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# Written representation in respect of Drax Re-power (App. No. EN010091)

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## Summary

1. This written representation is made by ClientEarth<sup>1</sup>, with the support of Sandbag<sup>2</sup>, in respect of the application by Drax Power Ltd (the Applicant) to modify two of the coal-fired generating units at Drax Power Station to become gas-powered generating plant operating combined cycle gas turbines (CCGT) (App. No. EN010091).
2. A summary<sup>3</sup> of ClientEarth's written representation is provided below and introduces the more detailed discussion that follows:
  - a. **ClientEarth objects to the Proposed Development in principle and disagrees with the Applicant that the Proposed Development's balance of public benefits and adverse impacts meets the relevant tests under the applicable legal framework:** This is primarily due to:
    - i. the lack of need for the Proposed Development, and
    - ii. the significant adverse impacts that would occur if the Proposed Development is built, including its major adverse climate impact or alternatively the risk of it becoming redundant infrastructure.
  - b. **The application of s 104 of the Planning Act 2008 and the National Policy Statement (NPS) framework in the present case:** The requirement in the NPS framework to give substantial weight to anticipated actual contributions to need is of no practical effect in the present case given the lack of need for the Proposed Development as explained below. Nonetheless, if the Examining Authority or the Secretary of State (SoS) assesses – contrary to our arguments – that there is a material need for the Proposed Development, this must still be balanced on an unweighted basis against the Proposed Development's adverse impacts under s 104(7) of the Act. If the adverse impacts outweigh the benefits to the public, consent should be refused, irrespective of the assessment under the NPS framework.
  - c. **There is no need for the Proposed Development:** Current Department of Business, Energy and Industrial Strategy (BEIS) projections show that there is no

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<sup>1</sup> Interested Party reference: 20011838. ClientEarth is an environmental law charity with offices in London, Brussels, Berlin, Warsaw, Beijing and New York (registered in England and Wales, Charity Registration No. 1053988. Company Registration No. 2863827).

<sup>2</sup> Sandbag is a not-for-profit climate change policy think tank based in Brussels and London (registered as a Community Interest Company in England and Wales: Company No. 6714443).

<sup>3</sup> In accordance with the Inspectorate's letter dated 11 October 2018, this summary is under 10% of the length of the original text (at approx. 650 words).

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need for further gas generation given the amount of gas generation capacity that has already received development consent. BEIS's forecasts are supported by analysis from energy and climate policy experts Sandbag (among others) who find – on the basis of current government data and forecasts – that the UK does not need *any* new-build large gas power capacity to achieve energy security.

- d. **The Proposed Development does not present any other significant benefits to the public:** The Proposed Development will either be redundant infrastructure (a stranded asset) or displace capacity provided by other infrastructure, be it other gas capacity or renewable energy capacity. The overall benefit to the public in terms of security of supply or employment (*before netting against adverse impacts*) can therefore be expected to be at best marginal and possibly non-existent.
- e. **The Proposed Development will have substantial adverse impacts:** On the other hand, the adverse impacts caused by the Proposed Development are various and significant, as acknowledged in the Applicant's Environmental Statement.
- i. In the event that the Proposed Development is constructed but *not used* to any significant extent – or is used and *displaces existing gas fired capacity* – the development's adverse impacts include: (i) biodiversity loss; (ii) noise and vibration; (iii) increased local traffic and transport disruption; and (iv) public subsidy / decommissioning cost risk.
  - ii. In the event that the Proposed Development *is used* to a significant extent – and *displaces low-carbon energy capacity* – a primary adverse impact (in addition to (i)-(iii) above) is a major increase in greenhouse gas emissions resulting from operation of the Proposed Development. Such emissions would significantly undermine the UK's ability to meet its obligations under the Climate Change Act 2008 and the Paris Agreement 2015. This impact is described by the Applicant as remaining "major, permanent, direct and long term" after mitigation.
- f. **The Proposed Development risks creating carbon lock-in effects:** Allowing long-term high-carbon infrastructure such as the Proposed Development to be built risks making the UK's future decarbonisation significantly more difficult and expensive. NPS EN-1 specifically warns against this risk in the strongest terms.
- g. **It is the proper and exclusive role of the planning system to regulate the substantial adverse impacts identified:** Refusing planning consent is the only effective means of avoiding the risks and adverse impacts identified above.

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- h. **Conditions:** If – contrary to our arguments – the Examining Authority is minded to recommend approval of the granting of development consent, we propose that the draft Development Consent Order (dDCO) be amended to include a carbon capture and storage (CCS) condition designed to mitigate the Proposed Development's major climate impacts and redundant infrastructure risks.

### ClientEarth's objection to the Proposed Development

3. ClientEarth objects to the Proposed Development in principle and disagrees with the Applicant that the Proposed Development's balance of public benefits and adverse impacts meets the relevant tests under the applicable legal framework.
4. As set out in more detail below, ClientEarth's objection to the application is primarily due to:
  - a. the lack of need for the Proposed Development; and
  - b. the significant adverse impacts that would occur if the Proposed Development is built, including its major adverse climate impact or alternatively the risk of it becoming redundant infrastructure.

### The legal framework

5. Section 104(3) of the Planning Act 2008 requires the SoS to decide this application for development consent in accordance with the relevant NPSs, unless and to the extent that any of the exceptions under ss 104(4) to (8) apply.
6. Section 104(7) requires that "if the SoS is satisfied that the adverse impact of the proposed development would outweigh its benefits", then that analysis takes precedence over the terms of the relevant NPSs. As the Examining Authority will be aware, it is the statutory scheme rather than the NPS framework that governs the powers and duties of the SoS.
7. The existence of s 104(7) (and the other exceptions under s 104) also recognises that the terms of the NPSs cannot be expected to take account of or anticipate all circumstances and developments that occur after their adoption. Indeed, the energy NPSs are expressly based on "a planning horizon of 2025",<sup>4</sup> while the Applicant assumes that the Proposed Development will operate until at least 2050, with Unit Y commencing operation in 2028.<sup>5</sup>

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<sup>4</sup> EN-1, para 3.3.16.

<sup>5</sup> Environmental Statement, Vol. 1, para 15.4.5 and Table 15-3.

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8. The NPSs of primary and direct relevance to the Proposed Development are EN-1 (the Overarching NPS for Energy) and EN-2 (the Fossil Fuel and Electricity Generating Infrastructure NPS).
9. While there is a presumption in favour of granting consent under the NPSs, that presumption is subject to compliance with the other NPS policies.<sup>6</sup> Moreover, there is no such presumption in the application of the exceptions under s 104 of the Act.

### The assessment required by the NPS framework

10. EN-1 requires that the SoS (i) take into account "the scale and urgency" of each technology's need as set out in EN-1,<sup>7</sup> and (ii) attribute weight to considerations of need "proportionate to the *anticipated extent* of a project's *actual contribution* to satisfying the need for a particular type of infrastructure".<sup>8</sup> EN-1 also requires that the SoS take into account a project's "potential adverse impacts, *including any long-term and cumulative adverse impacts*".<sup>9</sup>
11. EN-2 reiterates the general requirements of EN-1 and emphasises the non-exhaustive nature of the impacts specified in the NPSs, with applicants being required to assess "*all* likely significant effects of their proposals" and the SoS being required in turn to consider "*any* impacts" that are "relevant and important".<sup>10</sup> In this connection, we note that the Applicant describes the Climate Change Act 2008 and the Paris Agreement 2015 as being "of particular relevance to the Proposed Scheme".<sup>11</sup>
12. EN-1 explains (i) that "the Government does not consider it appropriate for planning policy to set targets for or limits on different technologies",<sup>12</sup> (ii) that "the [SoS] does not need ... to assess individual applications in terms of carbon emissions against carbon budgets",<sup>13</sup> and (iii) that "[i]t is not the [SoS]'s role to deliver specific amounts of generating capacity for each technology type."<sup>14</sup> However, none of these statements in EN-1 prevents the SoS (or the Examining Authority) from taking into account the carbon emissions of a proposed development and the development's cumulative impacts in the

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<sup>6</sup> EN-1, para 4.1.2.

<sup>7</sup> EN-1, para 3.1.3.

<sup>8</sup> EN-1, para 3.2.3 (our emphasis).

<sup>9</sup> EN-1, para 4.1.3 (our emphasis). See also EN-1, paras 1.7.3, 4.2.5 and 4.2.6.

<sup>10</sup> EN-2, para 2.4.2 (our emphasis).

<sup>11</sup> Planning Statement, para 4.3.2.

<sup>12</sup> EN-1, para 3.1.2.

<sup>13</sup> EN-1, para 5.2.2.

<sup>14</sup> EN-1, para 3.3.24.

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context of wider energy and climate policy (as required by the NPS framework and under EIA regulations as explained further below<sup>15</sup>):

- a. The first statement simply confirms that planning *policy* such as EN-1 does not set fixed targets or limits on different technologies (allowing the decision maker to assess the need for a proposed development against current developments).
  - b. The second statement simply confirms that the SoS and the Examining Authority are not *required* to assess an individual project's compliance with carbon budgets (the planning system not being formally responsible for delivering or enforcing compliance with carbon budgets), but it does not follow that they cannot take a development's carbon emissions into account as an adverse impact.
  - c. The third statement simply confirms that it is not the SoS's role in deciding whether to grant development consent to "deliver" a certain amount of capacity – as the bringing forward of capacity by operators is out of its control and influenced instead by economic instruments such as the Electricity Market Reform project – but again, this does not alter or affect the SoS's central obligation under EN-1 to assess the "anticipated extent" of a proposed development's "actual contribution" to satisfying need.
13. In view of the above, the approach to decision-making required by the NPS framework can be summarised as follows: the SoS must place substantial weight on the anticipated actual need for a project (taking into account the scale and urgency of the need for the particular type of infrastructure described in the NPSs), while balancing this against any adverse impacts.

### The low scale and urgency of new fossil fuel generation specified in the NPSs

14. On the question of scale and urgency, EN-1 refers to the need for only "some" new fossil fuel generation,<sup>16</sup> and – in contrast to renewable energy<sup>17</sup> and CCS infrastructure<sup>18</sup> – the need for unabated fossil fuel generation is not specified as urgent. The Applicant's Environmental Statement reflects this when it describes a key objective of EN-1 being

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<sup>15</sup> See paras 37-38 below.

<sup>16</sup> EN-1, paras 2.2.23 and 3.6.3.

<sup>17</sup> EN-1, para 3.4.5.

<sup>18</sup> EN-1, para 3.6.8.

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the achievement of "a diverse and reliable mix of fuels and low carbon technologies – renewables, nuclear and fossil fuel plants *fitted with carbon capture and storage*".<sup>19</sup>

15. The Applicant concedes that the Proposed Development does not conform with EN-1's emphasis on the need for low-carbon generation infrastructure, but suggests that the Proposed Development nonetheless "follows the spirit of" EN-1 as it will be carbon capture ready (CCR) should the technology become available and commercially viable.<sup>20</sup> However, this is not possible to reconcile with the clear statement in EN-1 that "until such time as fossil fuel generation can effectively operate with Carbon Capture and Storage (CCS), such power stations will not be low carbon".<sup>21</sup>

16. As the Applicant's Environmental Statement describes, a key objective of EN-1 is also:

[t]o help deliver the UK's obligation to reduce GHG emissions by 80% by 2050 and work to carbon budgets stemming from the Climate Change Act 2008, within the context of the EU Emissions Trading System.<sup>22</sup>

17. The context of the EU Emissions Trading System (ETS) is important because it means that a failure to take domestic action on reducing emissions in the traded sector can substantially increase the UK's costs of compliance with the Climate Change Act. This is recognised by the approach taken by the UK's Committee on Climate Change (CCC):

Under the Climate Change Act, performance against carbon budgets is measured by the net UK carbon account. In practice, this means that the part of the budget for the power sector and energy-intensive industry, which is covered by the EU Emissions Trading System (EU ETS), is based on the UK's share of the EU ETS cap rather than the actual emissions in those sectors. *It is clear that in order to stay on track to the 2050 target in the Act, actual emissions must be reduced. The accounting rules should not be used to mask the real progress to the UK's legal commitment.* Our proposed budget implies a 57% reduction in emissions from 1990 to 2030 on the accounting basis in the Act. *We also identify the cost-effective path for actual emissions across the UK economy (ignoring the allocation of emissions allowances in the EU ETS).* For actual emissions the recommended budget requires a 61% reduction from 1990 to 2030. The larger reduction in actual emissions reflects our

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<sup>19</sup> Environmental Statement, Vol. 1, para 15.2.3 (our emphasis). See also EN-1, para 3.3.4 ("...until such time as fossil fuel generation can effectively operate with Carbon Capture and Storage (CCS), such power stations will not be low carbon").

<sup>20</sup> Planning Statement, para 3.4.7. See also the Applicant's characterisation of the Proposed Development as merely "moving *toward* a more carbon efficient method of producing energy" (Planning Statement, para 5.1.2 (our emphasis)).

<sup>21</sup> Environmental Statement, Vol. 1, para 3.3.4.

<sup>22</sup> Environmental Statement, Vol. 1, para 15.2.3.



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scenarios for the power sector. *Under the cost-effective path the power sector should reach a carbon intensity of below 100 gCO<sub>2</sub>/kWh in 2030.* This would result in emissions in the traded sector of 450 MtCO<sub>2</sub>e across the fifth carbon budget period (a 75% reduction in 1990 levels), lower than the Committee's current best estimate of the allocation of emissions allowances to the UK. *To stay on track to the 2050 target and to support emissions reductions elsewhere in the economy, the power sector will need to reduce emissions at around the rate in our estimate of the cost-effective path.*<sup>23</sup>

18. In summary, the NPS framework prioritises the development of low-carbon electricity generation, and in this context, the SoS and the Examining Authority should consider the extent to which the Proposed Development's greenhouse gas emissions are consistent with the UK's cost-effective decarbonisation pathway (as calculated by the CCC). Indeed, this pathway is set to become only more stringent in line with the UK's obligations under the Paris Agreement.
19. Section 104(4) of the Act also provides that the terms of NPSs should be disregarded to the extent that their application would lead to the UK being in breach of any of its international obligations. EN-1 and EN-2 were adopted in 2011 before the UK became a signatory to the Paris Agreement in 2015.<sup>24</sup> The already high level of priority given to renewable generation over fossil fuel generation by the NPS framework should therefore be increased further to reflect the higher mitigation ambition to which the UK has since committed (i.e. from "no more than" 2 degrees<sup>25</sup> to "well below" 2 degrees while seeking to limit warming to 1.5 degrees<sup>26</sup>).<sup>27</sup> The Government has committed to asking the CCC to advise on "the implications of the Paris Agreement for the UK's long-term emissions

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<sup>23</sup> CCC, The Fifth Carbon Budget – The next step towards a low-carbon economy, pp 115-116 (our emphasis). There is also uncertainty as to the future accounting treatment of 'traded sector' emissions in respect of future carbon budgets, not least in the event that the UK exits the EU ETS upon leaving the EU.

<sup>24</sup> As the Applicant's Planning Statement recognises, the Paris Agreement imposes a legal obligation on the UK to "prepare and maintain nationally determined contributions that it intends to achieve and pursue mitigation measures at a domestic level with a view to achieving the targets of their established contributions" (Planning Statement, para 4.3.7).

<sup>25</sup> See EN-1, para 2.2.8: "To avoid the most dangerous impacts of climate change, the increase in average global temperatures must be kept to no more than 2°C, and that means global emissions must start falling as a matter of urgency."

<sup>26</sup> Paris Agreement 2015, Art. 2(1)(a). The Paris Agreement is referred to as an "overarching commitment by the UK" in the Applicant's Environmental Statement (para 15.2.2).

<sup>27</sup> The Applicant's Planning Statement incorrectly refers to the Paris temperature goal as being "no more than 2 degrees Celsius above pre-industrial levels" rather than "well below 2 degrees" (Planning Statement, para 4.3.4).

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reduction targets".<sup>28</sup> Consistent with this, EN-1 expressly recognises the principle of keeping step with increasing ambition when it states that new fossil fuel generation "must be constructed, and operate, in line with increasingly demanding climate change goals".<sup>29</sup> However, in stark contrast, the Applicant chooses to rely on a scenario where carbon budgets may be "revised *upwards*".<sup>30</sup>

## The application of s 104(7) of the Act

20. The main difference between the assessment required by the NPS framework and that required by s 104(7) of the Act is that s 104(7) does not place substantial weight on the need for the infrastructure in question. Instead, s 104(7) requires a weighing of public benefits and impacts in general terms and without special weight being attributed to specific factors.
21. In the present case, the requirement in the NPS framework to give substantial weight to anticipated actual contributions to need is of no practical effect given the lack of any need for the Proposed Development. As discussed above, it is also the case that fossil fuel generation without CCS is given low priority by the NPS framework and that s 104(4) requires this level of priority to be decreased further due to the UK's international climate change obligations. Nonetheless, if the Examining Authority or the SoS assesses – contrary to our arguments – that there is a material need for the Proposed Development, this must also be balanced on an unweighted basis against the Proposed Development's adverse impacts under s 104(7). If the Proposed Development's adverse impacts outweigh its benefits to the public then consent should be refused (or be made subject to adequate conditions), irrespective of the assessment under the NPS framework.

## The clear lack of need for the Proposed Development

22. In respect of the Proposed Development's actual contribution to satisfying the need for gas generation, current BEIS projections show that there is no need for further new gas generation capacity given the amount of capacity that has already received development consent. Specifically, while 15GW of new gas generation has planning consent,<sup>31</sup> BEIS

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<sup>28</sup> <https://www.reuters.com/article/us-britain-climatechange/britain-to-review-its-climate-targets-government-minister-idUSKBN1HO1DU> (17 April 2018).

<sup>29</sup> EN-1, para 3.6.1.

<sup>30</sup> Planning Statement, para 3.3.10 (our emphasis). This reference to UK carbon budgets being revised upwards is also misconceived as it refers to the possible adjustment to the 4th Carbon Budget that was contemplated in 2012 due to a one-off concern of inconsistency with the UK's allocation under the EU ETS; no such revision is contemplated currently.

<sup>31</sup> See para 25 below. The Planning Inspectorate's guidance on considering "other developments" as part of the NSIP process defines "Tier 1" developments that should be considered to the highest level of detail as those "under construction; permitted application(s), whether under the PA2008 or other regimes, but not

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projects only 6GW of new gas generation capacity being built through to 2035 in line with current policies:<sup>32</sup>

### BEIS 2017 Updated Energy & Emissions Projections

v1.0 21-Nov-2017

#### Reference Scenario

#### Scenario Assumptions:

Fossil Fuel Prices	Reference
Economic Growth	Reference
Policies	Reference

#### Cumulative new build for all power producers<sup>1,2</sup>

##### GW

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Coal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal and natural gas CCS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Oil	0	0	0	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
Natural gas	0	1	2	2	4	4	4	4	5	5	5	5	5	5	6	6	6	6	6
Nuclear	0	0	0	0	0	0	0	0	2	3	3	5	7	7	8	10	10	12	13
Other Thermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Renewables	4	7	8	10	12	15	16	19	21	22	25	28	30	31	33	37	40	42	45
Interconnectors	0	0	1	1	3	6	10	14	14	14	14	14	14	14	14	14	14	14	15
Storage	0	0	0	0	1	1	1	1	1	1	1	1	2	3	4	5	6	7	8
<b>Total cumulative new build</b>	<b>4</b>	<b>8</b>	<b>12</b>	<b>14</b>	<b>20</b>	<b>26</b>	<b>32</b>	<b>38</b>	<b>43</b>	<b>48</b>	<b>51</b>	<b>56</b>	<b>61</b>	<b>63</b>	<b>68</b>	<b>74</b>	<b>79</b>	<b>84</b>	<b>91</b>

#### Notes

1 This covers all new capacity including autogeneration. The latter is defined as in section 1.33 and 1.34 of the Digest of UK Energy Statistics. See: <https://www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes>

2 These are net capacities after allowing for plant own use (but before allowing for derating, e.g. of wind plants).

Any enquiries regarding this publication should be sent to us at [emissionsprojections@beis.gov.uk](mailto:emissionsprojections@beis.gov.uk).

23. Approving the present application would take the total new capacity with planning consent to over 18GW and therefore over three times BEIS's projections.

24. The Applicant appears to acknowledge the relevance of BEIS's projections and the need to take into account current planned capacity; however, they choose to refer to "previous", out of date projections – from 2012 – rather than current projections:

Previous modelling undertaken by the former DECC (now BEIS) suggested that up to 26 Gigawatts (GW) of new gas plant could be required by 2030 (in part to replace

yet implemented; [and] submitted application(s) whether under the PA2008 or other regimes but not yet determined." (Planning Inspectorate, Advice note seventeen: Cumulative effects assessment relevant to nationally significant infrastructure projects, December 2015, Table 3).

<sup>32</sup> BEIS, 2017 Updated Energy & Emissions Projections, 21 November 2017 (published 2 January 2018), Annex K: Total cumulative new electricity generating capacity (Reference scenario) (available at: <https://www.gov.uk/government/publications/updated-energy-and-emissions-projections-2017>). The BEIS scenario that envisages the highest need for new-build gas-fired generation capacity – the 'High Fossil Fuel Price Scenario' – envisages only 10GW of new gas capacity through to 2035 (see Annex 1).

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older coal, gas and nuclear plant as it retires from the system) (page 14 of the Gas Generation Strategy 2012).<sup>33</sup>

25. The 15GW of capacity comprises the following CCGT plants that bid for 15-year contracts in the last capacity auction, plus the 2.5GW at Eggborough which has since been granted planning consent.<sup>34</sup>

Project Name	Developer	Capacity (MW)
Trafford Power CCGT	Carlton Power	1800
Damhead Creek 2 CCGT	Scottish Power	1730
Knottingley Unit 1+2	ESB	1658
Thorpe Marsh CCGT	Carlton Power	1600
Willington C CCGT	Calon Energy Limited	1530
Gateway Energy Centre	InterGen	1217
Keadby 2	SSE Generation Limited	852
King's Lynn B	EP UK Investments Ltd	844
Spalding Energy Expansion	InterGen	530
C.GEN Killingholme	C.GEN SA	522

26. BEIS's forecasts are also supported by analysis from energy and climate policy experts. Modelling by Sandbag shows that the UK does not need *any* new CCGT.<sup>35</sup> Because of the influx of renewables, the remaining required capacity is needed only at a low load factor, which is met well by storage, demand response and interconnection.<sup>36</sup> So far no large CCGT plants have been granted a 15-year contract, and storage, demand response and interconnection are expected to undercut new CCGT.<sup>37</sup> In addition, the study finds that even older CCGT plants needing refurbishment are likely to undercut new CCGT in the auction.<sup>38</sup> Similarly, recent research from Aurora Energy suggests that there is a need for between only 1 GW and 4 GW of new build gas from 2017 to 2030:<sup>39</sup>

<sup>33</sup> Planning Statement, para 3.3.10.

<sup>34</sup> See WWF / Sandbag, [Coal To Clean – How the UK phased out coal without a dash for gas](#), p. 10.

<sup>35</sup> WWF / Sandbag, [Coal To Clean – How the UK phased out coal without a dash for gas](#), May 2018.

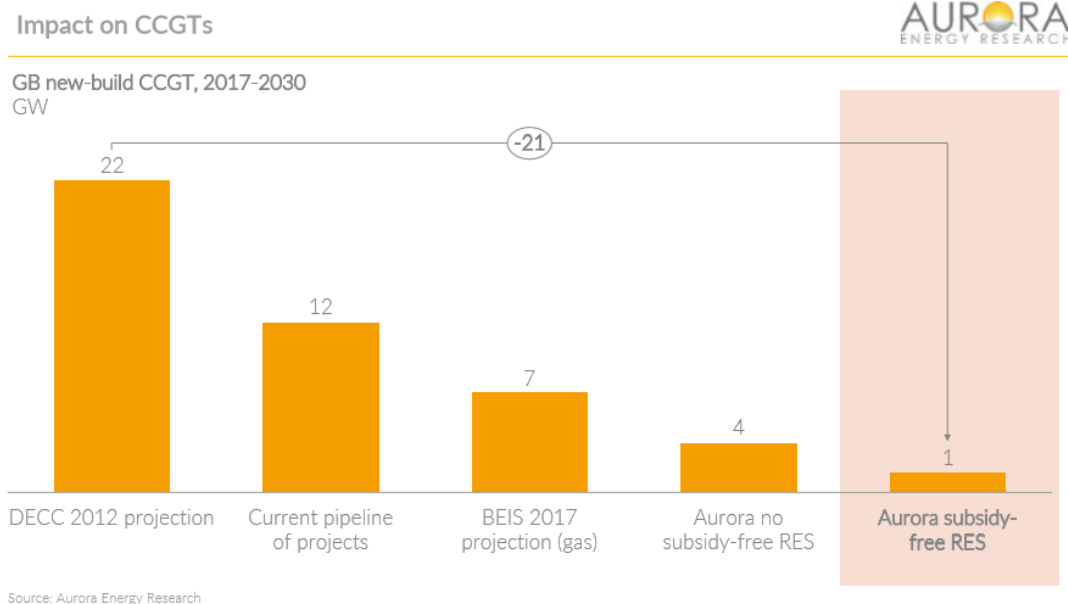
<sup>36</sup> WWF / Sandbag, [Coal To Clean – How the UK phased out coal without a dash for gas](#), pp 14-18.

<sup>37</sup> WWF / Sandbag, [Coal To Clean – How the UK phased out coal without a dash for gas](#), p. 27.

<sup>38</sup> WWF / Sandbag, [Coal To Clean – How the UK phased out coal without a dash for gas](#), p. 35.

<sup>39</sup> Aurora Energy Research, [Aurora Spring Forum 2018 Highlights](#).

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27. This analysis underscores the dramatic gap between the amount of capacity that has already been granted development consent and the amount of new gas capacity that the UK will need in the future. The maturing of storage technology is one reason for this: currently 7GW of electricity storage projects have applied for planning consent.<sup>40</sup>

### The lack of any public benefit resulting from the Proposed Development

28. As already explained, there is no need for the Proposed Development given (i) the projected future need for new gas generation capacity, and (ii) the amount of new gas generation capacity that has already been granted development consent. The Proposed Development will therefore either be redundant infrastructure or displace capacity that would be provided by other infrastructure, be it other gas capacity or clean renewable capacity.

29. The gross benefit to the public in terms of security of supply or employment of the Proposed Development (*i.e. before netting against adverse impacts*) can therefore be expected to be at best marginal and quite possibly non-existent. Moreover:

- a. In respect of employment, (i) the Environmental Statement states that during operation of the Proposed Development there will be a "limited *reduction* overall in staffing levels" (which assumes that the Proposed Development will operate for

<sup>40</sup> <https://www.renewableuk.com/news/425522/Energy-storage-capacity-set-to-soar-300-UK-based-companies-involved-in-new-sector.htm>

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a significant period and does not take into account the risk of the Proposed Development reducing employment in any energy supply that it displaces),<sup>41</sup> and (ii) the decommissioning of Units 5 and 6 (a true baseline scenario as explained below) would create jobs in the same way that the construction of the Proposed Development would.<sup>42</sup> In this context, the current Selby District Core Strategy Local Plan emphasises "that the shift to a low carbon economy will bring huge business opportunities" and that "[l]ocal businesses are increasingly becoming associated with the low carbon sector including both renewable energy production as well as training and skills."<sup>43</sup>

- b. The Applicant's claim that the Proposed Development will result in "net gain of habitats" does not take into account the much more likely baseline scenario in which Units 5 and 6 are decommissioned.<sup>44</sup>

## The significant adverse impacts resulting from the Proposed Development

30. On the other hand, the adverse impacts caused by the Proposed Development are various and significant, as acknowledged in the Applicant's Environmental Statement.<sup>45</sup>

31. In the event that the Proposed Development is constructed but *not used* to any significant extent – or is used and *displaces other existing gas-fired capacity* – the development's adverse impacts include:

- a. Biodiversity loss – alteration, degradation or destruction of linear habitats as a result of construction of the Proposed Development with no certainty of their rehabilitation;<sup>46</sup>

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<sup>41</sup> Environmental Statement – Non-Technical Summary, para 14.5.2 (our emphasis).

<sup>42</sup> See, e.g., Planning Statement, para 7.2.6.

<sup>43</sup> Selby District Core Strategy Local Plan, 22 October 2013, para 6.33. The Applicant's Planning Statement includes an incorrect and misleading citation of the Selby Local Plan: at para 4.2.13, the Applicant quotes the Plan as stating that Drax Power Station has "the potential for future development of renewable and local carbon energy", whereas this should read "the potential for future development of renewable and *low* carbon energy".

<sup>44</sup> Planning Statement, para 7.4.5.

<sup>45</sup> See, e.g., Environmental Statement – Non-Technical Summary, para 18.1.3.

<sup>46</sup> Planning Statement, para 7.3.7 ("The Proposed Scheme would result in a net loss for biodiversity for linear habitats. However, following construction, measures in the Landscape and Biodiversity Strategy would aim to deliver net gain for biodiversity of linear habitats by restoring these within the footprint of the Proposed Scheme where possible.")



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- b. Noise and vibration – disturbance and nuisance from noise generated by construction activities;<sup>47</sup>
- c. Increased local traffic and transport disruption – nuisance, delay and disruption to users of the local road network caused by traffic during construction and operation phases;<sup>48</sup> and
- d. Public subsidy / decommissioning cost risk – if the Proposed Development is built but not commercially viable, the public may be forced to bear: (i) the cost of subsidising the Proposed Development's operation, and / or (ii) the cost of decommissioning the site. If the Proposed Development is used to a significant extent but displaces other gas-fired capacity, the same risks would apply in respect of the displaced infrastructure.

32. In the event that the Proposed Development *is used* to a significant extent – and *displaces low-carbon energy capacity* – a primary adverse impact (in addition to (a)-(c) above) is a major increase in greenhouse gas emissions resulting from operation of the Proposed Development. As the Applicant's Environmental Statement acknowledges:

It should be noted that the Government projects a major reduction in the GHG intensity for average UK grid electricity over the coming years meaning that by 2050 the Proposed Scheme will be significantly less 'clean' (higher GHG intensity) than the UK average which will by then be dominated by renewable generation.

...

Although the Proposed Scheme generates much 'cleaner' electricity than the baseline scenario, it also increases generation capacity from 1,320 MW to 3,600 MW; a 173% increase. For this reason, the total direct GHG emissions related to electricity generation at the Existing Drax Power Station Complex between 2020 and 2050 are 90% higher for the Proposed Scheme than the baseline scenario. Focussing on the direct GHG emissions from generation of electricity at the Existing Drax Power Station Complex, the Proposed Scheme therefore results in a significant negative effect on climate.<sup>49</sup>

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<sup>47</sup> See, e.g., Environmental Statement, Table 7-16.

<sup>48</sup> See, e.g., Environmental Statement, Table 5-56. The Environmental Statement states that Stage 3 transport impacts are "[n]ot [a]ssessed as effects will be no greater than Stage 1 or 2 considered to be the worst case scenario"; however, this fails to address the ongoing transport disruption caused by the ongoing operation of the Proposed Development against an appropriate baseline of decommissioning.

<sup>49</sup> Environmental Statement, Vol. 1, paras 15.6.13 and 15.6.15. See also Environmental Statement, Vol. 1, para 15.4.14 ("In the case of GHG emissions, their contribution to global warming and climate change (and

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33. The Applicant categorises the Proposed Development's emissions impact and its contribution climate change (*after* any mitigation) as "major, permanent, direct and long term".<sup>50</sup> "Major" impacts are defined as impacts that "give[ ] rise to *serious concern*" and that "should be considered as *unacceptable*".<sup>51</sup> This does not seem possible to square with the Applicant's statements (i) that only "*limited harm*" will result from the Proposed Development,<sup>52</sup> (ii) that the "negative impacts ... are considered to be *acceptable in planning terms*",<sup>53</sup> and (iii) that:

[t]he draft DCO includes appropriate requirements that would control the detailed design of the Proposed Scheme and its construction and operation in order to ensure that it accords with the EIA undertaken and *does not result in unacceptable effects*.<sup>54</sup>

34. As the Applicant recognises, the project would have significant negative impacts when compared against partially abated coal-fired generation – but when compared against the low-carbon generation that the project risks displacing, the adverse effect on climate is vastly worse.

35. In this context, the baseline used by the Applicant is misleading. While it envisages either coal-fired generation continuing with greenhouse gas emissions partially abated (at the Government's proposed emissions intensity limit of 450 gCO<sub>2</sub>/kWh) from 2025 until 2050 or that "equivalent generation capacity will be provided elsewhere on the grid, at the same emissions intensity",<sup>55</sup> neither of these scenarios are realistic or evidence-based:

- a. Firstly, there is no evidence that coal-fired generation can be achieved economically at an emissions intensity of below 450 gCO<sub>2</sub>/kWh in accordance with the Government's planned coal phase-out from 2025.<sup>56</sup> The Applicant acknowledges that producing energy at such an emissions intensity would not be consistent with planning policy<sup>57</sup> and only goes as far as saying that it would be

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the consequent impacts on human and natural receptors) is the same wherever and whenever those emission occur i.e. the sensitivity of receptors does not vary and the significance of effects is determined solely by the magnitude of GHG emissions.").

<sup>50</sup> Environmental Statement, Vol. 1, p. 18-23.

<sup>51</sup> Environmental Statement, Vol. 1, para 2.1.5 (our emphasis).

<sup>52</sup> Planning Statement, para 8.1.8 (our emphasis).

<sup>53</sup> Planning Statement, para 7.3.8 (our emphasis).

<sup>54</sup> Planning Statement, para 8.1.4 (our emphasis).

<sup>55</sup> Environmental Statement, Vol. 1, para 15.5.6.

<sup>56</sup> See, e.g., BEIS, [Implementing the end of unabated coal by 2025: government response to unabated coal closure consultation](#), January 2018. This policy was also confirmed in the Government's [Clean Growth Strategy](#) (2017), p. 99.

<sup>57</sup> Environmental Statement, Vol. 1, para 4.2.3.



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"technically possible".<sup>58</sup> At the Open Floor Hearing on 4 October 2018, the Applicant suggested tentatively that this scenario relies on the use of CCS technology but is yet to confirm this.<sup>59</sup> CCS is a technology that BEIS does not envisage beginning to be commercially viable until 2035 at the earliest.<sup>60</sup> If instead the intention is to meet this emissions limit by co-firing coal with biomass, there is no evidence that this would be economic, not least given that there are no subsidies available (or planned) for such co-firing.<sup>61</sup>

- b. Secondly, there is no reason why the closure of Units 5 and 6 would lead to their capacity being displaced by capacity with an emissions intensity of 450 gCO<sub>2</sub>/kWh; as the Applicant acknowledges, there will be "a major reduction in the GHG intensity for average UK grid electricity over the coming years", and this means that it is more appropriate to assume that any replacement capacity is consistent with such a scenario. This is also supported by BEIS's projections as well as Aurora and Sandbag's analysis. Even as things stand, the baseline far exceeds the average emissions intensity of the UK grid in 2017, which stood at 292 gCO<sub>2</sub>/kWh.<sup>62</sup> The CCC's cost-effective path for the UK power sector requires reaching a carbon intensity of "below 100 gCO<sub>2</sub>/kWh in 2030",

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<sup>58</sup> Environmental Statement, Vol. 1, para 4.2.8.

<sup>59</sup> In response to a question at the Open Floor Hearing, the Applicant stated that it would clarify by way of a written response the extent to which its baseline in the Environmental Statement relies on CCS.

<sup>60</sup> BEIS, 2017 Updated Energy & Emissions Projections, 21 November 2017 (published 2 January 2018), Annex K: Total cumulative new electricity generating capacity (see Annex 1).

<sup>61</sup> See, e.g., Department of Energy and Climate Change (DECC), Electricity Market Reform: Contract for Difference - Allocation Methodology for Renewable Generation, 5 August 2013, p. 35 ("Biomass Co-firing. *We are not offering CfDs for co-firing plants because, as outlined in the Renewables Obligation Banding Review Government Response, our preference is for full biomass conversions. Conversions are more sustainable and provide higher levels of renewable generation. Significant support for biomass co-firing under CfDs could potentially destabilise the plans for those seeking to make full unit or plant conversions.*" (our emphasis)); BEIS, Consultation on Controlling the Costs of Biomass Conversion and Co-firing under the Renewables Obligation, September 2017, para 1.16 ("Since the deployment of the earliest biomass conversion projects, UK electricity generation has become less carbon-intensive. Coal power stations are reaching the end of their working lives and the Government recently consulted on proposals to close unabated coal generation by 2025. *In parallel, other renewable generation technologies have matured to the point where they can be deployed reliably at large scale, and they are becoming increasingly affordable. When compared with these technologies, carbon savings from biomass conversion or co-firing are low or non-existent, and the cost of any savings is high.*" (our emphasis)). See also BEIS, Contracts for Difference: An explanation of the methodology used to set administrative CFD strike prices for the next CFD allocation round, November 2016.

<sup>62</sup> <http://electricityinfo.org/real-time-british-electricity-supply/> – note that this excludes "embedded generation" such as solar and wind connected to distribution rather than transmission networks, likely giving a higher intensity level than if such generation were included.

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i.e. significantly lower than the baseline emissions intensity and the Proposed Development's emissions intensity of 380 gCO<sub>2</sub>/kWh.<sup>63</sup> The Government's recent Clean Growth Strategy goes even further than this stating that carbon emissions from the power sector will need to be 16MT per year by 2032, implying an emissions intensity of approximately 50 gCO<sub>2</sub>/kWh (assuming annual UK demand remains at approximately 320TWh).<sup>64</sup> The Government also plans to have 85% of UK power coming from low carbon sources ("such as renewables and nuclear") by 2032,<sup>65</sup> and in all three of its 2050 scenarios, 99% of electricity generated would be low carbon.<sup>66</sup> In view of all this, the same flaw also applies to the Applicant's argument that the Proposed Development may lead to "indirect reductions in GHG emissions (at the wider National level)" due to "the additional electricity generation capacity provided by the Proposed Scheme", which assumes that this additional electricity generation cannot be delivered by lower carbon energy sources.<sup>67</sup>

36. The only way that such an impact could be avoided would be through effective and viable CCS technology being deployed. However, as mentioned, BEIS projections do not envisage this technology being used until 2035 at the earliest.<sup>68</sup> The Applicant itself also does not assume that CCS will become viable during the operational life of the Proposed Development.<sup>69</sup> Without CCS, the CCC has advised that to meet the UK's current 2050 emissions reduction target under the Climate Change Act 2008 "gas would cease to be used for electricity generation by the mid-2030s".<sup>70</sup>

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<sup>63</sup> CCC, The Fifth Carbon Budget – The next step towards a low-carbon economy, November 2015, p. 115. (See also p. 116: "To stay on track to the 2050 target and to support emissions reductions elsewhere in the economy, the power sector will need to reduce emissions at around the rate in our estimate of the cost-effective path. In line with our approach to date, the Committee will continue to assess progress towards carbon budgets and the 2050 target on the basis of both the net carbon account and actual emissions across the economy.")

<sup>64</sup> BEIS, Clean Growth Strategy (2017), p. 95.

<sup>65</sup> BEIS, Clean Growth Strategy (2017), pp 96, 122 and 142.

<sup>66</sup> BEIS, Clean Growth Strategy (2017), p. 152.

<sup>67</sup> Environmental Statement, Vol. 1, para 15.8.7.

<sup>68</sup> BEIS, 2017 Updated Energy & Emissions Projections, 21 November 2017 (published 2 January 2018), Annex K: Total cumulative new electricity generating capacity (see Annex 1).

<sup>69</sup> Planning Statement, para 7.2.5 ("The Proposed Scheme has been designed to be CCR and thus has the potential to lower its carbon dioxide emissions even further *should CCS become viable*." (our emphasis)).

<sup>70</sup> CCC, Onshore Petroleum – The compatibility of UK onshore petroleum with meeting the UK's carbon budgets, March 2016, p. 9. As discussed above, emissions in the traded sector are relevant to the UK's ability to comply with the Climate Change Act targets despite their being carved out of the accounting framework. This is because a failure to reduce actual emissions in line with the cost-effective path risks the

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37. The failure to apply a reasonable baseline violates the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. These require that Environmental Statements be prepared in accordance with Schedule 4 of the Regulations,<sup>71</sup> which requires the use of a baseline scenario that reflects "the *likely evolution* ... of the current state of the environment ... without implementation of the development as far as natural changes from the baseline scenario can be assessed *with reasonable effort* on the basis of the *availability of environmental information and scientific knowledge*".<sup>72</sup>
38. The Applicant's failure to conduct a cumulative assessment of the Proposed Development's climate effects (including transboundary effects) also contravenes the applicable EIA regulations as well as the NPS framework.<sup>73</sup> Contrary to the Applicant's assertion,<sup>74</sup> the fact that cumulative climate effects are (inherently) not restricted to the local level does not relieve the Applicant of these requirements.<sup>75</sup>
39. Finally, the increased risk of upstream methane leakage resulting from potentially increased production and transmission of gas brought about by the Proposed

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UK (and plant operators) incurring unacceptably high costs when purchasing emissions credits in an increasingly scarce market. See fn 83 below.

<sup>71</sup> The Town and Country Planning (Environmental Impact Assessment) Regulations 2017, reg. 18.

<sup>72</sup> The Town and Country Planning (Environmental Impact Assessment) Regulations 2017, Sch. 4, para 3 (our emphasis). See also Scoping Opinion, para 3.3.7.

<sup>73</sup> See, e.g., EN-1, paras 4.2.5 and 4.2.6 ("When considering cumulative effects, the ES should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been sought or granted, as well as those already in existence). ... The [SoS] should consider how the accumulation of, and interrelationship between, effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place.")

<sup>74</sup> Environmental Statement, Vol. 1, para 17.12.5 ("Cumulative effects are not considered under the topic of Climate as GHG emissions are not restricted to a geographical area and are considered on a national level.")

<sup>75</sup> The Town and Country Planning (Environmental Impact Assessment) Regulations 2017, Sch. 4, para 5 ("A description of the likely significant effects of the development on the environment resulting from, inter alia: ... (e) the cumulation of effects with other *existing and/or approved projects* ...; (f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) ...." (our emphasis)). See also, Planning Inspectorate, Advice note seventeen: Cumulative effects assessment relevant to nationally significant infrastructure projects, December 2015, para 2.1 ("*The scale and nature of NSIPs will typically dictate a broad spatial and temporal zone of influence (ZOI) for an NSIP, resulting in an often complex CEA process. There may be considerable variation in the approach to the identification and assessment of 'other development' as part of the CEA process.*" (our emphasis).) This guidance was published before an express requirement to consider a proposed development's climate impacts was introduced under the EIA regulations (coming into force on 16 May 2017).

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Development remains irrespective of whether CCS becomes viable; such leakage currently amounts to approximately 7% of all methane emissions in the UK.<sup>76</sup>

40. In summary, the significant emissions and high emissions intensity that would be generated by the Proposed Development are not consistent with the UK's cost-effective pathway to meeting its domestic and international emissions reduction obligations (particularly as these can be expected to become increasingly stringent over the development's operating life). Unless the Proposed Development becomes redundant or forces the early retirement of existing equivalent infrastructure,<sup>77</sup> it will displace significant amounts of low-carbon energy generation and thereby significantly increase the risk of the UK being unable to meet its emissions targets.

### **Carbon lock-in risk – why allowing this high-carbon infrastructure to be built increases the costs and barriers to meeting the UK's climate targets**

41. The risk of carbon lock-in presented by high-carbon infrastructure such as the Proposed Development is a risk that EN-1 specifically warns against in the strongest terms:

A failure to decarbonise and diversify our energy sources now could result in the UK becoming locked into a system of high carbon generation, which would make it very difficult and expensive to meet our 2050 carbon reduction target. *We cannot afford for this to happen.*<sup>78</sup>

42. The Department for International Development (DFID) has published guidance on carbon lock-in risk. It explains how the building of a piece of high-carbon infrastructure with a long operating life can create a set of incentives (or a 'path dependency') that is both difficult and expensive to correct. In the context of carbon-intensive infrastructure, the guidance identifies two key categories of lock-in risk.<sup>79</sup>

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<sup>76</sup> Oxford Institute for Energy Studies, [Methane Emissions: from blind spot to spotlight](#), July 2018, p. 33; see also BEIS, [2016 UK greenhouse gas emissions: final figures - data tables](#), 29 March 2018, Table 5 (Exploration, production and transport of gas) (available at: <https://www.gov.uk/government/statistics/final-uk-greenhouse-gas-emissions-national-statistics-1990-2016>).

<sup>77</sup> Leading to a variety of unnecessary negative impacts, as discussed above at para 30.

<sup>78</sup> EN-1, para 3.3.16 (our emphasis). See also Christiana Figueres, [Transforming growth: Climate policy today for a sustainable tomorrow](#), Grantham Institute Annual Lecture, 11 April 2016 ("Every investment we make today has an emissions lock-in. The quality of investment today equals the quality of energy tomorrow and our quality of life forever.").

<sup>79</sup> Economic Consulting Associates (commissioned by the Department for International Development), [Carbon lock-in toolkit](#), February 2015, pp 3-4.

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- a. "asset lock-in", which arises "when investments are made in relatively long-lived capital intensive technologies, infrastructure and processes, with little flexibility to switch to alternatives at an acceptable cost"; and
- b. "institutional lock-in", which arises "when a pathway creates strong interest groups that, once established, will be harmed in some way by a move away from a given suboptimal path. The 'harm' will not always be economic harm, but may simply be the disruption of an established and comfortable pattern of life or the creation of uncertainties."

43. In a separate context concerning a called-in coal mine application,<sup>80</sup> a Planning Inspector recently emphasised the importance of taking a precautionary approach to approving fossil fuel projects due to the risk of locking in future emissions (an approach that was approved by the Secretary of State for Housing, Communities and Local Government and cited as a primary reason for refusing consent to the development<sup>81</sup>):

C115. The extraction, processing and combustion of up to 3 Mt of coal would result in significant emissions of GHG, albeit probably less than would result from using the same quantity of imported coal. But in assessing this application I do not consider that the argument that imported coal would substitute for Highthorn coal if the application was refused should hold sway. *In this scenario there would be some uncertainty about what might replace the energy that would have been generated from Highthorn coal, possibly resulting in a different level of GHG emissions. Whereas if the application was approved and the permission implemented there is much more certainty about the likely GHG emissions that would result.* I find that GHG emissions from the proposed development would adversely impact upon measures to limit climate change. Most of the GHG would be emitted in the short term, resulting in an adverse effect of substantial significance, reducing to minor

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<sup>80</sup> [A called-in planning application relating to a proposed coal mine in Druridge Bay](https://www.gov.uk/government/publications/called-in-decision-land-at-highthorn-widdrington-northumberland-ne61-6ee-ref-3158266-23-march-2018), 22 March 2018 (available at: <https://www.gov.uk/government/publications/called-in-decision-land-at-highthorn-widdrington-northumberland-ne61-6ee-ref-3158266-23-march-2018>).

<sup>81</sup> [Called-in decision: land at Highthorn, Widdrington, Northumberland \(ref: 3158266 - March 2018\)](#), p. 7 ("The Secretary of State has given careful consideration to the Inspector's analysis at IRC112-C115. For the reasons given he agrees that Green House Gas (GHG) emissions from the proposed development would adversely impact upon measures to limit climate change. He further agrees that most of the GHG emissions would be emitted in the short term, resulting in an adverse effect of substantial significance, reducing to minor significance in the medium term; and that Green House Gas emissions in the long term would be negligible, but that the effects of carbon in the atmosphere would have a cumulative effect in the long term (IR115). Given that cumulative effect, and the importance to which the Government affords combatting climate change, he concludes that overall the scheme would have an adverse effect on Green House Gas emissions and climate change of very substantial significance, which he gives very considerable weight in the planning balance.").



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significance in the medium term. GHG emissions in the long term would be negligible, but given that the effects of carbon in the atmosphere would have a cumulative effect in the long term, I consider that overall the scheme would have an adverse effect on GHG emissions and climate change of substantial significance, which should be given considerable weight in the planning balance.<sup>82</sup>

44. Allowing the Proposed Development to be built – in a context where planned gas-fired capacity far exceeds the expected need and the power sector's cost-effective decarbonisation pathway – risks undermining the UK's ability to meet its domestic climate targets and its obligations under the Paris Agreement due to carbon lock-in. Specifically, it risks dramatically increasing the cost of meeting such obligations as (i) emissions trading credits will need to be purchased in an increasingly scarce international market,<sup>83</sup> or (ii) assets will need to be decommissioned before investment costs are recovered and stakeholders reliant on such infrastructure will need to be given acceptable routes out of such reliance. Such costs may prove too high in terms of political acceptability leading to non-compliance. To borrow the words used by the Inspector above, if the application for development consent is approved "there is much more certainty about the likely GHG emissions that would result" than in the scenario where the application is refused.

### **It is not possible to rely on other regulation to prevent the Proposed Development's risks and adverse impacts**

45. Refusing consent through the planning system is the only effective means of avoiding the risks and adverse impacts identified above. Once planning consent is issued, there is no regulatory mechanism that can prevent a plant being built. The recent commitment by

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<sup>82</sup> Called-in decision: land at Highthorn, Widdrington, Northumberland (ref: 3158266 - March 2018), p. 144 (our emphasis).

<sup>83</sup> Recent analysis from Carbon Tracker suggests that ETS prices are already starting to rise dramatically in anticipation of a reduction in available credits (<https://www.carbontracker.org/reports/carbon-countdown/>). RWE's recently announced decision not to proceed to apply for planning permission in respect of its proposed CCGT plant due to "current market conditions and project costs" also supports the view that new-build gas generation does not make long-term economic sense (<https://www.group.rwe/en/innovation-and-knowledge/innovation-and-technology/project-proposals/tilbury#>). See also <https://af.reuters.com/article/commoditiesNews/idAFL8N1XG5EM> (5 November 2018) ("High wholesale gas and carbon permit prices have led to weakening economics for gas-fired power stations."). Although, as explained below in relation to Keadby 2, it is not possible to rely on market mechanisms such as the Capacity Market or the ETS to prevent a plant that has received development consent from being built.

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SSE to build the Keadby 2 CCGT power station irrespective of whether it secures a Capacity Market contract illustrates this.<sup>84</sup>

46. As EN-1 acknowledges, the planning system represents a key regulatory control on the use of land:

The planning system controls the development and use of land in the public interest. It plays a key role in protecting and improving the natural environment, public health and safety, and amenity, for example by attaching conditions to allow developments which would otherwise not be environmentally acceptable to proceed, and preventing harmful development which cannot be made acceptable even through conditions. ... In considering an application for development consent, the IPC should focus on whether the development itself is an acceptable use of the land, and on the impacts of that use ...<sup>85</sup>

47. It is not possible to rely on other regulatory controls to assess the acceptability of the Proposed Development itself in light of the adverse impacts resulting from its construction and operation.

### **The Proposed Development should not be granted development consent whether under the NPSs or under s 104(7) of the Act**

48. In conclusion, development consent should be refused for the Proposed Development, whether on the basis of the terms of the NPS framework or on the basis of its failure to provide a net benefit to the public.
49. Consent should be refused under the NPS framework as there are various significant impacts that clearly outweigh the need for the Proposed Development. As there is no need for the Proposed Development, giving substantial weight to such need in the planning balance does not affect this analysis. Moreover, the carbon lock-in risk posed by the Proposed Development is one that the NPS framework specifically seeks to counter and guard against.
50. If – contrary to our arguments – the Examining Authority were to interpret the NPS framework as supporting the granting of consent for the Proposed Development, s 104(7) of the Act requires in any event that the terms of the NPSs be disregarded and for consent to be refused. This is because, in general terms and disregarding the specific

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<sup>84</sup> See, e.g., [https://www.siemens.com/press/en/pressrelease/?press=en/pressrelease/2018/power-gas/pr2018060209pgen.htm&content\[\]=PG](https://www.siemens.com/press/en/pressrelease/?press=en/pressrelease/2018/power-gas/pr2018060209pgen.htm&content[]=PG) (5 June 2018) ("The decision to build Keadby 2 continues without SSE securing a capacity contract in the 2018 Capacity Auction, testament to the company's commitment to the project and trust in the technology Siemens can deliver.")

<sup>85</sup> EN-1, paras 4.10.2 and 4.10.3.

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policies in the NPSs, the Proposed Development's impacts outweigh its benefits. In its Planning Statement, the Applicant concludes that "on balance, the likely benefits of the Proposed Scheme significantly outweigh any potential adverse impacts of the Proposed Scheme",<sup>86</sup> without explaining how major adverse impacts such as climate are outweighed, having acknowledged elsewhere that such impacts exist.<sup>87</sup>

## Conditions to the DCO

51. If – contrary to our arguments – the Examining Authority is minded to recommend approval of the granting of development consent, we propose that the DCO be amended to include the following condition designed to mitigate the Proposed Development's major climate impacts and redundant infrastructure risks:

that carbon capture and storage technology (with a CO<sub>2</sub> mitigation rate of at least 90% at all times) be installed and used on Units X and Y at all times of operation.

52. In accordance with paragraph 4.1.7 of EN-1, such a condition would be "necessary, relevant to planning, relevant to the development to be consented" given the Proposed Development's major adverse climate effects, as well as being "enforceable, precise, and reasonable in all other respects".

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<sup>86</sup> Planning Statement, para 7.4.5.

<sup>87</sup> See, e.g., Environmental Statement, Vol. 1, p. 18-23 and paras 15.6.13 and 15.6.15; Environmental Statement – Non-Technical Summary, para 18.1.3.



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## Annex 1 – BEIS Energy & Emissions Projections (November 2017)

### Reference Scenario

#### BEIS 2017 Updated Energy & Emissions Projections

v1.0 21-Nov-2017

##### Reference Scenario

###### Scenario Assumptions:

Fossil Fuel Prices	Reference
Economic Growth	Reference
Policies	Reference

#### Cumulative new build for all power producers<sup>1,2</sup>

##### GW

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Coal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal and natural gas CCS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Oil	0	0	0	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
Natural gas	0	1	2	2	4	4	4	4	5	5	5	5	5	5	6	6	6	6	6
Nuclear	0	0	0	0	0	0	0	0	2	3	3	5	7	7	8	10	10	12	13
Other Thermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Renewables	4	7	8	10	12	15	16	19	21	22	25	28	30	31	33	37	40	42	45
Interconnectors	0	0	1	1	3	6	10	14	14	14	14	14	14	14	14	14	14	14	15
Storage	0	0	0	0	1	1	1	1	1	1	1	2	3	4	5	6	7	8	8
<b>Total cumulative new build</b>	<b>4</b>	<b>8</b>	<b>12</b>	<b>14</b>	<b>20</b>	<b>26</b>	<b>32</b>	<b>38</b>	<b>43</b>	<b>48</b>	<b>51</b>	<b>56</b>	<b>61</b>	<b>63</b>	<b>68</b>	<b>74</b>	<b>79</b>	<b>84</b>	<b>91</b>

##### Notes

- 1 This covers all new capacity including autogeneration. The latter is defined as in section 1.33 and 1.34 of the Digest of UK Energy Statistics. See: <https://www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes>
- 2 These are net capacities after allowing for plant own use (but before allowing for derating, e.g. of wind plants).

Any enquiries regarding this publication should be sent to us at [emissionsprojections@beis.gov.uk](mailto:emissionsprojections@beis.gov.uk).

### High Fossil Fuel Price Scenario

#### BEIS 2017 Updated Energy & Emissions Projections

v1.0 21-Nov-2017

##### High Fossil Fuel Price Scenario

###### Scenario Assumptions:

Fossil Fuel Prices	High
Economic Growth	Reference
Policies	Reference

#### Cumulative new build for all power producers<sup>1,2</sup>

##### GW

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Coal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal and natural gas CCS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil	0	0	0	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3
Natural gas	0	1	2	2	4	4	4	4	5	9	9	9	9	9	9	10	10	10	10
Nuclear	0	0	0	0	0	0	0	0	2	3	3	5	7	7	8	10	10	12	13
Other Thermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Renewables	4	7	8	10	12	15	16	19	21	23	25	28	30	31	34	37	40	42	46
Interconnectors	0	0	1	1	3	6	10	14	14	14	14	14	14	14	14	14	14	14	15
Storage	0	0	0	0	1	1	1	1	1	1	2	3	4	5	6	7	8	8	8
<b>Total cumulative new build</b>	<b>4</b>	<b>8</b>	<b>12</b>	<b>14</b>	<b>20</b>	<b>26</b>	<b>32</b>	<b>38</b>	<b>43</b>	<b>53</b>	<b>56</b>	<b>61</b>	<b>66</b>	<b>69</b>	<b>74</b>	<b>80</b>	<b>84</b>	<b>89</b>	<b>96</b>

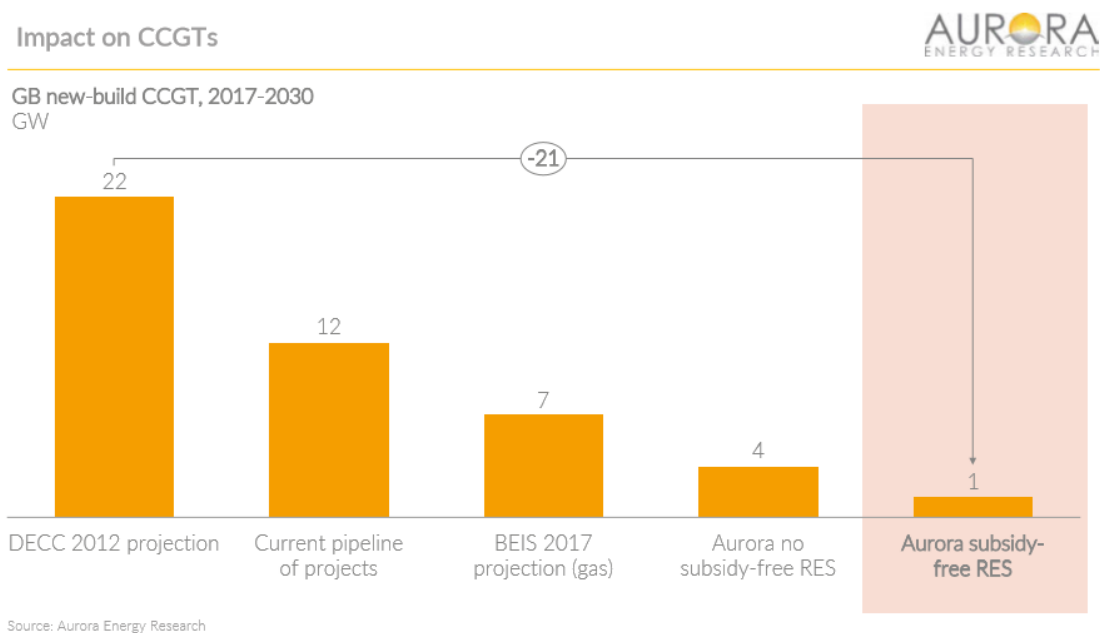
##### Notes

- 1 This covers all new capacity including autogeneration. The latter is defined as in section 1.33 and 1.34 of the Digest of UK Energy Statistics. See: <https://www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes>
- 2 These are net capacities after allowing for plant own use (but before allowing for derating, e.g. of wind plants).

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## Annex 2 – Aurora UK CCGT Projections (Spring 2018)



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