cliffs SPA	This site is designated for its very large populations of breeding seabirds such as the peregrine and guillemot.		There is a potential to avoid the SPA within the route corridor.	
SSSI	Ushat Head SSSI	This site was designated for its impressive cliffs and geological features.		There is a potential to avoid the SSSI within the route corridor.	
Annex 1 Reefs	Annex 1 Reefs	There are scattered areas of reef that span the width of the route corridor just offshore of Crosskirk.		Cannot avoid the annex 1 reef within the route corridor.	
Community Constraints – Landfall					
Scheduled monuments	Scheduled monuments (2)	There are two scheduled monuments located within the route corridor.		There is potential to avoid the scheduled monuments within the route corridor.	
Wreck locations	Wreck locations (2)	There are two wrecks within the route corridor.		There is the potential to avoid wreck locations within the route corridor.	

Onshore Constraints Map – NS2 - SW_N1 – Spittal



Feature/Constraint	Name	Description/Features/ Potential Effects (adverse and beneficial)	Ranking	Mitigation Identified/Residual Effects	Ranking with Mitigation
Technical and Construction Constraints – Onshore					
Lakes	Lakes	There are a number of lakes located within the route corridor.	Yellow	There is the potential to avoid lakes within the route corridor.	Green
Shallow soils and exposed rock	Shallow soils and exposed rock	There are areas of identified clastic rocks with limestone, sandstone and mudstone located within the route corridor.	Yellow	Cannot avoid all areas of shallow soils and exposed rock within the route corridor.	Yellow
Rivers	Rivers	There are a number of rivers located within the route corridor.	Green	Rivers will need to be avoided or crossed within route corridor.	Green
Roads and railways	Roads and railways	There are a number of roads and one railway line within the route corridor.	Green	Roads will need to be avoided or crossed. The railway line will need to be crossed.	Green

National Flood Zones	National Flood Zones	Areas of National Flood Zones.		Areas of flood zones cannot be avoided within the cable route corridor.	
Environmental Constraints – Onshore					
SAC	River Thurso SAC	This site is designated for its importance to wintering Atlantic Salmon and other fish species such as Grilse.		The SAC cannot be avoided within the route corridor. It might be possible to drill beneath it.	
SSSI	Achanar ras Quarry SSSI	This site is designated for its impressive number of rare and good quality fossils.		There is a potential to avoid the SSSI within the route corridor.	
SSSI	Banniskirk Quarry SSSI	This site is designated for its scientific interest in quarry restoration.		There is a potential to avoid the SSSI within the route corridor.	
SSSI	Loch Lieurary SSSI	The site is designated for its importance to highland biodiversity.		There is a potential to avoid the SSSI within the route corridor.	
SSSI	Newlands of Geise Mire SSSI	This site is designated for its scientific importance.		There is a potential to avoid the SSSI within the route corridor.	
SSSI	River Thurso SSSI	The site is designated for its importance to wintering Atlantic salmon and other fish species such as grilse.		There is a potential to avoid the SSSI within the route corridor.	
SSSI	Spittal Quarry SSSI	This site is designated for its impressive number of rare and good quality fossils		There is a potential to avoid the SSSI within the route corridor.	
SSSI	Ushat Head SSSI	This site was designated for its impressive cliffs and geological features.		There is a potential to avoid the SSSI within	

				the route corridor.	
Ancient Woodland	Ancient woodland	There is an area of ancient within the route corridor.		There is potential to avoid areas of ancient woodland along the route corridor.	
Community Constraints – Onshore					
Scheduled monuments	Scheduled monuments (21)	There are 21 scheduled monuments within the route corridor.		There is potential to avoid all scheduled monuments within the route corridor.	
Major settlements / urban regions	Major settlements / urban regions	The urban area of Halkirk is within the route corridor.		There is potential to avoid this urban area within the route corridor.	

Appendix B.3

*This appendix has been produced to support the Applicant's response to the Examining Authority's First Written Question - Q1.2.4.1. This document should be read alongside the **Applicant's Response to the Examining Authority's First Written Questions** [document reference 12.4].*

Response to Q1.2.4.1

The assessment of need for the Proposed Development has been set within the context of the ongoing need for electricity generation in the U.K. [APP-285, Section 4].

However, there are other types of infrastructure that are supported by NPS EN-1 that can meet the need for electricity generation. Justify the need for the specific type of infrastructure (offshore windfarm) for electricity generation as opposed to or alongside other types of infrastructure. And explain, how the Proposed Development specifically satisfies the need for offshore windfarms for electricity generation. Explain in the context of NPS EN-1, including Paragraph 3.2.3: “The weight which is attributed to considerations of need in any given case should be proportionate to the anticipated extent of a project’s actual contribution to satisfying the need for a particular type of infrastructure”; and Paragraph 3.3.4: “There are benefits of having a diverse mix of all types of power generation. It means we are not dependent on any one type of generation or one source of fuel or power and so helps to ensure security of supply.”

1 Summary

1. Justification is based on the falling ability of the UK to generate energy over recent years but is also provided in full by established National Policy Statements (NPSs) which make clear that need has already been established for offshore wind farms. The proportion of the weight which is attributable to the energy generation benefits of the project is significant and meaningful, given the project will contribute 4% of the shortfall in meeting the government target to achieve 40GW of offshore wind energy generation by 2030. Since the application sits within a clear framework which establishes a minimum need for a range of technologies (including 33GW of renewable energy generation capacity and up to 18GW of nuclear energy generation capacity, all by 2025) the approval of SEP and DEP would help meet the minimum need for renewable energy generation as one element in the diverse mix established by the NPS framework, a need which has not yet been even half achieved.

2 Justification of Need for Renewable Energy

2. The premiss of the question is the relative contribution of different types of energy generation and the appropriate mix of source of generation. Attention is drawn, in the question, to NPS EN-1 paragraph 3.3.4 which states:

There are benefits of having a diverse mix of all types of power generation. It means we are not dependent on any one type of power generation. It means that we are not dependent on any one type of generation or one source of fuel or power and so helps to ensure security of supply.

3. A full picture of NPS EN-1 policy can only be given by the document as a whole. It is worth noting that the NPS was subject to national consultation and was considered by and specifically voted upon by both houses of parliament before it was designated to apply to NPS decisions from 2011 onwards.
4. The above passage relating to the benefits of a diverse mix of power generation is followed by bullet points establishing the main generation types (the scale of need for each type is considered further below) and the section then concludes with paragraph 3.3.6 which (emphasis added) states that:

*Within the strategic framework established by the Government **it is for industry to propose the specific types of developments that they assess to be viable.** This is the nature of a market-based energy system¹⁹. The [ExA/SoS] should therefore act in accordance with the policy set out at in Section 3.1 when assessing proposals for new energy NSIPs.*

5. The policy set out in Section 3.1 (emphasis added) is as follows:

3.1.1 The UK needs all the types of energy infrastructure covered by this NPS in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions.

3.1.2 It is for industry to propose new energy infrastructure projects within the strategic framework set by Government. The Government does not consider it appropriate for planning policy to set targets for or limits on different technologies.

*3.1.3 The [ExA/SoS] should therefore assess all applications for development consent for the types of infrastructure covered by the energy NPSs on the basis that the Government has demonstrated that **there is a need for those types of infrastructure** and that the scale and urgency of that need is as described for each of them in this Part.*

3.1.4 The [ExA/SoS] should give substantial weight to the contribution which projects would make towards satisfying this need when considering applications for development consent under the Planning Act 2008

3 Justification of Need for Offshore Windfarms

6. Similarly, in relation to offshore wind specifically, a type of infrastructure covered by National Policy Statement for Renewable Energy Infrastructure (NPS EN-3), the policy in paragraph 2.1.2 of NPS EN3 is that:

“the [ExA/SoS] should act on the basis that the need for infrastructure covered by this NPS has been demonstrated”.

7. Given that NPS EN-1 states that applications for all types of energy infrastructure should be assessed on the basis that “Government has demonstrated that there is a need for those types of infrastructure”, the need to justify the specific type of

infrastructure proposed (offshore windfarm) represented by the proposed development is considered beyond doubt by the NPS.

8. However, NPS EN-1 goes further and in paragraph 3.3.22 sets out and justifies minimum levels of need for each type of infrastructure. These levels of NPS established minimum need for the period up to 2025 and the progress/lack of progress in reaching them is explained in detail in section 4.4.1 and Table 4-1 of the Planning Statement [APP-285]. In summary, the NPS states that of a minimum need for 59GW of electricity generation capacity to be built by 2025 (emphasis added):

- *“around **33 GW** of the new capacity by 2025 would need to come **from renewable sources**”*
- *“it would be for industry to determine the exact mix of the remaining 26 GW”*
- *“of these figures of 33 GW and 26 GW respectively, around 2 GW of renewables and 8 GW of non-renewable technologies are already under construction³⁶. This leaves a balance of **18 GW to come from new non-renewable capacity**; and*
- *the Government would like a significant proportion of this balance to be filled by new low carbon generation and believes that, in principle, new nuclear power should be free to contribute as much as possible towards meeting the need for around 18 GW of new non-renewable capacity by 2025”.*

4 Justification of Need for Renewable Energy and Matters beyond the NPSs

9. Given provisions in the Planning Act 2008 that in deciding the application the SoS must have regard to any other matters which the Secretary of State thinks are both important and relevant (S104(2)(d)) and that “It is for the Examining authority to decide how to examine the application” (S87(1)), and given the passage of time since the designation of NPS EN-1 it is reasonable, without questioning the merits of the NPSs themselves, to consider whether any new policy or other matters, such as changes in circumstances, would mitigate against the weight given to this area NPS policy is deciding the application. Analysis of whether this is the case is set out in full in section 4 of the Planning Statement [APP-285].

10. In short, the above levels of minimum need, including the need to build 33GW of renewable energy generation capacity by 2025 and the circumstances pertaining to them, remain unchanged and in fact exacerbated with the passage of time since 2011. The main reasons for the NPS EN-1 minimum need for 33GW of newbuild renewable energy generation capacity to be established by 2025 remaining appropriate are twofold:

- firstly, because by 2021 only 18GW of additional renewable energy generation capacity had been added to the UK's generation capacity, set against the established NPS EN-1 minimum need for 33GW of renewable energy generation to be added by 2025, and
- secondly and equally seriously, because total UK generating capacity has not increased from the 85GW of capacity that it was (the baseline in NPS EN-1), it but has in fact fallen to only 77GW of generation capacity in 2021.

11. The overall fall in the level of generating capacity in the UK since 2011 has meant that the margin of total capacity over peak demand has become smaller. In 2011 peak demand amounted to only 69.8% of total capacity, a figure 3.2 percentage points higher than in 2019 (page 37 and Table 5.3 of Department for Business, Energy and Industrial Strategy (2021) Digest of UK Energy Statistics 2020) [APP-285].
12. In July 2023, the Digest of UK Energy Statistics for 2022 is expected to be published enabling further conclusions to be reached on the progress towards meeting minimum need for the generation of renewable energy and towards a range of other targets. It is considered very unlikely however that a shortfall of 15GW (from the established NPS EN-1 minimum need for 33GW of renewable energy generation capacity), will be built out in the two remaining years until 2025 given that the rate of additions of such capacity has averaged out at 1.8GW of added per year since 2011.

5 Justification of Need for Offshore Windfarms and Matters beyond the NPSs

13. Turning to whether the need for offshore windfarms as a specific type of renewable energy infrastructure is specifically justified, there is a third reason why more recent policy and circumstances have not undermined the weight that should be afforded to the need for offshore windfarms established in NPS EN-3, supported by NPS EN-1. This is because more recent policy, in the context of the falling generation capacity of the UK as a whole, has established further targets and ambitions for the delivery of offshore wind generation. Three further factors in particular give added weight to the need for offshore wind farms:
- first, Government policy in its background notes to the Queen's Speech 2019 stated: *"We will increase our ambition on offshore wind to 40GW by 2030, and enable new floating turbines"*;
 - second, the Government's British Energy Security Strategy of April 2022, (published following the immediate energy impacts of the invasion of Ukraine) states: *"our ambition is to deliver up to 50GW by 2030, including up to 5GW of innovative floating wind"*, and

- third, there were only 4.84GW of UK offshore wind generation capacity deployed by 2021 (after derating the 11.26GW of capacity by a factor of 0.43, recommended by the Department for Business, Energy and Industrial Strategy, 2022, Digest of UK Energy Statistics 2021).

14. Therefore, given NPS EN-3 policy which establishes the need for offshore wind farms, the other above national government policies for the delivery of offshore wind energy generation and the relatively small amount deployed to date, the need for SEP and DEP offshore wind farms as a specific type of infrastructure is explicitly justified by relevant policy and by the UK's falling ability to generate energy from the levels that were achievable in 2011.

6 Weight Attributable

15. On the degree of weight that should be attributed, the benefit of the meaningful and significant contribution that SEP and DEP would make, of 4%, to the capacity shortfall required to meet the above 40GW target, should attract a meaningful and significant degree of weight in favour of consent, in the proportionate way required by NPS EN-1 policy 3.2.3.

16. In addition, paragraph 3.1.4 of NPS EN-1 states that the decision maker (emphasis added) "**should give substantial weight to the contribution which projects would make towards satisfying**" (with respect to the preceding paragraphs) the need demonstrated by the government for all types of energy infrastructure covered by the NPS.

17. Further in relation to the weight that should be given to a wind farm at the site of SEP and DEP paragraph 2.1.3 of NPS EN-1 (emphasis added) states that: "**it is for energy companies to decide what applications to bring forward and the Government does not seek to direct applicants to particular sites for renewable energy infrastructure other than in the specific circumstances described in this document**".

7 Diversity of Mix

18. With regard to policy in NPS EN-1 paragraph 3.3.4 that: "There are benefits of having a diverse mix of all types of power generation. It means we are not dependent on any one type of generation or one source of fuel or power and so helps to ensure security of supply", this is subject to the key contextualising policies in the NPS which follow paragraph 3.3.4, which:

- state that in the context of the above the "*Government would like industry to bring forward many new low carbon developments (renewables, nuclear and fossil fuel generation with CCS) within the next 10 to 15 years to meet the twin challenge of energy security and climate change as we move towards 2050*" (NPS EN-1 paragraph 3.3.5);

- lay down the framework for the “*diverse mix of all types of energy supply*” referred to, by setting out minimum levels of need for different types of energy generation capacity, including a minimum need for 33GW of new build renewable energy generation capacity by 2025, fifty percent of which is yet to be achieved (see above and paragraph 3.3.22 of NPS EN-1), and
- state that “*within the strategic framework established by the Government it is for industry to propose the specific types of developments*”.

19. Since there has been no change to strategic framework established, since the SEP and DEP application clearly sits within this framework, since the minimum need for renewable energy generation established in NPS EN-1 has not yet been half met, and indeed since the overall level of UK generation capacity has gone down rather than up, and in any event since the Planning Act 2008 continues to require that applications “must be decided in accordance with” the 2011 NPS EN-1, it remains for industry promoters to propose the specific type of infrastructure and development on the basis that all types are justified in terms of need by NPS EN-1 and 3. In the case of the SEP and DEP offshore wind farms, EN-3 (above) justifies and establishes the need for offshore windfarms in particular.
20. In addition, regarding diversity of mix, it remains for nuclear and other technologies to take up as much of the remaining minimum need (of 18 GW according to NPS EN1 paragraph 3.3 22), which going by recent delivery rates, renewables are highly unlikely to encroach into.

8 Endnote

The above answer is drafted in the context of the provisions of sections 87, 94 and 106 which all provide for the disregarding of, or refusal to allow representations which relate to the merits of policy set out in national policy statements, and section 102 which establishes that a relevant representation is not a relevant representation to the extent that it relates to the merits of policy set out in national policy statements. This answer does not address the merits of policies in the designated NPSs for this application but restates their key conclusions and considers whether other important and relevant matters affect the weight to be given to the minimum level of established need for renewable energy generation established in NPS EN-1 or to other related policies.