REPORT ON THE APPLICATION OF THE CAPACITY METHODOLOGIES DURING FORMULA YEAR 2017/18

MAY 2018

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1 Introduction

National Grid Gas plc ("National Grid") in its role as holder of the Gas Transportation Licence in respect of the NTS (the "Licence") has prepared this report to meet the requirements as set out in Special Condition 9A.10 of the Licence, that:

"The Licensee must, by 31st May in each Formula Year, provide the Authority with a report on the application and implementation of each methodology relevant to Entry Capacity Transfer, Entry Capacity Trade, Entry Capacity Substitution and Exit Capacity Substitution and Exit Capacity Revision during the previous Formula Year setting out the extent to which, in the Licensee's opinion, the capacity objectives were achieved during that previous Formula Year."

National Grid is further required to use "reasonable endeavours" to ensure that the Methodologies will facilitate the "Capacity Objectives" as set out within Special Condition 9A.5 and for information contained within appendix 1 (Additional applicable Licence conditions are also contained within appendix 1).

The following sections summarise the effects, in terms of capacity release at individual NTS entry and exit points, of applying each capacity methodology for the formula year 2017/18. National Grid's opinion of the extent to which each capacity methodology achieves the capacity objectives is provided

2 Transfer and Trade

2.1 Results

Transfers and Trades resulting from the Rolling Monthly Transfer and Trade System Entry Capacity (RMTNTSEC) auctions for the months April 2017 to March 2018 are provided in the table below.

The first stage of the Entry Capacity Transfer and Trade methodology requires that where possible unsold or surrendered capacity at an ASEP is used to satisfy bids for capacity from Users at the same ASEP. All unsold and surrendered capacity not allocated in Stage 1 will be made available in Stage 2. Sold out ASEPs with unsatisfied capacity bids from Stage 1 will be considered as recipient ASEPs for Transferring or Trading available capacity from different, donor ASEPs.

Results April 2017 – March 2018								
STAGE 1								
Month	Initial Recipient	Final Donor	Capacity Offered for Surrender	Surrendered Quantity Allocated kWh/d	Transfer	Trade	Unsold Quantity Allocated	Unsold Quantity Remaining
Apr-17	Teesside	Teesside	102,800,000	10,749,999*	-	-	1*	300,373,903
May-17	Teesside	-	102,800,000	-	-	-	-	300,373,903
Jun-17	Teesside	-	102,500,000	-	-	-	-	402,873,904
Jul-17	Teesside	-	102,000,000	-	-	-	-	404,121,496
Aug-17	Teesside	-	102,200,000	-	-	-	-	404,121,496
Sep-17	Teesside	-	102,500,000	-	-	-	-	404,621,496
Oct-17	Bacton UKCS	-	50,000,000	-	-	-	-	32,170,560
Nov-17	Bacton UKCS	-	50,000,000	-	-	-	-	142,170,560
	Teesside	Teesside	42,000,000	10,750,000	-	-	-	325,192,924
Dec-17	Teesside	Teesside	42,000,000	5,900,000	-	-	-	330,042,924
Jan-18	Bacton UKCS	-	50,000,000	-	-	-	-	-
	Teesside	-	35,400,000		-	-	-	320,798,004
Feb-18	Bacton UKCS	-	100,000,000	-	-	-	-	-
	Teesside	Teesside	35,400,000	10,750,000	-	-	-	345,448,004
Mar-18	Bacton UKCS	-	50,000,000	-	-	-	-	-
	Teesside	Teesside	35,400,000	10,750,000	-	-	-	320,798,004
Total			**1,105,000,000**	**48,899,999**				
STAGE 2 - No Trade or Transfers occurred								

*The reason for 1 kWh/d of unsold capacity being used rather than surrendered capacity is due to the system proration between 2 separate shippers with different amounts and 10,749,999 being the nearest whole number

The table above shows that:

- for the period April 2017 to March 2018 all capacity requests, at all ASEPS, were satisfied in stage 1, i.e. by using unsold and/or surrendered capacity at the same ASEP
- the only ASEP where bids were received was at Teesside, demand for capacity was met from surrendered quantities. This meant that more capacity remained available at Teesside for allocation through the Daily Auctions.
- because all capacity requests were satisfied in stage 1 no capacity transfer or trades, i.e. between different ASEPs, were required
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The Entry Capacity Transfer and Trade methodology has therefore been successful in enabling additional capacity to be made available at all entry points where firm capacity was requested as part of the RMTNTSEC auction.

Please note:

- ***Surrendered capacity*** *is capacity that Shippers with capacity allocations greater than their requirements make available for purchase by other Shippers, at the same or different ASEPs. If surrendered capacity is not allocated to a new Shipper then it remains with the original Shipper at the original ASEP*
- *In* ***Stage 1*** *unsold capacity plus surrendered capacity is made available for allocation in the RMTNTSEC auction at the same specific ASEP. Any allocations under stage 1 either from unsold or surrendered capacity is neither a trade nor transfer as defined by the Licence*
- *In* ***Stage 2*** *all ASEPs with unsold and surrendered capacity not allocated in stage 1 will be considered as donor ASEPs for Transferring or Trading that capacity to different ASEPs*
- *Any unsold capacity allocated in stage 1, i.e. at the same ASEP, has been omitted from the table.*

2.2 Achievement of Objectives

As can be seen from the table above, the Transfer and Trade methodology was successful in enabling additional capacity to be made available to Shippers. Where surrendered capacity was allocated at Teesside, more capacity remained for the Daily Auctions. A total 1,105,000,000 kWh/d of capacity was offered for surrender and 48,899,999 kWh/d was surrendered and allocated at Teesside.

All bids were satisfied during stage 1 allocations, the lack of stage 2 activity is an indication that in these months there was sufficient capacity available at each ASEP for all bids to be satisfied using the unsold and surrendered capacity at that ASEP.

National Grid believes that through the Entry Capacity Transfer and Trade process, of which the methodology is an integral part, it:

- has made effective use of the NTS. Through the surrender and allocation of capacity at Teesside, better use was made of existing capacity
- would have avoided material increases in costs, had stage 2 allocations been required. The application of the approved methodology would have identified system capability limits such that, in the absence of low probability circumstances, the risk of capacity buy-back actions being required would not have been significantly increased (nor reduced)
- has increased competition between Shipper and Suppliers. By undertaking Transfers and Trades through an auction process all Users had equal access to available capacity and this was allocated to those who valued it most (as indicated by bid prices)

3 Entry Capacity Substitution

3.1 Results

The Entry Capacity Substitution Methodology has been available, if needed, to enable unsold Non-Incremental Obligated Entry Capacity at one or more ASEP(s), to meet a requirement for capacity that is in excess of the Obligated Entry Capacity elsewhere. This is in preference to releasing Funded Incremental Obligated Entry Capacity which could require investment in new infrastructure.

Entry Capacity Substitution resulting from the QSEC auctions in March 2017 is provided in the table below:

Results for March 2017 QSEC					
ASEP where release of incremental entry capacity was triggered.	Quantity	Date from	Donor	Quantity Substituted	Comment
None	**n/a**	**n/a**	**n/a**	**n/a**	

As there were no bids that triggered the release of incremental capacity there was no requirement, nor opportunity to consider Entry Capacity Substitution. Had such bids been received, substitution would have been considered and indicative data relating to quantities and ASEPs populated in the table.

No PARCA applications were received during the year 2017 – 2018 that resulted in Entry Substitution.

3.2 Achievement of Objectives

As can be seen from the tables above, the Entry Capacity Substitution methodology was not tested. However National Grid believes that it provides a robust methodology that, whilst meeting the capacity objectives, would allow for the release of capacity at an ASEP in excess of the Obligated Entry Capacity without the need to release Funded Incremental Obligated Entry Capacity.

4 Exit Capacity Substitution

4.1 Results

The Exit Capacity Substitution methodology enables additional exit capacity to be made available which otherwise would have been made available only with additional funding of investment to satisfy the incremental demand through the release of Funded Incremental Obligated Exit Capacity.

Exit Capacity Substitution, resulting from Enduring Annual NTS Exit (Flat) Capacity applications in the July 2017 Application window, is provided in the table below.

Results							
Recipient NTS Exit Point	**Quantity kWh/d**	**Donor NTS Exit Points**	**Capacity Donated (kWh/d)**	**Capacity Received (kWh/d)**	**Exchange Rate (Recipient : Donor)**	**Remaining quantity requiring funding**	**Effective from**
Kings Lynn PS	3,480,000	West Winch OT	1,454,992	1,454,992	1 : 1	0	1/10/2020
		Peterborough OT	3,915,795	2,025,008	1 : 1.9337		1/10/2020

The table shows that:

- Enduring Annual NTS Exit (Flat) Capacity applications in July 2017, received a request for capacity at Kings Lynn Power Station from 1st October 2020.
- Exit Capacity Substitution was applied with sufficient capacity being available at an exchange rate 1:1 from West Winch Offtake and an exchange rate of 1:1.9337 from Peterborough Offtake to meet the demand.

4.2 Achievement of Objectives

As can be seen from the table above, the Exit Capacity Substitution methodology has been successful in enabling unsold exit capacity at West Winch OT and Peterborough OT to be used to meet the requirement for incremental exit capacity at Kings Lynn PS. Therefore additional capacity has been made available without the requirement for additional funding through the revenue driver mechanism.

4.3 PARCA

PARCA Applications						
Recipient NTS Point	**Quantity (kWh/d)**	**Donor NTS Points**	**Capacity Donated (kWh/d)**	**Capacity Allocated (kWh/d)**	**Exchange Rate (Recipient : Donor)**	**Effective from**
Sutton Bridge Power Station	5,167,000	Sutton Bridge DN	631,277	580,000	1 : 1.0884	1/10/2018
		Wragg Marsh (Spalding PS)	4,736,400	4,587,000	1 : 1.0326	1/10/2018

The table shows that:

- Planning and Advanced Reservation of Capacity Agreement (PARCA) application received, requesting 5,167,000 kWh/d
- Substitution of unsold exit capacity from Sutton Bridge Distribution Network (DN) and Wragg Marsh (Spalding Power Station) from 1st October 2018 has been allocated to satisfy the PARCA request.

5 Exit Capacity Revision

Since the introduction of the Exit Capacity Substitution and Revision Methodology, there has been no Incremental Obligated Entry Capacity released and hence no increased flow at any Entry Points has been demonstrated. As a result, within the formula year April 2017 to March 2018, no notional NTS Exit points have been established and Exit Capacity Revision has not occurred.

6 Interconnector Points Rolling Monthly Auctions

6.1 Results

Transfers and Trades resulting from the Interconnector Points Rolling Monthly System Entry Capacity (IPRMSEC) auctions for the months April 2017 to March 2018 are provided in the table below.

Results April 2017 – March 2018				
Stage 1				
Month	Location	Quantity Offered kWh/d	Surrendered Quantity Allocated kWh/d	Unsold Quantity Remaining
Apr-17	Bacton Interconnector	1,297,800,000	-	1,297,800,000
May-17	Bacton Interconnector	1,297,800,000	-	1,297,800,000
Jun-17	Bacton Interconnector	1,297,800,000	-	1,297,800,000
Jul-17	Bacton Interconnector	1,297,800,000	-	1,297,800,000
Aug-17	Bacton Interconnector	1,297,800,000	-	1,297,800,000
Sep-17	Bacton Interconnector	1,297,800,000	-	1,297,800,000
Oct-17	Bacton Interconnector	1,134,631,000	-	1,134,631,000
Nov-17	Bacton Interconnector	1,134,631,000	-	1,134,631,000
Dec-17	Bacton Interconnector	1,134,631,000	-	1,067,224,672
Jan-18	Bacton Interconnector	900,534,577	-	712,234,153
Feb-18	Bacton Interconnector	900,534,577	-	886,709,185
Mar-18	Bacton Interconnector	900,534,577	-	743,429,185
Total		**13,892,296,731**	-	**13,465,659,195**

7 Summary

National Grid believes that it has fully complied with

- the Entry Capacity Transfer and Entry Capacity Trade obligations through the application of the prevailing Entry Capacity Transfer and Trade Methodology Statement
- the Entry Capacity Substitution obligations through the application of the prevailing Entry Capacity Substitution Methodology Statement , and

- the Exit Capacity Substitution and Exit Capacity Revision obligations through the application of the prevailing Exit Capacity Substitution and Revision Methodology Statement

National Grid believes that

- the Transfer and Trade solution successfully met the capacity objectives in formula year 2017/18
- despite there being no opportunity to apply the Entry Capacity Substitution, methodology for formula year 2017/18, it has been developed such that it successfully met the capacity objectives in formula year 2017/18
- the Exit Capacity Substitution methodology successfully met the capacity objectives in formula year 2017/18

Appendix 1 – Licence Conditions:

Special Condition 9A. 2 - This obligation requires National Grid to use reasonable endeavours to:

- substitute Entry Capacity and Exit Capacity in accordance with the relevant Capacity Methodology Statements
- revise Exit Capacity in accordance with the relevant Capacity Methodology Statement; and
- meet any requests from a Relevant Shipper to transfer and/or trade Entry Capacity in accordance with the relevant Capacity Methodology Statements

Special Condition 9A.3 (a) - This obligation requires National Grid to have in place capacity methodologies ("the methodologies") that facilitate the achievement of the capacity objectives. The capacity methodologies are:

- Entry Capacity Substitution
- Exit Capacity Substitution
- Exit Capacity Revision
- Entry Capacity Transfer
- Entry Capacity Trade

Special Condition 9A.3(c) – This obligation requires these methodologies to be set out in the "Capacity Methodology Statements" and that they are approved by the Authority. The Capacity Methodology Statements are:

- Entry Capacity Substitution
- Exit Capacity Substitution and Revision[1]
- Entry Capacity Transfer and Trade[2]

Special Condition 9A.5 – This obligation requires that the methodologies are developed to facilitate the achievement of the "capacity objectives", which are:

> (a) ensuring that each of Entry Capacity Substitution and Exit Capacity Substitution, Entry Capacity Transfer, Entry Capacity Trade and Exit Capacity Revision are effected in a manner consistent with the Licensee's duties under the Act and, in particular, the duty to develop and maintain an efficient and economical pipeline system and its obligations under [the Licence];

[1] Due to the high degree of similarity between the Exit Capacity Substitution and Revision methodologies National Grid has prepared this single document to satisfy the Licence requirements outlined above

[2] Due to the high degree of similarity between the Entry Capacity Trade and Entry Capacity Transfer methodologies National Grid has prepared this single document to satisfy the Licence requirements outlined above

(b) in so far as is consistent with (a) above, ensuring that:

(i) Entry Capacity Substitution is effected in a manner which seeks to minimise the reasonably expected costs associated with Funded Incremental Obligated Entry Capacity, taking into account the Entry Capacity that shippers have indicated that they will require in the future through making a financial commitment to the Licensee; and

(ii) Exit Capacity Substitution is effected in a manner which seeks to minimise the reasonably expected costs associated with Funded Incremental Obligated Exit Capacity, taking into account the Exit Capacity that shippers and DN Operators have indicated that they will require in the future through making a financial commitment to the Licensee;

(c) in so far as is consistent with (a) above, ensuring that Entry Capacity Substitution, Exit Capacity Substitution, Entry Capacity Transfer, Entry Capacity Trade and Exit Capacity Revision is effected in a manner which is compatible with the physical capability of the pipeline system to which the Licence relates;

(d) in so far as is consistent with (a) above, avoiding material increases in costs including:

(i) Entry Capacity and Exit Capacity Constraint Management costs in respect of Obligated Entry Capacity and Obligated Exit Capacity previously allocated by the Licensee to Relevant Shippers; and

(ii) Exit Capacity Constraint Management costs in respect of Obligated Exit Capacity previously allocated by the Licensee to DN Operators,

that are reasonably expected to be incurred by the Licensee as a result of Entry Capacity Substitution, Exit Capacity Substitution, Entry Capacity Transfer, Entry Capacity Trade and Exit Capacity Revision; and

(e) in so far as is consistent with (a), (and where relevant) (b), (c) and (d) above, facilitating effective competition between:

(i) Relevant Shippers, and to the extent relevant to Exit Capacity, DN Operators; and

(ii) Relevant Suppliers