

BP Kinneil PARCA ExCS Informal Notice - Appendix 1

01st April 2016

Our Ref: 2016 - BP Kinneil - PARCA

This Appendix relates to the proposed substitution of NTS Exit Capacity from 1 (one) NTS Exit Points to BP Kinneil NTS Exit Point.

1. Recipient selection:

The PARCA application at BP Kinneil for Enduring Annual NTS Exit (Flat) Capacity triggered a PARCA Exit Window. During that PARCA Exit Window a further application was received in an exit zone that does not interact with BP Kinneil and, hence, BP Kinneil was the only NTS Exit Point considered as a recipient within the Exit Capacity Substitution and Revision Methodology Statement v5.0.

2. Donor selection:

Substitution from individual donor NTS Exit Points was 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.

For the purposes of the NTS Exit Capacity Substitution analysis, 9 sequences of NTS Exit points were analysed to determine the best exchange rate.

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

NTS Exit Point	Type	Current Baseline (kWh/d)	Substitutable capacity (kWh/d)
Bathgate_OT	DN	24,176,039	3,094,273
Glenmavis_OT	DN	145,790,000	17,527,656
Balgray_OT	DN	15,723,362	765,381
Lockerbie_OT	DN	7,439,745	682,634
Langholm_OT	DN	249,796	94,477
Keld_OT	DN	1,890,000	465,445
Wetheral_OT	DN	29,110,000	13,385,999
Lupton_OT	DN	16,230,000	765,350
Salmsbury_OT	DN	110,990,000	11,131,348
Blackrod_OT	DN	166,545,212	42,605,945

The pipeline distances to the potential donor NTS Exit Points are:

<i>From</i>	<i>To</i>	<i>Pipeline flow distance /km</i>
BP Kinneil	Bathgate_OT	18.09
	Glenmavis_OT	36.41
	Balgray_OT	95.81
	Lockerbie_OT	120.77
	Langholm_OT	133.59
	Wetheral_OT	168.47
	Keld_OT	215.76
	Lupton_OT	252.92
	Salmsbury_OT	316.15
	Blackrod_OT	336.80

As a result of these analyses the final NTS Exit Points selected were as follows;

NTS Exit Point	Type	Recipient /Donor	Current Baseline (kWh/d)	Proposed Baseline (kWh/d)	Remaining unsold capacity (kWh/d)
BP Kinneil	DC	Recipient	0	6,264,000	0
Glenmavis OT	SC	Donor	145,790,000	138,748,605	10,486,261

In accordance with paragraph 62 of the methodology the individual donor NTS Exit Point to recipient NTS Exit Point exchange rate was determined and is as follows:

<i>Donor NTS Exit Points</i>	<i>Exchange Rate Recipient : Donor</i>
Glenmavis OT	1 : 1.1241052

3. Network analysis: Supply & demand scenario

- Substitution analysis was conducted for the Gas Year 2019/20 as the first year of the enduring exit capacity period for which substitution can be effected.
- The analysis starting point is our 2019/20 1-in-20 peak day demand network. From this a Scottish sensitivity network is created, taking the most onerous credible demand levels for power stations and DN offtakes from sold and forecast levels for the Scottish Exit Zone as detailed in Section 5, and with Scottish supplies reduced to a credible minimum.
- The substitution network is created from the Scottish sensitivity network, with the distribution network NTS Exit Points bounded by the nearest upstream and downstream compressor stations Kirriemuir and Nether Kellet / Carnforth increased to obligation in accordance with the Methodology, as these were deemed to have a reasonable probability of being donors.
- BP Kinneil NTS Exit Point was set at the level of prevailing Obligated Exit Capacity in 2019 (Zero).

4. Enhanced Network

System enhancements for the substation network were as follows;

Static Analysis

- Multi-junction configuration introduced at Bishop Auckland compressor to enable discharge to the North; new unit assumed running on Generic configuration with maximum power of 35MW.

Transient Analysis

- Further reinforcement required to solve the transient analysis scenario by increasing pipe diameter on certain sections of feeder 6, from 750mm to 889mm;
- Bishop Auckland compressor maximum power set to 60MW.

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

- All Scottish Direct Connect sites are set at obligated level, with the remaining Direct Connects being scaled back from the balance sheet forecast so that the aggregate total matches the balance sheet forecast total.
- Sites increased to their obligated level as part of the Scottish sensitivity network are the potential donors (DN offtakes) listed above; none of these sites have already been set to their obligated level.
- All other DN NTS Exit Points are at Sold level as booked through the annual NTS Exit (Flat) Capacity application processes.

6. Flow adjustments:

- Flow adjustments were made in accordance with Paragraph 45 of the Methodology.
- Flow adjustments are detailed in Section 4 above, the substitution network demand is 546.42 GWh/d, which is higher than the 1 in 20 peak demand (including sold capacity levels at DN NTS Exit Points).

7. Remaining unsold NTS Exit (Flat) Capacity at the donor NTS Exit Points:

Following the substitution of exit capacity on 01st January, 2018 the remaining unsold Annual NTS Exit (Flat) Capacity at the donor exit points is shown in the following table.

<i>Donor NTS Exit Points</i>	<i>Type</i>	<i>Unsold capacity Post-2019 BP Kinneil capacity reservation (kWh/d)</i>
Glenmavis OT	DN (SC)	10,486,261

8. Summary of network analysis key parameter changes:

- The donor/recipient offtakes are sufficiently far from compression/pressure reduction facilities that no significant parameter changes were required between substitution networks.