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25th May 2018

Our Ref: 2018 – Peterborough Eye (Tee)- ExCS

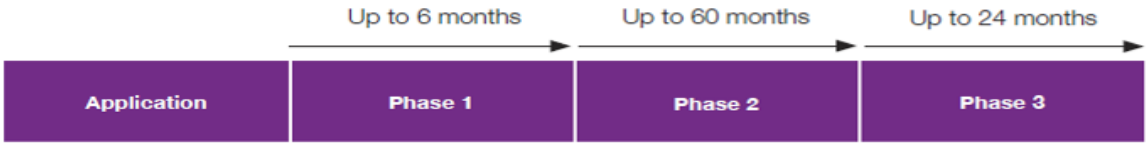
Dear Industry Colleagues,

Peterborough Eye (Tee) ExCS Informal Notice (including exit Substitution & Baseline Revision)

National Grid Gas plc ("National Grid") received a Planning and Advanced Reservation of Capacity Agreement (PARCA) application on 25th October 2017. The application achieved competency[1] on 24th November 2017. The application requested firm Enduring Annual NTS Exit (Flat) Capacity[2] in excess of the prevailing baseline capacity level at the Peterborough Eye (Tee) NTS exit point. The application requested up to:

- 3,021,303 kWh/d from 1st March 2021

The PARCA application triggered Phase 1 of the PARCA process on 27th November 2017.



As part of Phase 1 works, National Grid completed network analysis to identify the most appropriate and robust solution to accommodate the capacity being requested. The Phase 1 process identified that the capacity request could be met by:

- Reserving 1,208,682 kWh/d through unsold exit capacity at Peterborough Eye (Tee) from 1st March 2021.
- Reserving 1,812,621 kWh/d through substitution of unsold exit capacity from Mappowder exit point, from 1st March 2021.

[1] As per Uniform Network Code, Transportation Principal Document, Section B – System Use and Capacity, para. 1.15.4.
[2] Please note that this notice contains terminology relating to Exit Capacity which is used in the Licence and in the Uniform Network Code ("UNC"). Licence defined capacity terms are given in ***bold italics***.

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This informal notice signifies the end of PARCA Phase 1 and the first opportunity for industry parties to raise any concerns around the method to meet the additional capacity request in this location.

Application for Capacity Release

Substitution of Unsold Capacity from 1st March 2021

As part of the Phase 1 works, National Grid completed network analysis to assess what impact the capacity had on the existing network.

In accordance with the Gas Transporter Licence[3], substitution[4] of ***Non-incremental Obligated Capacity*** has been assessed and identified as being able to meet the Enduring Annual NTS (Flat) Capacity requirements in excess of the prevailing baseline NTS Capacity at the Peterborough Eye (Tee) NTS exit point in full.

National Grid therefore proposes that from 1st March 2021:

- All of the additional Baseline NTS Capacity identified at the Peterborough Eye (Tee) exit point can be met by substituting unsold NTS Baseline Capacity from Mappowder (See table below).

Statement of proposed *Non-incremental* Capacity substitution in accordance with Special Condition 5G paragraph 6 (formerly paragraph 4(a) (iv) of Special Condition C8E) of the Licence:

Recipient NTS Point	***Donor NTS Exit Points***	***Capacity Donated (kWh/d)***	***Capacity Received (kWh/d)***	***Exchange Rate (Donor : Recipient)***
Peterborough Eye (Tee)	Mappowder	3,004,782	1,812,621	1.6577 : 1

[3] Special Condition 5G (formerly paragraph 3(c) (i) of Special Condition C8E).
[4] During October 2015, the Authority approved the Exit Capacity Substitution and Revision Methodology Statement (the "Methodology") pursuant to Special Condition 9A.

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Baseline Modification Proposal:

NTS Point	***Type***	***Recipient / Donor***	***Current Baseline (kWh/d)***	***Obligation October 2020 (kWh/d)***	***Proposed Baseline March 2021 (kWh/d)***	***Remaining unsold capacity (kWh/d)***
Peterborough Eye (Tee)	DC	Recipient	25,450,000	21,534,205	23,346,826	0
Mappowder	DN	Donor	47,680,000	47,680,000	44,675,218	8,8268,135

Appendix 1 provides additional information regarding the proposal to demonstrate that National Grid has determined its proposals for capacity substitution in accordance with the Methodology.

I would therefore be grateful if you could acknowledge receipt of this written proposal and the date on which it was received.

If you require any further information, please contact myself or Mark Hamling, Gas Network Capability Manager on 01926 654276.

Yours sincerely,

Craig Dyke
Gas Network Development Manager
Network Capability & Operations, Gas System Operator
National Grid

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Peterborough Eye (Tee) ExCS Informal Notice - Appendix 1

25th May 2018

Our Ref: 2018 – Peterborough Eye (Tee) ExCS

This Appendix relates to the proposed substitution of NTS exit Capacity to Peterborough Eye (Tee) Exit point, from Mappowder Exit point.

1. Recipient selection:

The PARCA application in respect of Peterborough Eye (Tee) for Enduring Annual NTS Exit (Flat) Capacity was received through a PARCA Exit Window which opened on Monday October 2nd and closed on Friday 24th November triggered by Ferrybridge D power station. Also during that Window a further PARCA application was received from Kings Lynn B power station.

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, nine donor 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***	***Obligated Capacity (GWh/d)***	***Unsold Capacity (at 1st October 2020)(GWh/d)***
Wragg Marsh (Spalding)	DC	37.28	37.28
Gosberton	DN	15.23	2.91
Kirkstead	DN	1.21	0.35
Silk Willoughby	DN	3.53	1.33
Staythorpe	DC	82.00	82.00
Peterborough (Peterborough Power Station)	DC	23.28	20.48
Caldecott	DN	11.08	2.10

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NTS Exit Point	***Type***	***Obligated Capacity (GWh/d)***	***Unsold Capacity (at 1st October 2020)(GWh/d)***
Caldecott (Corby Power Station)	DC	21.12	21.12
Market Harborough	DN	9.48	2.51
Tur Langton	DN	65.67	9.31
Blaby	DN	13.40	3.53
Austrey	DN	87.84	28.23
Shustoke	DN	44.76	44.66
Royston	DN	2.70	0.33
Hardwick	DN	123.70	28.56
St. Neots (Little Barford)	DC	35.20	35.20
Whitwell	DN	161.87	57.41
Ipsden	DN	12.39	3.43
Ipsden 2	DN	15.68	4.01
Didcot	DC	137.76	137.76
Winkfield (NT)	DN	15.91	15.81
Winkfield (SE)	DN	106.26	15.82
Winkfield (SO)	DN	71.86	2.54
Braishfield A	DN	107.28	45.68
Braishfield B	DN	58.87	1.73
Matching Green	DN	92.34	41.87
Epping Green (Enfield Energy, aka Brimsdown)	DC	19.60	10.40
Luxborough Lane	DN	165.30	89.15
Horndon	DN	46.41	13.10
Barking (Horndon)	DC	58.59	58.59
Stanford Le Hope (Coryton)	DC	38.60	38.60
Shorne	DN	67.06	18.78
Medway (aka Isle of Grain Power Station, NOT Grain Power)	DC	38.12	5.35
Farningham	DN	135.12	48.50
Farningham B	DN	117.88	59.66
Tatsfield	DN	221.74	28.97
Peters Green	DN	151.86	39.90
Peters Green South Mimms	DN	197.18	32.30
Ilchester	DN	34.96	5.99
Mappowder	DN	47.68	11.27

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NTS Exit Point	***Type***	***Obligated Capacity (GWh/d)***	***Unsold Capacity (at 1st October 2020)(GWh/d)***
Aylesbeare	DN	22.68	3.55
Kenn	DN	15.43	1.43
Coffinswell	DN	5.15	0.32
Lyneham (Choakford)	DN	50.30	9.88
Langage Power Station	DC	41.62	9.92

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

From	***To***	***Pipeline distance (km)***
Peterborough Eye (Tee)	Wragg Marsh (Spalding)	40.10
	Gosberton	52.49
	Kirkstead	82.21
	Silk Willoughby	98.72
	Staythorpe	137.19
	Peterborough (Peterborough Power Station)	48.91
	Caldecott	82.65
	Caldecott (Corby Power Station)	87.68
	Market Harborough	99.07
	Tur Langton	101.28
	Blaby	116.63
	Austrey	158.10
	Shustoke	175.44
	Royston	153.65
	Hardwick	158.66
	St Neots (little Barford)	106.57
	Whitwell	150.39
	Ipsden	205.27
	Ipsden 2	205.29
	Didcot	210.13
	Winkfield (NT)	234.29
	Winkfield (SE)	234.29

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From	*To*	*Pipeline distance (km)*
	Winkfield (SO)	234.29
	Braishfield A	285.82
	Braishfield B	285.84
	Matching Green	186.30
	Epping Green (Enfield Energy, aka Brimsdown)	199.98
	Luxborough Lane	211.32
Peterborough Eye (Tee)	Horndon	225.85
	Barking (Horndon)	225.85
	Stanford Le Hope (Coryton)	229.91
	Shorne	238.81
	Medway (aka Isle of Grain Power Station, NOT Grain Power)	259.73
	Farningham	253.33
	Farningham B	253.35
	Tatsfield	278.36
	Peters Green	156.50
	Peters Green South Mimms	156.52
	Ilchester	327.19
	Mappowder	356.17
	Aylesbeare	389.18
	Kenn	404.86
	Coffinswell	427.78
	Lyneham (Choakford)	467.44
	Langage Power Station	467.44

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

NTS Point	***Type***	***Recipient / Donor***	***Current Baseline (kWh/d)***	***Current Obligation October 2020 (kWh/d)***	***Proposed Baseline from March 2021 (kWh/d)***	***Remaining unsold capacity (kWh/d)***
Peterborough Eye (Tee)	DC	Recipient	25,450,000	21,534,205	23,346,826	0
Mappowder	DN	Donor	47,680,000	47,680,000	44,675,218	8,8268,135

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:

Donor NTS Exit Points	***Exchange Rate (Donor : Recipient)***
Mappowder	1.6577:1

3. Network analysis: Supply & demand scenario

- Substitution analysis was conducted for the Gas Year 2020/21 as the first year of the capacity will be required by Peterborough Eye (Tee) and is also the first year Kings Lynn B Power Station has requested their capacity.
- The analysis starting point is our 2020/21 1-in-20 peak day demand network. From this a South East sensitivity network is created, taking the most onerous credible demand levels for power stations (and other DCs) and DN offtakes from sold and forecast levels for the South East Exit zone as detailed in Section 5, and with South East supplies reduced to a credible minimum.
- The substitution network is created from the South East sensitivity network, with the potential donor distribution network NTS Exit Points in the area increased to obligation in accordance with the Methodology, as these were deemed to have a reasonable probability of being donors.
- Peterborough Eye (Tee) NTS Exit Point was set at the level of prevailing Obligated Exit Capacity in October 2017 (21,534,205 kWh/d).

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4. Enhanced Network

    - System enhancements for the substitution network were required in the South West (Feeder 7) and South East (along Feeder 5, 18).

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

    - All South East DC sites are set at obligated level, with the remaining DCs being scaled back from the forecast so that the aggregate total matches the forecast total.
    - Sites increased to their obligated level as part of the South East sensitivity network are the potential donors (DN offtakes) listed above; none of these sites had already been set to their obligated level.
    - All other DN NTS Exit Points were 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 3 above, the substitution network demand is 6420.05 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:

If substitution is effected as stated in this notice on 1st March 2021, the remaining unsold Annual NTS Exit (Flat) Capacity at the donor Exit points is shown in the following tables.

NTS Exit Point	***Type***	***Remaining unsold capacity (kWh/d)***
Mappowder	DN	8,268,135

8. Summary of network analysis key parameter changes:

    1. No significant parameter changes were required between substitution networks.

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9. change Rate Validation

In order to validate that the above donor list and the sequence of substitution provides the best exchange rate, nine different donor sequences were assessed. These are listed, with their respective exchange rates, in the following tables:

Sequence 1

Recipient NTS Exit Point	***Donor NTS Exit Points***	***Capacity Donated (kWh/d)***	***Capacity Received (kWh/d)***	***Exchange Rate (Donor : Recipient)***
Peterborough Eye (Tee)	Ilchester	n/a	n/a	Over 3:1

Sequence 2

Recipient NTS Exit Point	***Donor NTS Exit Points***	***Capacity Donated (kWh/d)***	***Capacity Received (kWh/d)***	***Exchange Rate (Donor : Recipient)***
Peterborough Eye (Tee)	Aylesbeare	1,812,621	1,812,621	1.6631 : 1

Sequence 3

Recipient NTS Exit Point	***Donor NTS Exit Points***	***Capacity Donated (kWh/d)***	***Capacity Received (kWh/d)***	***Exchange Rate (Donor : Recipient)***
Peterborough Eye (Tee)	Wragg Marsh (Spalding)	n/a	n/a	Over 3:1

Sequence 4 (Selected)

Recipient NTS Exit Point	***Donor NTS Exit Points***	***Capacity Donated (kWh/d)***	***Capacity Received (kWh/d)***	***Exchange Rate (Donor : Recipient)***
Peterborough Eye (Tee)	Mappowder	3,004,782	1,812,621	1.6577 : 1

Sequence 5

Recipient NTS Exit Point	***Donor NTS Exit Points***	***Capacity Donated (kWh/d)***	***Capacity Received (kWh/d)***	***Exchange Rate (Donor : Recipient)***
Peterborough Eye (Tee)	Tatsfield	3,007,863	1,812,621	1.6594 : 1

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Sequence 6

Recipient NTS Exit Point	***Donor NTS Exit Points***	***Capacity Donated (kWh/d)***	***Capacity Received (kWh/d)***	***Exchange Rate (Donor : Recipient)***
Peterborough Eye (Tee)	Austrey	n/a	n/a	Over 3:1

Sequence 7

Recipient NTS Exit Point	***Donor NTS Exit Points***	***Capacity Donated (kWh/d)***	***Capacity Received (kWh/d)***	***Exchange Rate (Donor : Recipient)***
Peterborough Eye (Tee)	Tur Langton	3,987,767	1,812,621	2.2 : 1

Sequence 8

Recipient NTS Exit Point	***Donor NTS Exit Points***	***Capacity Donated (kWh/d)***	***Capacity Received (kWh/d)***	***Exchange Rate (Donor : Recipient)***
Peterborough Eye (Tee)	Little Barford	3,062,241	1,812,621	1.6894 : 1

Sequence 9

Recipient NTS Exit Point	***Donor NTS Exit Points***	***Capacity Donated (kWh/d)***	***Capacity Received (kWh/d)***	***Exchange Rate (Donor : Recipient)***
Peterborough Eye (Tee)	Braishfield A	3,028,889	1,812,621	1.671 : 1