

Rooney, Lauren

From: Sam Hunter Jones <SHunterJones@clientearth.org>
Sent: 30 January 2019 18:40
To: Drax Re-power
Subject: Drax Re-power (EN010091) / IP ref: 20011838 - ClientEarth's Response to ANC 2.5 and the Applicant's Deadline 5 Submission
Attachments: ClientEarth_Response to ANC 2.5 and Applicant's Deadline 5 Submission_30 January 2019.pdf
Follow Up Flag: Follow up
Flag Status: Completed

Dear Sir / Madam

I attach ClientEarth's Response to Written Question ANC 2.5 and the Applicant's Deadline 5 Submission.

Where possible, the document contains hyperlinks to sources outside of the Examination Library and planning policy and legislation.

Yours faithfully

Sam Hunter Jones
Lawyer, Climate Accountability



t. +44 (0)30 3050 5976
ClientEarth, Fieldworks, 274 Richmond Road, London, E8 3QW

[email](#) | [website](#) | [facebook](#) | [twitter](#)

Please consider the environment before printing this email. This email and any files attached are confidential and intended solely for the use of the individual or entity to whom it was addressed. Please note that any views or opinions presented in this email are solely those of the author and do not necessarily represent the views of ClientEarth. ClientEarth is a company limited by guarantee, registered in England and Wales, company number 02863827, registered charity number 1053988, registered office 2-6 Cannon Street, London EC4M 6YH, with a registered branch in Belgium, N° d'entreprise 0894.251.512, and with a registered foundation in Poland, Fundacja ClientEarth Poland, KRS 0000364218

This email has been scanned by the Symantec Email Security.cloud service.
For more information please visit <http://www.symanteccloud.com>

30 January 2019

Response to Written Question ANC 2.5 and the Applicant's Deadline 5 submission in respect of Drax Re-power (App. No. EN010091)

30 January 2019

Contents

Introduction	3
1 Response to Written Question ANC 2.5.....	3
2 New arguments advanced in the Applicant's 'Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008'	6
2.1 The assessment of need under the NPS framework.....	6
2.2 Local grid operability.....	11
2.3 Consistency with the UK's decarbonisation pathway	17
2.4 CCS as a condition to the DCO	19
2.5 Decommissioning and public subsidy risk.....	20
2.6 The operation of s 104 of the Planning Act 2008	21
2.6.1 Section 104(4).....	21
2.6.2 Section 104(7).....	22

30 January 2019

Introduction

1. This submission is made by ClientEarth¹ in response to (i) the Examining Authority's Written Question ANC 2.5, and (ii) the 'Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008' submitted by the Applicant at Deadline 5.²

1 Response to Written Question ANC 2.5³

2. In the Applicant's Note submitted at Deadline 5 it refers to the Written Ministerial Statement (WMS) by the SoS BEIS dated 17 May 2018, citing the following passage:

The UK must have safe, secure and affordable supplies of energy with carbon emissions levels that are consistent with the carbon budgets defined in our Climate Change Act and our international obligations. We believe that gas has a key part to play in meeting these objectives both currently and in the future.

...

[E]very scenario proposed by the Committee on Climate Change setting out how the UK could meet its legally binding 2050 emissions reduction target includes demand for natural gas.

¹ 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).

² Unless specified otherwise, abbreviations and defined terms used in this submission are the same as those used in ClientEarth's Written Representation of 8 November 2018, ClientEarth's Post-Hearing Submission of 13 December 2018, and ClientEarth's Revised Baseline Scenario and Quantitative Climate Impact Assessment of 9 January 2019.

³ Examining Authority's Further Written Questions, Question ANC 2.5: "Provide a response to the Written Ministerial Statement from the Secretary of State for Business, Energy and Industrial Strategy dated 17 May 2018 in respect only to their comments on the role of gas (and not the role of shale gas), which has been introduced by the Applicant in Appendix 2 of its responses to D4 [REP4-012]."

30 January 2019

3. The Applicant suggests that this statement on the future need for gas “re-affirms the policy in the energy NPSs”.⁴
4. To recall, EN-1 envisages an increasingly residual or back-up role for unabated fossil fuel generation on the grid:

If fossil fuel plant remains the most cost-effective means of providing such back-up, particularly at short notice, it is possible that even when the UK's electricity supply is almost entirely decarbonised *we may still need fossil fuel power stations for short periods* when renewable output is too low to meet demand, for example when there is little wind.⁵

...

Fossil fuel power stations play a vital role in providing reliable electricity supplies: they can be operated flexibly in response to changes in supply and demand, and provide diversity in our energy mix. They will continue to play an important role in our energy mix as the UK makes the transition to a low carbon economy, and *Government policy is that they must be constructed, and operate, in line with increasingly demanding climate change goals.*⁶

...

As set out in paragraph 3.3.8 above, a number of fossil fuel generating stations will have to close by the end of 2015. Although this capacity may be replaced by new nuclear and renewable generating capacity in due course, it is clear that there must be *some* fossil fuel generating capacity to provide back-up for when generation from intermittent renewable generating capacity is low and to help with the transition to low carbon electricity generation. *It is important that such fossil fuel generating capacity should become low carbon, through development of CCS, in line with carbon reduction targets.*⁷

⁴ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 6.20.

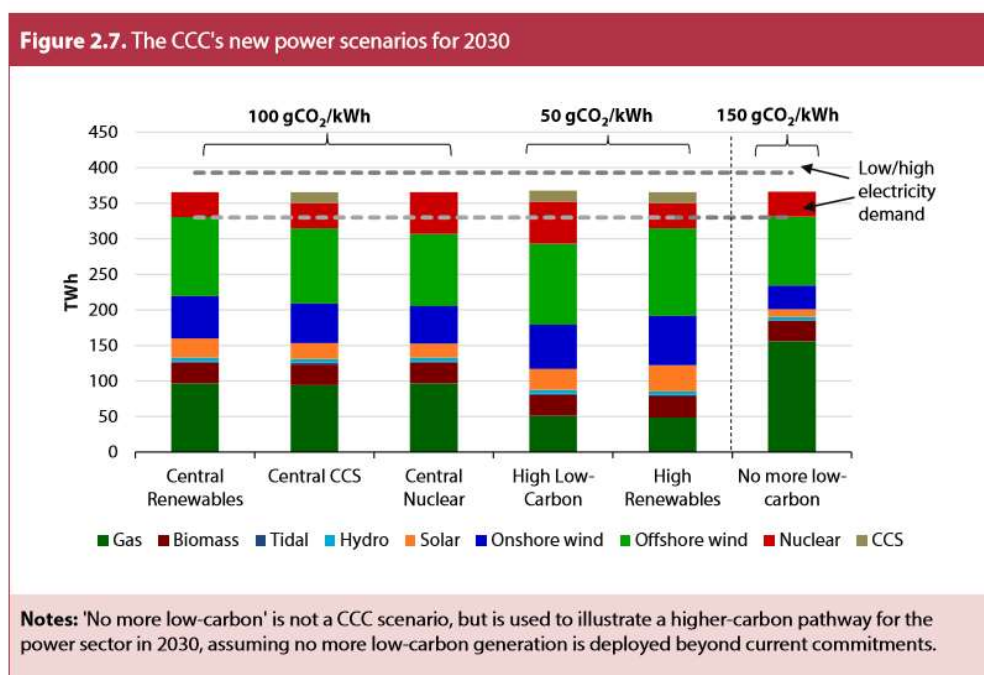
⁵ EN-1, para 3.3.11 (our emphasis).

⁶ EN-1, para 3.6.1 (our emphasis).

⁷ EN-1, para 3.6.8 (our emphasis).

30 January 2019

5. This declining role for gas in power generation is also consistent with BEIS's Updated Energy and Emissions Projections, which show gas-fired generation more than halving by 2028 (from 155 TWh to 74 TWh). By 2035, gas-fired generation is at less than a third of its current level (49 TWh).⁸
6. The reference in the WMS to the CCC's scenarios also helps to confirm that the "key part" that the Government believes gas will play is in providing a residual or back-up function. In the CCC's latest power scenarios for 2030 (reproduced below), gas is used to generate between approx. 15-25% of the UK's power,⁹ down from its current share of approx. 40%.¹⁰



⁸ BEIS, Updated Energy and Emissions Projections, 2017, Annex J (total electricity generation by source) (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/666265/Annex-j-total-electricity-gen-by-source.xls).

⁹ CCC, Reducing UK emissions - 2018 Progress Report to Parliament, 2018 (<https://www.theccc.org.uk/wp-content/uploads/2018/06/CCC-2018-Progress-Report-to-Parliament.pdf>), p. 70, Fig. 2.7.

¹⁰ CCC, Reducing UK emissions - 2018 Progress Report to Parliament, 2018, p. 57, Fig. 2.3.

30 January 2019

7. The lower end of the CCC's range for gas generation of approximately 15% is consistent with the Government's Clean Growth Strategy, which envisages 85% low-carbon generation by 2032 and 99% low-carbon generation by 2050.¹¹ To underscore the conservative nature of the Government's projections, National Grid's two scenarios that comply with the UK's 2050 carbon reduction target go further, seeing gas-fired generation fall to between 5-8% of UK power generation by 2032.¹²
8. This is the context in which the WMS refers to gas's role on the UK grid and to UK demand for gas. The Applicant has failed to explain how the Proposed Development is consistent with this role.

2 New arguments advanced in the Applicant's 'Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008'

9. In the following we respond to new arguments advanced by the Applicant in its 'Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008' submitted at Deadline 5. To the extent that the Applicant's Note repeats existing arguments, ClientEarth repeats the points it has made in previous submissions in this examination (i.e. ClientEarth's (i) Written Representation, (ii) Post-Hearing Submission and (iii) Revised Baseline and Quantitative Climate Impact Assessment). The following therefore supplements ClientEarth's previous submissions.

2.1 The assessment of need under the NPS framework

10. In its Deadline 5 submission, the Applicant proposes the following approach to assessing need under the NPS framework:

NPS EN-1, as re-affirmed by NPS EN-2, establishes the need for the Proposed Scheme;

¹¹ BEIS, Clean Growth Strategy, 2017, pp 142 and 152.

¹² National Grid, Future Energy Scenarios, July 2018, Data Workbook, Tab 5.2 and 5.3. (http://fes.nationalgrid.com/media/1366/2018-fes-charts-v2_as-published.xlsx).

30 January 2019

NPS EN-1 requires that substantial weight be given to the contribution that the Proposed Scheme would make towards satisfying the identified need;

the precise amount of weight, within the floor set of “substantial”, that is attributed to the consideration of need in this case should be proportionate to the anticipated extent of the Proposed Scheme's actual contribution to satisfying the need ...¹³

11. In this approach, the need for the project is (i) assumed and given substantial weight, and also (ii) assessed (apparently by reference to projections¹⁴) in order to determine the “degree or category”¹⁵ of substantial weight to be applied. The Applicant suggests that a scale of substantial weight should be used, presumably ranging from “low” to “high” via “moderate” degrees of substantial weight.¹⁶

¹³ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 2.19. See also para 2.9 (“The precise amount or category of weight (within that floor set of “substantial”) is determined on the basis set out in paragraph 3.2.3 of NPS EN-1. Accordingly, the ExA and the SoS are not required to grapple with whether there is a need for the type of infrastructure in question and, accordingly, whether there is a need for the Proposed Scheme; the ExA and the SoS are told to assume there is a need and that substantial weight must be given to that need.”).

¹⁴ See, e.g., Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 3.9 (“In addition to the UK wide need for electricity, there is also a need based on National Grid's boundary areas around the country, the latest projections of which are set out in the National Grid's Electricity Ten Year Statement ... If one simply looks at these projections, then the capacity of the Proposed Scheme makes a contribution to the applicable boundary area for Drax.”). Nevertheless, the Applicant continues to rail against the inherent fallibility of projections and forecasts. See, e.g., para 2.11 (“The use of the words “anticipated extent” are important as no-one can be definitive about the precise extent of electricity demand going forward and the NPS makes it expressly clear that a projection is simply that.”).

¹⁵ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 6.8.

¹⁶ See, e.g., Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 6.10 (“The paper concludes that a high degree of substantial weight should be afforded to the anticipated extent of the Proposed Scheme's actual contribution to satisfying the demonstrated need.”).

30 January 2019

12. However, this approach has no basis in the NPSs:

- a. The Applicant continues to suggest that paragraph 3.1.3 of EN-1 requires the need for the Proposed Development to be assumed when this paragraph in fact refers to “the types of infrastructure covered by the energy NPSs” (such as renewable, nuclear and fossil fuel generation), and nowhere in EN-1 is it stated that the need for individual projects should be assumed.¹⁷
- b. When individual projects are addressed in the following paragraph (3.1.4), EN-1 states that substantial weight should be given to the contribution that a project would make towards satisfying the need for the type of infrastructure in question.
- c. Paragraph 3.2.3 of EN-1 provides guidance as to the required approach to applying paragraphs 3.1.3 and 3.1.4:
 - i. It clarifies that “in any given case” the weight to be attributed to need in the planning balance should be “proportionate to” the “anticipated extent” of the project’s “actual contribution to satisfying the need for a particular type of infrastructure.”¹⁸
 - ii. In deciding an application, the weight to be given to need versus (say) biodiversity or noise is therefore a factor of the project’s anticipated actual contribution to the need for the type of infrastructure in question. To assess the project’s anticipated actual contribution to that need, it is necessary to take into account: (i) existing and planned capacity; (ii) the most reliable and up-to-date projections; and (iii) the scale and urgency of the need set out in EN-1¹⁹. For example:
 1. No weight should be attributed to need in the planning balance where – as here – a project is not anticipated to contribute to the need for a type of energy infrastructure, given (i) sufficient existing and planned capacity, (ii) in light of the most reliable and

¹⁷ See ClientEarth’s Post-Hearing Submission, para 8.

¹⁸ EN-1, para 3.2.3 (“The [SoS] should therefore give substantial weight to considerations of need. 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.”).

¹⁹ EN-1, para 3.1.3.

30 January 2019

up-to-date projections, and (iii) taking into account the relative scale and urgency of the need for the infrastructure in question under EN-1.

2. By contrast, need should be attributed substantial weight in the planning balance where a project is anticipated to contribute to the need for a type of energy infrastructure, given (i) insufficient existing and planned capacity, (ii) in light of the most reliable and up-to-date projections, and (iii) taking into account the relative scale and urgency of the need for the infrastructure in question under EN-1.

- iii. In this respect, the last sentence of paragraph 3.2.3 simply clarifies what is meant by (i) giving “substantial weight to considerations of need” in the preceding sentence, and (ii) giving “substantial weight to the contribution which projects would make” in paragraph 3.1.4.

- d. The Applicant is therefore right that paragraph 3.2.3 “should be read together with paragraphs 3.1.3 and 3.1.4 which provide the over-arching decision making principles”. However, rather than doing so, its interpretation of paragraph 3.2.3 results in an approach that diverges from those paragraphs by creating a complex and artificial weighting framework that has no basis in the wording of paragraphs 3.1.3 and 3.1.4. As the Examining Authority has noted, this approach suggests that the need for the project should be counted twice (once assumed, once assessed), without explaining how such double counting is supported by the NPS or wider planning policy.²⁰

13. Of course, the approach suggested in the Applicant's Deadline 5 submission is just the latest iteration of its position on this question:

²⁰ Examining Authority's Further Written Questions, Question ANC 2.1 (“The ExA suggests that Paragraph 3.1.3 will already have considered the contribution new power projects would have to meeting the three pillars, and to do so again to assess individual contributions as advocated by Paragraph 3.2.3 of NPS EN-1 would in essence amount to double counting.”)

30 January 2019

- a. At the Preliminary Meeting, the Applicant claimed that the issue of the need for the project was “outside the remit of this examination”.²¹
- b. In its Deadline 2 and 3 submissions, the Applicant stated that the need for the Proposed Development was “not up for debate”,²² that “decisions should proceed on the basis that need for schemes such as that proposed here has been demonstrated”,²³ with projections and forecasts being of no relevance.²⁴
- c. Whereas the Applicant now suggests that need for the Proposed Development should be both assumed and assessed (apparently by reference to projections and forecasts) in a complex hybrid approach²⁵ – one that finds no support in either the text or context of the NPSs.

14. The question of the need for the Proposed Development has therefore gone from being entirely outside of the scope of the examination to being an intrinsic part of the SoS's decision-making process. This change of approach is presumably intended to respond to the criticism that the Applicant's existing approach rendered paragraphs 3.1.4 and 3.2.3 entirely redundant.²⁶ However, the Applicant is still to provide a workable and logically consistent interpretation of this key part of the NPS framework.

15. Irrespective of the proper interpretation of the NPSs, the Applicant's approach to assessing need continues to fail to consider the Proposed Development's anticipated actual contribution to need given (i) government and other projections, and (ii) the levels of existing and planned capacity. As explained immediately below, when the Applicant

²¹ See Planning Inspectorate's Preliminary Meeting Note, p. 18 (“ClientEarth requested the project's climate impacts and consistency with the UK climate change commitments and the need for the project. The Applicant objected to the inclusion of these issues on the ground that these issues related to policy which is outside the remit of this examination.”)

²² Applicant's Response to Written Questions, para 2.1.71.

²³ Applicant's Response to Written Representations, para 4.6.4.

²⁴ Applicant's Response to Written Representations, paras 4.10.5 and 4.10.9 (“...the forecast is not a “target” nor is it a prediction of “need”.”).

²⁵ See Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, paras 2.9, 2.11 and 2.19.

²⁶ See, e.g., ClientEarth's Post-Hearing Submission, para 8.

30 January 2019

does purport to provide evidence of a need for the Proposed Development specifically – in the context of local grid operability – it does so on a false basis.

2.2 Local grid operability

16. Having now accepted that the SoS should consider the Proposed Development's anticipated actual contribution to need,²⁷ the Applicant has advanced a new argument regarding the specific contribution that it says the Proposed Development would make to local grid operability. This argument was first raised at ISH1,²⁸ before being presented in more detail in the Applicant's submissions at Deadline 5.²⁹

17. The Applicant bases its argument on National Grid's latest Electricity Ten Year Statement (published in November 2018), which the Applicant appended to its Deadline 4 submission. Specifically, it relies on Figure B7a.2 of the Ten Year Statement, which it says show a particular level of required thermal generation capacity in the Drax area:

The current projection of the total transfer requirement (i.e. the energy needed to transmit renewable energy around the system to where it is needed) for the boundary area in which Drax operates is around 16GW (see figure B7a.2 in the updated Ten Year Statement, November 2018), hence there are still significant levels of gas generation projected for 2030.³⁰

²⁷ See Section 2.1 above.

²⁸ See Applicant's Written Summary of Oral Case Put at ISH1, paras 3.30, 3.45-3.47, 3.61, and 3.64-3.65.

²⁹ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, paras 3.4 and 3.16-3.44.

³⁰ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 3.40. See also para 3.4 ("In addition to the UK wide need for electricity, there is also a need based on National Grid's boundary areas around the country, the latest projections of which are set out in the National Grid's Electricity Ten Year Statement 2018 (Chapter 3 of which was provided at Appendix 4 to the Written Summary of Applicant's Oral Case at Issue Specific Hearing ...). If one simply looks at these projections, then the capacity of the Proposed Scheme makes a contribution to the applicable boundary area for Drax. However, even with the Proposed Scheme there would still remain a shortfall."). See also Applicant's Written Summary of Oral Case Put at ISH1, paras 3.30 ("As is explained later in this summary, in the boundary area where Drax power station is located, if there is a high penetration of renewable energy from the north and Scotland, this results in a large security

30 January 2019

18. However, as [REDACTED] has already noted in his Deadline 5 submission,³¹ this is not what Figure B7a.2 shows. Figure B7a.2 (and the equivalent figures provided in respect of each Boundary line) simply show for each Future Energy Scenario:

- a. future power flows that National Grid expects will need to cross the relevant boundary; and
- b. the current capability of the transmissions system to support such power flows.³²

19. Figure B7a.2 therefore says nothing about the level of gas or other thermal generation needed in a particularly region to achieve a stable or safe transmission system. The 16GW in 2030 in the Two Degrees scenario that the Applicant appears to be relying on is

requirement which has to be met from fossil fuel plants in the SO Stack (currently coal and other lower efficiency plants). The current projection of the total transfer requirement (i.e. the energy needed to transmit renewable energy around the system to where it is needed) for the boundary area in which Drax operates is 16GW, hence there are still significant levels of gas generation projected for 2030.”), and 3.61 (“Mr Preece responded, explaining that there are forecasts for the transfer requirements in Drax’s area (Boundary B7a, as explained above) only. For 2030 the forecasted transfer requirement is for 13GW up to 17GW in Boundary B7a (National Grid’s Ten Year Statement, page 61 (see Appendix 4)).”). This reference to page 61 would appear to be a typographical error, given that page 61 concerns Boundary NW3.

³¹ Julian May, Deadline 5 Submission, p. 2 (“The Boundary concept uses imagined boundary LINES on the UK map I assume the 16 GW figure was taken from the projection of the boundary capacity needed for the boundary line north of the area Drax operates in (B7(a)). We are talking about the transfer capacity of power lines and offshore High Voltage DC links that geographically crosses this boundary line (and may or may not connect to land within the adjacent areas), NOT about projections of any generation capacity required in any AREA.”).

³² National Grid, Electricity Ten Year Statement, November 2018 (<https://www.nationalgrideso.com/documents/133836-etys-2018>), p. 23 and p. 100 (“Boundary transfer capacity’: The maximum pre-fault power that the transmission system can carry from the region on one side of a boundary to the region on the other side of the boundary while ensuring acceptable transmission system operating conditions will exist following one of a range of different faults.”) See also National Grid, Electricity Ten Year Statement, November 2018, p. 18 (“... we use our future energy scenarios to help us decide on credible ranges of future [National Electricity Transmission System (NETS)] requirements and its present capability. This is done using the system boundary concept. It helps us to calculate the NETS’s boundary capabilities and the future transmission requirements of bulk power transfer capability.”).

30 January 2019

in fact the level of '90% annual power flows' in 2030.³³ The Applicant appears to have simply invented the concept of the "total transfer requirement" cited above (being "the energy needed to transmit renewable energy around the system to where it is needed") in an effort to present Figure B7a.2 in a way that supports its application.

20. Moreover, at an equally fundamental level:

- a. the Applicant is wrong to describe Boundary B7a as an "area" when it is simply a boundary line;³⁴
- b. as the largest power flows are from north to south,³⁵ the most relevant boundary to the Proposed Development featured in the Ten Year Statement is in fact Boundary B8, which lies to the south of Drax Power Station;³⁶ and
- c. As National Grid notes in the Ten Year Statement, Boundary B8 will need to be reinforced to accommodate increased north-to-south flows due to the connection

³³ National Grid, Electricity Ten Year Statement, November 2018, p. 23 ("Two shaded areas are now shown on each boundary graph which represents the distribution of annual power flow. The darker shaded area shows an area in which 50% of the annual power flows lie. In percentile terms, 75% of annual power flows are lower than the upper edge of the darker shaded area and 75% are higher than the lower edge. The lighter and darker shaded areas together show an area in which 90% of the annual power flows lie. In percentile terms, 95% of annual power flows are lower than the upper edge of the lighter shaded area and 95% are higher than the lower edge.").

³⁴ National Grid, Electricity Ten Year Statement, November 2018, p. 20 ("To provide an overview of existing and future transmission requirements, and report the restrictions we will see on the NETS, we use the concept of boundaries. A boundary splits the system into two parts, crossing critical circuit paths that carry power between the areas where power flow limitations may be encountered.").

³⁵ See, e.g., National Grid, Electricity Ten Year Statement, November 2018, pp 44 and 46 ("Presently, most of the northern transmission network is oriented for north-south power flows with connections for demand and generation along the way. At times of high wind generation the power flow will mostly be from north to south, with power coming from both internal boundary generation and generation further north in Scotland. When most of this area and Scotland is generating power, the transmission capability can be highly stressed. The loss of one of the north to south routes can have a highly undesirable impact on the remaining circuits.").

³⁶ See National Grid, Electricity Ten Year Statement, November 2018, p. 51.

30 January 2019

of new intermittent renewable generation to the north of the boundary.³⁷ The Proposed Development would therefore *add* to this power flow and to the associated cost in reinforcing the network. Rather than implying a need for the Proposed Development, the Ten Year Statement suggests that the Proposed Development will *exacerbate* existing capability shortfalls.³⁸ By extension, less generation capacity above the B8 boundary (where Proposed Development would be situated) would reduce the required boundary capability. If anything, the Ten Year Statement suggests a need to site additional generation capacity in southern ('importing') transmission regions where possible.

21. It is obviously highly concerning that the Applicant has advanced such a plainly misleading argument.

22. When the Ten Year Statement does address the level of generation capacity in the North of England transmission region, it shows (i) a decline in future fossil fuel capacity generation in the region in all four National Grid scenarios, and (ii) a steep decline in the two scenarios that comply with the UK's 2050 carbon reduction target ("Community Renewables" and "Two Degrees"). Figure NE.2 ("Generation capacity mix scenarios for the North of England") shows the level of fossil fuel generation capacity across the region

³⁷ National Grid, Electricity Ten Year Statement, November 2018, p. 52 ("Figure B8.2 above shows the projected boundary power flows crossing B8 for the next 20 years. The boundary capability is limited to 10GW by loading limits of a Cellarhead–Drakelow 400kV circuit. Across all the [Future Energy Scenarios (FES)], the [Security And Quality of Supply Standards (SQSS)] Economy required transfer and expected power flows grow to beyond the present boundary capability. This suggests a need for network development to manage the increasing power flows. Some of the FES show a peak in power flow requirements within ten years, meaning development options could need to be done quickly. Based on the FES, high levels of intermittent generation will be connecting to the north of the boundary, leading to a broad range of boundary power flows.").

³⁸ In situations where wind output is low and power flows across the B8 Boundary from south to north, those flows could be reduced by the Proposed Development. However, as the boundary capability is more than adequate to accommodate such south to north flows, the Proposed Development would add no value. See National Grid, Electricity Ten Year Statement, November 2018, p. 52 ("The magnitude of the south to north power flows is low compared to those in the opposite direction so network capability should be sufficient to support those conditions.")

30 January 2019

– from the Scottish border to the north Midlands – falling from 12GW currently to as little as 4GW in 2035 in the Two Degrees scenario.³⁹

23. In its more general discussion of grid system services, the Applicant suggests that grid inertia (or more accurately frequency control) is a location-specific issue;⁴⁰ in fact, frequency control is not location dependant and resources contributing to frequency stability can be located anywhere on the grid.⁴¹ Frequency control can also be provided by battery storage and frequency-sensitive demand instead of through the inertia provided by synchronous generation units such as conventional thermal generators.⁴² In this respect, the table included in the Applicant's Deadline 5 submission risks giving the impression that inertia is an end in itself rather than a means to an end (the end being frequency control and system stability).⁴³ Indeed, in National Grid's first Enhanced Frequency Reserve (EFR) auction – in effect, a replacement for inertia⁴⁴ – all of the

³⁹ National Grid, Electricity Ten Year Statement, November 2018, p. 45.

⁴⁰ See, e.g., Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 3.32 ("A key aspect which is not dealt with within the Vivid Economics report is the strategic location required for plant within the network to maintain inertia as well as other system services.") and para 3.36 ("As identified in National Grid's Ten Year Statement 2018 ... there is a security requirement for Boundary B7a to maintain short circuit levels and inertia.").

⁴¹ National Grid, Operability Strategy 2018, November 2018 (<https://www.nationalgrideso.com/sites/eso/files/documents/Operability%20Strategy%20Report%20Final.pdf>), pp 9-16.

⁴² National Grid, Operability Strategy 2018, November 2018, p. 12 ("We procure the bulk of our frequency response via balancing services contracts. ... These services include: Firm Frequency Response (FFR), Frequency Control by Demand Management (FCDM), Enhanced Frequency Response (EFR), Legacy bi-lateral contracts.").

⁴³ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 3.43.

⁴⁴ National Grid, Enhanced Frequency Response Market Information Report, 26 August 2016 (https://www.nationalgrideso.com/sites/eso/files/documents/EFR%20Market%20Information%20Report%20v1%20%281%29_1.pdf), p. 1 ("... NGET procures a service known as dynamic frequency response, whereby providers automatically vary their power consumption or production (technology dependent) to compensate for deviations in system frequency away from the nominal Great Britain frequency of 50Hz. The changing generation mix in Great Britain is reducing the contribution that synchronous generation makes to the energy market, which in turn is reducing the level of system inertia, particularly on low demand days when there is a high penetration of renewable plant. Lower system inertia affects the ability of the System Operator (SO) to manage the system frequency within normal operating limits. This in turn

30 January 2019

successful bids were from battery storage projects.⁴⁵ That battery storage is competitively providing system services demonstrates the misconceived nature of the Applicant's reference to the high cost of battery storage relative to biomass in this context.⁴⁶

24. While reactive power, voltage stability, short circuit levels and black start are all location-specific grid requirements, the Applicant has not explained: (i) why the Proposed Development is required given current and future local system services capacity;⁴⁷ and (ii) why any such need cannot be met by a variety of other solutions (such as synchronous compensators, static and dynamic reactive power sources or batteries).⁴⁸ In fact, as noted by National Grid in the Ten Year Statement, adding further conventional generation capacity to the Drax area could lead to *decreased* network performance:

will drive the procurement of larger volumes of the existing frequency response products. As an alternative to procuring increasing volumes of frequency response we have designed an enhanced frequency response (EFR) service which, by responding faster than existing frequency response services, will help reduce the increasing response required in times of low system inertia. ... We have been really encouraged by the level of participation and interest shown in the EFR procurement process and we recognise that this is a clear signal of the potential storage capability ready to participate in markets.”). See also National Grid, Operability Strategy 2018, November 2018, pp 9-11 (“We currently manage the frequency response requirement via four routes: Buying frequency response services via balancing service contracts; Buying frequency response via the mandatory market; Limiting the size of the loss to be contained; Increasing the inertia on the system.”).

⁴⁵ National Grid, EFR Tender Round 1 Tender Results

(<https://www.nationalgrideso.com/sites/eso/files/documents/EFR%20tender%20round%201%20tender%20results.xlsx>).

⁴⁶ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 3.44 (“Furthermore, current storage solutions remain expensive to scale. For example, the biomass domes at Drax Power Station can store 300,000 tonnes of sustainably-sourced compressed wood pellets – equivalent to 600 GWhs worth of electricity. Currently, batteries cost £350 per kWh, meaning at present prices it would cost £210 billion to replace the capacity of all four of our biomass domes using battery power.”).

⁴⁷ We note in this respect that National Grid do not refer to any foreseen operability gaps in the Drax area in its latest Operability Strategy, whereas in respect of voltage control it refers to gaps in the South Wales and Mersey regions. See National Grid, Operability Strategy 2018, November 2018, pp 20-21.

⁴⁸ National Grid, Operability Strategy 2018, November 2018, p. 35, Fig. 5.1.

30 January 2019

The high concentration of large conventional generators around Humber and South Yorkshire means that system configuration can be limited by high fault levels. Therefore, some potential network capability restrictions in the north can be due to the inability to configure the network as desired due to fault level concerns.⁴⁹

25. Once again, rather than supporting the Applicant's case, the Ten Year Statement suggests that the Proposed Development could add to the burden of operating the transmission system in the North of England region.

2.3 Consistency with the UK's decarbonisation pathway

26. The Applicant suggests that the Proposed Development will contribute to the decarbonising of other sectors such as the transport sector. It does so on the basis that the Proposed Development will contribute to decarbonisation of the electricity sector and that a number of other sectors in the UK will rely on electrification to decarbonise, citing a graph from National Grid's Future Energy Scenarios.⁵⁰ However, the Applicant fails to acknowledge that the Proposed Development is not low carbon⁵¹ and therefore does not produce "low carbon electricity" as the Applicant suggests.⁵²
27. The Applicant's analysis is also not consistent with the CCC's latest assessment, which envisages the need for the "steady deployment of *low-carbon capacity* over the period to 2050 ... to decarbonise the existing power system before providing the basis for electrification of other sectors in the 2030s and 2040s."⁵³
28. Moreover, the Applicant fails to explain how the Proposed Development is consistent with the approximately 17 Mt of carbon emissions allocated to the *entire power sector* in 2028 in the cited National Grid graph.⁵⁴ To recall, the Proposed Development emits up

⁴⁹ National Grid, Electricity Ten Year Statement, November 2018, p. 46.

⁵⁰ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, paras 3.46-3.49.

⁵¹ See EN-1, para 3.3.4.

⁵² Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 3.48.

⁵³ CCC, Reducing UK emissions – 2018 Progress Report to Parliament, 2018, p. 69.

⁵⁴ National Grid, Future Energy Scenarios, July 2018, Data Workbook, Tab 3.2. (http://fes.nationalgrid.com/media/1366/2018-fes-charts-v2_as-published.xlsx).

30 January 2019

to approximately 12 Mt of carbon per year – *approximately three-quarters of the allocation for the entire sector*. By 2035, National Grid's allocation for the power sector is approximately 11 MtCO₂e, with this number continuing to fall over time.⁵⁵

29. The National Grid scenario cited by the Applicant broadly mirrors that set out in the Government's Clean Growth Strategy.⁵⁶ Indeed, even industry body Oil & Gas UK now plans for a future involving "a largely renewable electricity system that only requires minimal back-up generation from fossil fuels" and in which "gas will only play a residual role."⁵⁷
30. The Applicant's discussion of the urgency of decarbonising the UK's power sector also fails to have regard to the above projections and to mainstream estimates of what is required. After incorrectly referring to the UK's 2050 target under the Climate Change Act as being 50% (rather than the actual target of at least 80%),⁵⁸ the Applicant suggests that the relative ease of decarbonising the power sector means that the Proposed Development's emissions impact should be discounted.⁵⁹ In fact, the reverse is true, with sectors such as power needing to reduce emissions as far and as fast as possible given that (i) other sectors are expected to be significantly more difficult to decarbonise,⁶⁰ and (ii) the UK is currently not on course to meet its fourth and fifth carbon budgets.⁶¹

⁵⁵ National Grid, Future Energy Scenarios, July 2018, Data Workbook, Tab 3.2.

⁵⁶ BEIS, Clean Growth Strategy, 2017, pp 142 and 152. See also ClientEarth's Revised Baseline and Quantitative Climate Impact Assessment, para 7(e).

⁵⁷ Oil & Gas UK, Energy Transition Outlook 2018 (<https://oilandgasuk.cld.bz/Energy-Transition-Report-2018>), p. 8.

⁵⁸ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 5.2.

⁵⁹ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 5.4.

⁶⁰ See, e.g., CCC, Reducing UK emissions – 2018 Progress Report to Parliament, 2018, p. 69 ("Early power sector decarbonisation helps to manage risks around economy-wide decarbonisation effectively, given limited progress with emissions reductions in other sectors and any potential revision of long-term emissions reductions targets following the 2015 Paris Agreement. The power sector has options available that are deployable at scale and are cheaper than abatement in other sectors.").

⁶¹ See, e.g., CCC, Reducing UK emissions – 2018 Progress Report to Parliament, 2018, pp 18 and 25.

30 January 2019

31. The above emphasises how far the Applicant is from showing that the Proposed Development is consistent with the UK's cost-effective decarbonisation pathway.

2.4 CCS as a condition to the DCO

32. Having suggested at ISH1 that a CCS condition "could not be placed on the DCO" as the technology is still in its early stages and the consent would not be "bankable",⁶² the Applicant now accepts that the SoS can place such a condition on the DCO and that such factors do not in principle make such a condition unreasonable in planning terms.⁶³

33. Instead, the Applicant now suggests that it would be unreasonable to impose a condition for CCS in view of the "urgent need for fossil fuel generation ... identified in the NPS EN-1".⁶⁴ However, EN-1 does not identify an urgent need for fossil fuel generation (in contrast to the need for new renewables and CCS capacity),⁶⁵ and the Government's projections for new-build gas capacity are far exceeded by the amount of capacity with planning consent.⁶⁶

34. The Applicant also suggests that imposing a CCS condition would "effectively ... re-write national policy".⁶⁷ However, as explained previously, the NPS framework includes no such restriction and in fact expressly envisages the imposition of conditions beyond those stipulated in the NPS framework.⁶⁸

35. The Applicant points to the *Wednesbury* reasonableness test applying in this context – broadly, that to be unlawful a condition must be irrational and "so unreasonable that no reasonable person acting reasonably could have made it."⁶⁹ Clearly, this would not apply to the imposition of a condition such as CCS that is designed to mitigate an adverse

⁶² Applicant's Written Summary of Oral Case Put at ISH1, para 3.87.

⁶³ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, paras 4.38-4.41.

⁶⁴ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 4.36.

⁶⁵ See ClientEarth's Post-Hearing Submission, paras 5-6.

⁶⁶ See, e.g., ClientEarth's Written Representation, paras 22-25.

⁶⁷ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 4.38.

⁶⁸ EN-1, para 4.1.7. See ClientEarth's Post-Hearing Submission, paras 38-41.

⁶⁹ *Associated Provincial Picture Houses Ltd v Wednesbury Corporation* (1948) 1 KB 223.

30 January 2019

impact of the Proposed Development categorised by the Applicant as “major, direct, long-term, permanent” and “unacceptable”,⁷⁰ which ClientEarth’s assessment has shown to be a substantial underestimate.⁷¹

36. The House of Lords⁷² in the *British Railways Board* case confirmed that what mattered in this context was “whether or not the proposed development was desirable in the public interest” and whether any condition was “appropriate in the light of sound planning principles”.⁷³ In this context, EN-1 confirms the soundness of attaching conditions where the development would otherwise not be environmentally acceptable.⁷⁴

2.5 Decommissioning and public subsidy risk

37. The Applicant continues to make generic, unsupported claims about the Proposed Development’s alleged insulation from becoming uneconomic.⁷⁵ In contrast to its CCR Statement, it has not sought to explain the various assumptions that it relies on in this context, such as: (i) the level of Capacity Market payments; (ii) the price of ETS allowances (or equivalent); (iii) wholesale electricity prices; and (iv) wholesale gas prices.
38. The same deficiency in analysis applies to the Applicant’s discussion of the affordability of the energy supplied by the Proposed Development, which fails to consider the impact of factors such as carbon prices and wholesale gas prices as well as the relative cost of all alternative sources of energy.⁷⁶ In this context, the CCC have advised that:

Continued power sector decarbonisation is likely to be no more expensive than alternative pathways for the power sector, such as increased gas generation paying a market carbon price in the UK or importing electricity from abroad.⁷⁷

⁷⁰ Environmental Statement, Vol. 1, para 2.1.5.

⁷¹ See ClientEarth’s Revised Baseline and Quantitative Climate Impact Assessment.

⁷² The Applicant incorrectly refers to the Court of Appeal having given this judgment.

⁷³ *British Railways Board v Secretary of State for the Environment* [1994] J.P.L. 32, 38 (per Lord Keith).

⁷⁴ EN-1, 4.10.2.

⁷⁵ Applicant’s Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, paras 4.55-4.56.

⁷⁶ Applicant’s Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, paras 3.6-3.15.

⁷⁷ CCC, Reducing UK emissions – 2018 Progress Report to Parliament, 2018, p. 68.

30 January 2019

39. Just as fundamentally, the Applicant also:

- a. fails to acknowledge the possibility that other new gas capacity on the grid would operate at the same or higher efficiency; and
- b. misrepresents the contents of its Funding Statement, by stating that it includes “provision for reinstatement to cover the estimated costs of decommissioning and demolishing its generation assets and remediating the site at the end of the useful economic lives of the assets”, when in fact no such provision is made.⁷⁸

2.6 The operation of s 104 of the Planning Act 2008

2.6.1 Section 104(4)

40. In its Deadline 5 Note, the Applicant recognises that EN-1 does not reflect the UK's commitments under the Paris Agreement 2015.⁷⁹ However, it then goes on to conclude that s 104(4) is not triggered as the Proposed Development cannot on its own lead to the UK being in breach of those commitments.⁸⁰

41. As explained previously, s 104(4) is designed to ensure that decision making takes into account the UK's current international obligations by disapplying an NPS to the extent

⁷⁸ See, e.g., Applicant's Funding Statement, para 3.2.1 (“The current cost estimate for the Proposed Scheme is circa £600m. This cost estimate includes construction costs, preparation costs, supervision costs and land acquisition costs (including compensation payable in respect of any compulsory acquisition of land and rights in land, including the additional land identified in the Supplemental Statement of Reasons submitted at Deadline 2 (Applicant's document reference 8.5.8), anticipated at circa £400k). This includes all aspects for the Proposed Scheme including land acquisition, equipment purchase, construction, installation, commissioning and connection to fuel supply and power export.”).

⁷⁹ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 6.15 (“The NPS was devised in the context of the Climate Change Act 2008 and to meet the carbon budget; EN-1 expressly deals with climate change and the road to 2050 (*at the time the NPS took effect the goal for the global average temperature was that it must be kept to no more than 2°C*). *The Proposed Scheme meets those policy requirements ...*” (our emphasis)).

⁸⁰ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 6.22 (“In any event, it is not possible to determine that a decision to approve one project will put the UK in breach of its climate change obligations (internationally and nationally) at an economy wide level.”).

30 January 2019

that it is inconsistent with such obligations.⁸¹ Indeed, the Applicant states that the decision maker is required to “expressly consider the international obligations which have come into effect (in this case since the NPSs were designated)”.⁸² However, it then fails to explain the implications of this requirement for the consideration of its application.

2.6.2 Section 104(7)

42. In respect of s 104(7), the Applicant suggests that it is ClientEarth's position that the balancing exercise under that section is “carried out in a vacuum”, with all impacts treated equally.⁸³ This has never been ClientEarth's argument. Indeed, in ClientEarth's Post-Hearing Submission for example, we explained at the outset that:

s 104(7) allows the substantive content of national policy relevant to assessing the benefits and adverse impacts of a proposed development – including the NPSs – to be taken into account.⁸⁴

43. While substantive policy in EN-1 can be taken into account, allowing decision-making rules under NPSs (such as presumptions in favour of granting consent, assumptions of need or special weight being placed automatically on certain factors) would make the s 104(7) an entirely circular exemption.⁸⁵

44. The distinct nature of the s 104(7) balancing exercise is underscored by the judgments of Ouseley J and Sales LJ in the *Thames Tideway* case, including by confirming that the provision was not redundant (or “otiose”) despite the existence of a separate balancing exercise under the NPS at issue in that case.⁸⁶ By contrast, the Applicant's position is

⁸¹ ClientEarth's Post-Hearing Submission, paras 18-20.

⁸² Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 6.16.

⁸³ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 2.23.

⁸⁴ ClientEarth's Post-Hearing Submission, para 43.

⁸⁵ ClientEarth's Post-Hearing Submission, paras 43-49.

⁸⁶ *R. (Thames Blue Green Economy Limited) v SoS for Communities and Local Government* [2015] EWCA Civ 876 at [15-16] (Sales LJ); *R. (Thames Blue Green Economy Limited) v SoS for Communities and Local Government* [2015] EWHC 727 (Admin) at [38] (Ouseley J). See also ClientEarth's Post-Hearing Submission, para 43.

30 January 2019

that the balancing exercise under s 104(7) will always be the same as that under the relevant NPS – here EN-1.⁸⁷

45. As explained previously, the application of NPS decision rules to the balancing exercise under s 104(7) may have little or no effect in practice – as here where there is no need for the Proposed Development and it has major adverse impacts. However, that would not be the case if, as the Applicant argues, EN-1 were to be interpreted to require that the need for any given project be assumed or that the Proposed Development's climate impacts be given only "limited weight".⁸⁸

⁸⁷ Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 2.25 ("The Applicant has never asserted that it is not possible for the substantial weight to be given to the need identified in the energy NPSs to be outweighed by adverse effects; its position has simply been that in undertaking that balancing exercise, factors are to be given the weight required by the NPS – so substantial weight must be given to the contribution which projects would make towards satisfying the identified need.").

⁸⁸ See, e.g., Applicant's Response to ClientEarth's Written Representation, para 4.6.4, and Applicant's Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008, para 6.9(b).

Response to Written Question ANC 2.5
and the Applicant's Deadline 5 submission
in respect of Drax Re-power (App. No.
EN010091)



30 January 2019

Sam Hunter Jones
Lawyer
020 7749 5975
shunterjones@clientearth.org
www.clientearth.org