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The Planning Inspectorate
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By Email Only To: Wylfa@pins.gsi.gov.uk

Dear Sirs

**Application by Horizon Nuclear Power for an Order Granting Development Consent for the
Wylfa Newydd Project**

Response to Written Question 17.2.5.5

We act on behalf of National Grid Electricity Transmission plc ("NGET").

Please find appended to this letter a copy of NGET's response to Written Question 17.2.5.5.

Yours faithfully



Bryan Cave Leighton Paisner LLP

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Appendix 1

National Grid's Response to Q17.2.5.5

ExA Ref	Question to	Question
Q17.2.5.5	National Grid	Please respond to the Applicant's comments in relation to R17.8.4 at D9 [REP9-006]

1.1 What is the capacity of the existing grid connection?

1.1.1 For this assessment, three boundaries within the North Wales area were identified. Each of these boundaries represents an area of the North Wales network where power is transferred to or from the rest of the NETS. The boundaries considered were:-

- (a) NW1, comprising of the 400 kV double-circuit Wylfa-Pentir;
- (b) NW2, comprising of the 400 kV single-circuit Pentir-Trawsfynydd and the 400 kV double-circuit Pentir - Bodelwyddan- Connah's Quay; and
- (c) NW3, comprising of the 400 kV double-circuit Trawsfynydd-Connah's Quay/Legacy and the 400 kV double-circuit Pentir - Bodelwyddan-Connah's Quay.

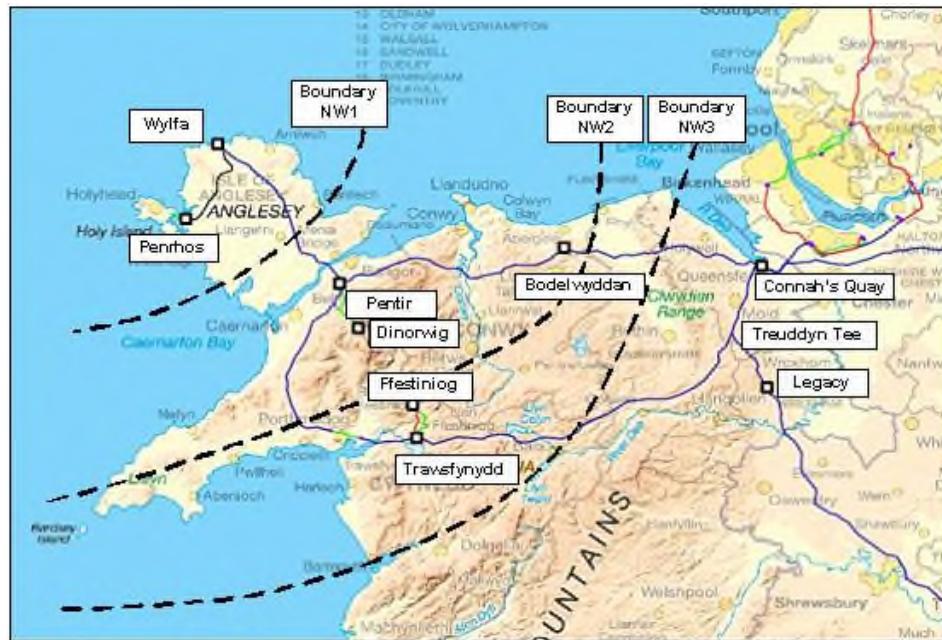


Figure 1 – Transmission System Boundaries within North Wales

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Capability of the transmission system – Boundary NW1

1.1.2 Table 1 shows the capability of the NW1 Boundary when all transmission circuits are available as well as for the most onerous, unplanned double-circuit outage condition (i.e. the loss of the two circuits with the highest rating) that National Grid is required by the NETS SQSS to assess:

Circuit	Summer Rating
	MVA
Wylfa-Pentir 1	2,220
Wylfa-Pentir 2	2,220
Total Intact Capability of NW1 Boundary Circuits	4,440
Capability of NW1 Export Boundary less the worst-case double-circuit fault [Wylfa-Pentir]	0

Table 1 –Boundary NW1 Circuit Ratings

1.1.3 The maximum intact export capability of Boundary NW1 is 4,440 MW as shown in Table 1. However, there is only a single transmission route across this boundary, the Wylfa-Pentir double-circuit. Therefore, a double-circuit fault on that route will result in all generation within Boundary NW1 being disconnected from the transmission system.

Capability of the transmission system – Boundary NW2

1.1.4 Table 2 shows the capability of Boundary NW2 when all transmission circuits are available as well as for the most onerous, unplanned double-circuit outage condition (i.e. the loss of the two circuits with the highest rating) that National Grid is required by the NETS SQSS to assess:

Circuit	Summer Rating
	MVA
Pentir-Trawsfynydd	990
Pentir/Bodelwyddan-Connah's Quay 1	2,220
Pentir/Bodelwyddan-Connah's Quay 2	2,220

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Total Intact Capability of NW2 Boundary Circuits	5430
Capability of NW2 Export Boundary less the worst-case double-circuit fault [Pentir/Bodelwyddan-Connah's Quay1&2]	990

Table 3.2 –Boundary NW2 Circuit Ratings

1.1.5 The maximum intact export capability of Boundary NW2 is 5430 MW as shown in Table 2. For Boundary NW2, the most onerous double-circuit fault for the export of power is a double circuit fault of the Pentir/Bodelwyddan-Connah's Quay circuits.

1.1.6 A fault of this type causes the biggest reduction in transmission capacity, and leaves the region connected to the rest of the transmission system by only the Pentir – Trawsfynydd circuit. The transmission, or thermal, capacity of Boundary NW2 for this outage condition is limited to 9900 MW. In this scenario any generation connected to the Pentir/Bodelwyddan-Connah's Quay circuits would be disconnected.

Capability of the transmission system – Boundary NW3

1.1.7 Table 3 shows the capability of Boundary NW3 when all transmission circuits are available as well as for the most onerous, unplanned double-circuit outage condition that National Grid is required by the NETS SQSS to assess:

Circuit	Summer Rating
	MVA
Trawsfynydd-Connah's Quay/Legacy 1	2,960
Trawsfynydd-Connah's Quay/Legacy 2	2,960
Pentir/Bodelwyddan-Connah's Quay 1	2,220
Pentir/Bodelwyddan-Connah's Quay 2	2,220
Total Intact Capability of NW3 Boundary Circuits	10,360
Capability of NW3 Export Boundary less the worst-case double-circuit fault [Trawsfynydd-Connah's Quay/Legacy 1 & 2]	4,440

Table 3.3 –Boundary NW3 Circuit Ratings

1.1.8 The maximum intact export capability of Boundary NW3 is 10,360 MW as shown in Table 3. For Boundary NW3, the most onerous double-circuit fault for the export of power is a double-circuit fault on the Trawsfynydd-Connah's Quay/Legacy transmission route.

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1.1.9 A fault on this route, being the highest rated of the transmission lines out of the region, causes the biggest reduction in transmission capacity, and leaves the region connected to the rest of the transmission system by only the lower rated Pentir/Bodelwyddan-Connah's Quay circuits. The transmission, or thermal, capacity of Boundary NW3 for this outage condition is limited to 4,440 MW.

1.2 **Would it be available to the Wylfa Newydd Project?**

1.2.1 Part of National Grid's role is to provide the contractual interface with demand customers, generators and interconnectors that are seeking to connect to and that are connected to the National Electricity Transmission System (NETS).

1.2.2 National Grid is also required to provide the contractual interface with customers that are exporting power or seeking to export power onto the NETS. A site specific use of system agreement with National Grid is required for each customer connection to the NETS which exports power onto the NETS.

1.2.3 One aspect of National Grid's role of providing a contractual interface with customers seeking to use or using the NETS, is to respond to each customer application with an offer for new or modified connection to the NETS. The offer needs to include a connection date, connection location and also define any transmission system reinforcement works that are needed so that the connection can be made.

1.2.4 Standard Condition C8 (Requirement to offer terms) of National Grid's transmission licence sets out National Grid's obligations regarding provision of offers to provide connections to and/or use of the transmission system.

1.2.5 In summary, where a party applies for a connection National Grid is to offer to enter into an agreement(s) to connect, or to modify an existing connection, to the transmission system and the offer shall make detailed provision regarding the:

- (a) carrying out of works required to connect to the transmission system;
- (b) carrying out of works (if any) in connection with the extension or reinforcement of the transmission system; and
- (c) date by when any works required permitting access to the transmission system (including any works to reinforce or extend the transmission system) shall be completed.

1.2.6 Following Horizon's termination of agreements in place with National Grid there is no obligation on National Grid to maintain the terms which had previously been agreed to or to provide any connection to Wylfa Newydd.

1.2.7 Going forwards, any connection request from any customer will be considered on a first come first serve basis. National Grid cannot, therefore, categorically confirm if the residual capacity of the existing aforementioned infrastructure will be available or not at a future point in time when a new connection request for Wylfa Newydd may be made.

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- 1.3 **At what point would a new grid connection be required in the lifetime of the project and can the applicant update in track changes the grid connection statement [APP-403]?**
 - 1.3.1 National Grid is not in a position to answer this query which is aimed at Horizon. There is no longer any formal contracted position in place with Horizon for a connection to Wylfa Newydd.
 - 1.3.2 National Grid would respond to a formal connection request should one be made and agreement around a connection date amongst other matters would be reached as part of this process.
- 1.4 **In the light of recent developments please provide an updated Statement of Common of Ground with National Grid [REP6-043].**
 - 1.4.1 Following completion of the SOCG in January 2019 between Horizon and National Grid, Horizon terminated its connection agreement with National Grid on the 15th February 2019.
 - 1.4.2 In view of this, National Grid withdrew its application for development consent for a new connection from the proposed Wylfa Newydd nuclear power station back to the transmission network the following week.
 - 1.4.3 If a new application is received for a grid connection from Horizon, National Grid would consider that application, including potential connection dates, and make an offer as appropriate. In all other respects the SOCG remains as agreed.