Warwick Technology Park
Gallows Hill, Warwick
CV34 6DA

Net Zero Teesside & H2 Teesside ExCS Informal Notice - Appendix 1

13th January 2025
Our Ref: 2024 – Net Zero Teesside & H2 Teesside ExCS

This Appendix relates to the proposed substitution of NTS Exit Capacity to Net Zero Teesside & H2 Teesside from Enron Billingham DC (disconnected) and Phillips Petroleum Teesside DC (disconnected) exit points.

1. Recipient selection:

A PARCA application was received in respect of Net Zero Teesside for Enduring Annual NTS Exit (Flat) Capacity. The request triggered the opening of a PARCA Exit Window. A second PARCA in respect of H2 Teesside was received within the Exit Window. This Appendix relates to both PARCAs.

2. Donor selection:

Substitution from individual donor NTS exit points were assessed by reducing the capacity at the most favourable NTS exit points that had Substitutable Capacity. The most favourable donor NTS exit points will normally be the furthest downstream NTS exit points from the recipient NTS exit point, as measured by pipeline distance.

The exit points identified as potential donor sites were as follows:

NTS exit Point	***Type***	***Obligated Capacity (GWh/d)***	***Substitutable Capacity[1] (at 1st August 2027) (GWh/d)***
Enron Billingham (disconnected)	DC	114.8	114.8
Phillips Petroleum (disconnected)	DC	3.6	3.6
Cowpen Bewley	DN	51.8	10.5
Saltholme	DC	7.3	5.8
Elton	DN	60.2	4.2
Little Burdon	DN	20.9	6.8

[1] NTS Exit Capacity required as a result of demand forecasts provided via Exit Capacity Planning processes as per Standard Special Condition A57 and the Exit Capacity Planning Guidance will not be Substitutable.

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The pipeline distances to the potential donor NTS exit points are:

From	***To***	***Pipeline distance (km)***
Net Zero Teesside & H2 Teesside	Enron Billingham (disconnected)	9.4
	Phillips Petroleum (disconnected)	0.0
	Cowpen Bewley	6.4
	Saltholme	4.3
	Elton	22.9
	Little Burdon	28.8

As a result of these analyses, the final NTS exit points selected were as follows;

NTS Point	***Type***	***Recipient / Donor***
Net Zero Teesside	DC	Recipient
H2 Teesside	DC	Recipient
Phillips Petroleum (disconnected)	DC	Donor
Enron Billingham (disconnected)	DC	Donor

3. Network analysis: Supply & demand scenario

- Substitution analysis was conducted for the Gas Year 2026/27 as the first year the capacity will be required at either Net Zero Teesside or H2 Teesside.
- The analysis starting point is our 2026/27 1-in-20 peak day demand network. From this a North sensitivity network is created, taking the most onerous credible demand levels for power stations (and other DCs), and GDN offtakes from sold and forecast levels for the North zone as detailed in Section 5, and with North supplies reduced to a credible minimum.
- The substitution network is created from the North sensitivity network, with the potential donor NTS exit points in the area increased to obligation in accordance with the Methodology.
- Net Zero Teesside and H2 Teesside are new NTS exit points and as such have initially been set at 0 kWh/d.

4. Enhanced Network

- No enhancements

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5. Exit points set at obligated, sold or otherwise:

    - All North DC sites and GDN offtakes that are potential donors as listed above are increased to their obligated level, with scaling back at other exit points so that the aggregate total matches the forecast total.
    - All other GDN NTS exit points in the North were at forecast undiversified levels, with the remaining GDN exit points scaled accordingly so that the aggregate total matches the sold total.

6. Flow adjustments:

    - Flow adjustments were made in accordance with Paragraph 47 of the Methodology.
    - Flow adjustments are detailed in Section 3 above, and the substitution network demand is 5541 GWh/d, which is higher than the 1 in 20 peak demand (including sold capacity levels at GDN NTS Exit Points).

7. Summary of network analysis key parameter changes:

    - No significant parameter changes were required between substitution networks.

8. Exchange Rate Validation

Two sequences from the list of potential donors were assessed to determine the best exchange rate.The respective exchange rates are listed below in the following tables: Both PARCAs were combined for the analysis and the total capacity received for Net Zero Teesside & H2 Teesside listed below.

Sequence 1

Donor NTS Exit Points	***Capacity Donated (kWh/d)***	***Capacity Received (kWh/d)***	***Exchange Rate (Donor: Recipient)***
Enron Billingham (disconnected)	77,800,000	68,076,576	1.1428:1

Sequence 2 (Selected)

Donor NTS Exit Points	***Capacity Donated (kWh/d)***	***Capacity Received (kWh/d)***	***Exchange Rate (Donor: Recipient)***	***Total Exchange Rate (Donor: Recipient)***
Phillips Petroleum Teesside (disconnected)	3,690,000	3,690,000	1:1	1.1368:1
Enron Billingham (disconnected)	73,700,000	64,386,576	1.1446:1	