

CONCLUSIONS REPORT TO THE AUTHORITY

Modification Proposals to the Gas Transmission Transportation Charging Methodology

NTS GCM 17R:

QSEC New ASEP NTS Entry Capacity P0 Pricing

26th May 2009

Table of Contents

EXECUTIVE SUMMARY	1
1 INTRODUCTION	2
2 BACKGROUND	2
The Transport Model for Determination of NTS Entry Capacity Prices	2
The Tariff Model for Determination of NTS Entry Capacity Prices	3
New Entry Points.....	3
3 DISCUSSION AND ISSUES	4
Allocation Rules	4
Connecting at a New versus an Existing ASEP.....	4
The Transportation Model and New ASEPS.....	4
Commodity Charge Issues.....	5
4 TERMS OF THE ORIGINAL PROPOSAL	5
5 REPRESENTATIONS MADE	6
Support for the Proposal	6
Summary of Responses by Consultation Question	6
Summary of Responses by Relevant Objectives.....	7
Other issues raised during the Consultation	8
6 CHANGES TO THE ORIGINAL PROPOSAL IN THE LIGHT OF REPRESENTATIONS MADE	10
7 FINAL PROPOSAL	10
8 JUSTIFICATION	11
Assessment against Licence Objectives.....	11
Assessment against EU Gas Regulations	12

Executive Summary

This document is issued by National Grid Gas plc (“National Grid”) in its role as holder of the Gas Transporter Licence in respect of the NTS (the “Licence”).

This document sets out a final proposal for amending the Gas Transmission Transportation Charging Methodology (the “Charging Methodology”) in respect of the setting of the NTS Entry Capacity reserve price for Obligated NTS Entry Capacity at new Aggregated System Entry Points (ASEPs).

Under the prevailing Charging Methodology, the Obligated NTS Entry Capacity reserve price for a new ASEP is zero and an ASEP is treated as new for Quarterly System Entry Capacity (QSEC) auctions until obligated entry capacity is released. The Obligated NTS Entry Capacity reserve price is the P0 price in the QSEC price schedule with price P1 up to P20 relating to incremental capacity. The P0 price for all existing ASEPs is the annuitised long run marginal cost (LRMC) generated from the Transportation Model with the relevant ASEP flowing at the obligated level.

While the obligated entry capacity level is zero at new entry points, capacity can actually be released at the zero P0 price due to the UNC quarterly entry capacity allocation rules and there is evidence that this has occurred. Capacity can be released at the P0 price when the economic test has been passed through bids at earlier quarters. The NPV of the bids required to pass the economic test is 50% of the project value. This suggests that later capacity sales in other auctions will cover the other 50%. This is unlikely to be the case if significant capacity has already been released at a zero price and this could lead to a potential cross subsidy.

National Grid proposes through this document that for new entry points, the P0 price within the QSEC price stack should be calculated consistently with the P0 price for all existing entry points. The P0 price for existing entry points is the transportation model derived annuitised long run marginal cost for the relevant entry point with that point flowing at the obligated level.

This proposal would ensure that the P0 price was set on a consistent basis for new and existing ASEPs and should remove a potential cross subsidy.

Implementation

It is proposed that these arrangements are implemented with effect from 1st July 2009 and hence in relation to any QSEC auction held two months after that date.

1 Introduction

- 1.1 This document is issued by National Grid Gas plc (“National Grid”) in its role as holder of the Gas Transporter Licence in respect of the NTS (the “Licence”).
- 1.2 This document sets out a final proposal for amending the Gas Transmission Transportation Charging Methodology (the “Charging Methodology”) in respect of the setting of the NTS Entry Capacity reserve price for Obligated NTS Entry Capacity at new Aggregated System Entry Points (ASEPs).
- 1.3 Under the prevailing Charging Methodology, the NTS Entry Capacity reserve price for a new ASEP is zero and an ASEP is treated as new for Quarterly System Entry Capacity (QSEC) auctions until obligated entry capacity is released.
- 1.4 The Obligated NTS Entry Capacity reserve price is the P0 price in the QSEC price schedule with price P1 up to P20 relating to incremental capacity. The P0 price for all other existing ASEPs is the annuitised long run marginal cost (LRMC) generated from the Transportation Model with the relevant ASEP flowing at the obligated level.

2 Background

- 2.1 NTS Entry Capacity is presently allocated by means of five main auction mechanisms.
 - Quarterly (firm) System Entry Capacity (QSEC)
 - Monthly (firm) System Entry Capacity (MSEC)
 - Rolling Monthly (firm) Transfer and Trade System Entry Capacity (RMTTSEC)
 - Daily (firm) System Entry Capacity (DSEC)
 - Daily Interruptible System Entry Capacity (DISEC)
- 2.2 Under its NTS SO incentive schemes, National Grid is obliged to make available for sale in the Entry Capacity “Long Term” auctions, Quarterly System Entry Capacity (QSEC) calculated in accordance with Special Condition C8D Part C Paragraph 9 of National Grid’s Licence.
- 2.3 QSEC can be obtained in respect of each of Capacity Year + 2 to Capacity Year + 16 inclusive (where ‘Capacity Year + n’ is a reference to the Capacity Year commencing on the nth anniversary of the first day of the Capacity Year in which the applications are invited to be made).
- 2.4 The methodology for determination of the obligated capacity price and incremental price steps is set out in both National Grid’s Charging Methodology statement and Incremental Entry Capacity Release (IECR) methodology statement. As part of the 2009 IECR review it will be proposed that price determination be removed and left solely in the Charging Methodology.

The Transport Model for Determination of NTS Entry Capacity Prices

- 2.5 The transport model calculates the marginal costs of investment in the transmission system that would be required as a consequence of an increase in demand or supply at each connection point or node on the transmission system.

-
- 2.6 The measure of the investment costs is in terms of £/GWhkm, a concept used to calculate marginal costs, hence marginal changes in flow distances based on increases at entry and exit points are estimated initially in terms of increases or decreases in units of kilometres of the transmission system for a small energy injection to the system.
- 2.7 The expansion constant, expressed in £/GWhkm, represents the capital cost of the transmission infrastructure investment required to transport 1 GWh over 1 km. Its magnitude is derived from the projected cost of an 85bar pipeline and compression for a 100km NTS network section. The 100km distance was selected as this represents the typical compressor spacing on the NTS.

The Tariff Model for Determination of NTS Entry Capacity Prices

- 2.8 NTS Entry Capacity reserve prices represent purely locational prices derived from the transport model to reflect the costs of capital investment in, and the maintenance and operation of, a transmission system to provide bulk transportation of gas from the different entry locations.
- 2.9 The Entry Capacity reserves prices are not adjusted to collect allowed revenue. The issue of residual revenue recovery is addressed via the application of the TO commodity charge.
- 2.10 Prices for each Gas Year are set on the basis of the relevant year's 1-in-20 peak base case supply and demand data and network model, but with adjustments to the supply flows to reflect the capacity level in question (i.e. the obligated entry capacity level when setting the obligated entry reserve price). Demand flows remain unadjusted.
- 2.11 The Nodal Marginal Distances, calculated from the Transport Model, are converted to capital costs by multiplying by the expansion constant, and annuitised using the annuitisation factor implied by the Licence (which means that the cost is spread evenly over the expected life of the asset taking into account the required rate of return). The final step converts the result from £/GWh/year to p/kWh/day by dividing by 365, multiplying by 100 and dividing by 10^6 . Prices are adjusted to recognise the different calorific values of gas entering the system using ASEP specific calorific values.
- 2.12 The reserve prices are calculated such that they are collared at a minimum value of 0.0001 p/kWh/day.
- 2.13 Where an entry point has a zero baseline capacity level (as defined in the Licence), but where permanent obligated capacity has been sold at the entry point in previous auctions, the level of permanent obligated entry capacity released within the Gas Year in question is used as the obligated entry capacity level.

New Entry Points

- 2.14 For new NTS Entry Points, where an entry point has an obligated baseline entry capacity level of zero (defined by the Licence) and where no permanent obligated entry capacity has been released, the obligated entry capacity reserve price is set at zero.
- 2.15 Entry points are only treated as new for the purposes of long term (QSEC) auctions as incremental obligated capacity can only be released through these auctions.

-
- 2.16 Where permanent obligated capacity has been sold at an NTS Entry Point in previous auctions, the entry point is no longer treated as 'new' and is treated consistently with those entry points that have a Licence-defined obligated baseline capacity level (see above).

3 Discussion and Issues

Allocation Rules

- 3.1 While the obligated entry capacity level is zero at new entry points, capacity can actually be released at the zero P0 price due to the UNC quarterly entry capacity allocation rules¹ and there is evidence that this has occurred.
- 3.2 Capacity can be released at the P0 price when the economic test has been passed through bids at earlier quarters.
- 3.3 The NPV of the bids required to pass the economic test is 50% of the project value. This suggests that later capacity sales in other auctions will cover the other 50%. This is unlikely to be the case if significant capacity had already been released at a zero price and this could lead to a potential cross subsidy.
- 3.4 One solution could have been to change the allocation rules to prevent allocation at P0, however, this would have only introduced more disparities between the treatment of new and existing ASEPS.

Connecting at a New versus an Existing ASEP

- 3.5 The prevailing charging arrangements might create a perverse incentive for a new entry project to not connect at an existing ASEP and to request a new ASEP be created due to potential benefits from a zero P0 price.
- 3.6 A new entry project connecting at a new ASEP close to an existing ASEP would have a very similar if not identical LRMC to the existing ASEP. If the P0 prices were calculated on the same basis for both new and existing ASEPs then these prices would be comparable.

The Transportation Model and New ASEPS

- 3.7 The Transportation Model can be used to calculate an LRMC at any flow level with the resulting LRMC representing the unit capital cost (£m/GWh) of providing additional capacity relative to the supply and demand scenario modelled.
- 3.8 The model will generate an LRMC for an entry point with zero flow and this LRMC will represent the unit cost of increasing the flow from zero.
- 3.9 The version of the Transportation Model presently made available to the industry already calculates entry price schedules based on LRMCS for all entry points at any obligated and incremental capacity level and hence no changes will be required.
- 3.10 Under the prevailing arrangements the P0 prices calculated by the model are ignored for new ASEPs and replaced with zero values for the published price schedules and invitation letters.

¹ UNC TPD B2.6 Allocation: Quarterly NTS Entry Capacity

Commodity Charge Issues

- 3.11 The allocation of entry capacity at a zero price may result in the costs of providing that capacity being met through the SO Commodity charge as the release of Incremental Obligated Entry Capacity results in increased SO allowed revenue for the first five years.
- 3.12 In later years, the allocation of entry capacity at a zero price may result in the costs of providing that capacity being met through the TO Entry Commodity charge once assets associated with the release of the capacity have been included in the TO regulated asset value.
- 3.13 A Shipper can calculate the approximate impact on the commodity charge of any entry capacity costs not recovered through capacity charges.
- Every £2M of incremental entry allowed revenue not recovered through entry capacity charges will result in a 0.0001 p/kWh increase in the SO Commodity charge over a 12 month period.
 - Every £1M of incremental entry allowed revenue not recovered through entry capacity charges will result in a 0.0001 p/kWh increase in the TO Entry Commodity charge over a 12 month period.

4 Terms of the Original Proposal

- 4.1 Through GCM17, National Grid proposed that:
- For new entry points, the P0 price within the QSEC price stack should be calculated consistently with the P0 price for all existing entry points.
 - The P0 price for existing entry points is the transportation model derived annuitised long run marginal cost for the relevant entry point with that point flowing at the obligated level.
 - It was proposed that these arrangements are implemented with effect from 1st July 2009 and hence in relation to any QSEC auction held two months after that date.

5 Representations Made

- 5.1 National Grid NTS received 5 responses to its consultation on NTS GCM 17; 4 were in support, 1 offered qualified support and none were against. None of the responses were marked as confidential, and copies of the responses have been posted on the Gas Charging section of the National Grid information website.²

Support for the Proposal

Respondent	Abbr.	View
British Gas Trading Ltd (Centrica)	BGT	Support
E.ON UK plc	EON	Support
EDF Energy plc.	EDF	Qualified Support
RWE npower & RWE Supply and Trading GmbH	RWE	Support
Scottish and Southern Energy plc	SSE	Support

Summary of Responses by Consultation Question

Consistent Pricing for all Entry Points

Respondents Views

SSE notes “This proposal, GCM17, would ensure that the P0 price was set on a consistent basis for new and existing ASEPs and should remove a potential cross subsidy.”

BGT “agrees in principle with the proposal raised in GCM17, namely that for new entry points the P0 price within the QSEC price stack should be calculated consistently with the P0 price for all existing entry points and should be applied as such.”

RWE “agree that it seems inappropriate to set the P0 prices for new entry points at zero as this provides users with the opportunity to book quarterly strips of firm capacity for free in the QSEC auctions, which they otherwise would have to acquire in later auctions at non zero reserve prices or in daily interruptible strips. This ultimately leads to SO and TO Commodity charges being inflated and the fact this consultation has highlighted such opportunities exist is likely to increase the prevalence of future occurrences over and above the three instances there appear to have been to date.”

RWE “agree that it is appropriate to calculate P0 prices consistently for all entry points, both new and existing”

National Grid’s View

National Grid welcomes support for this aspect of the proposal.

² GCM17 consultation responses can be found at ;

<http://www.nationalgrid.com/uk/Gas/Charges/consultations/>

P0 Prices set from the Annuitised LRMCRespondents Views

SSE notes “National Grid proposes through this consultation that for new entry points, the P0 price within the QSEC price stack should be calculated consistently with the P0 price for all existing entry points. The P0 price for existing entry points is the transportation model derived annuitised long run marginal cost for the relevant entry point with that point flowing at the obligated level.”

EDF “recognises that the intent of this proposal is to ensure that the P0 prices at two ASEPs that are close together are similar and not constrained to close to zero for new entry points.”

National Grid’s View

National Grid welcomes support for this aspect of the proposal.

Implementation with effect from 1st July 2009Respondents Views

BGT “agrees that this should be implemented with effect from 1st July 2009 and hence in relation to any QSEC auction held two months after that date.”

RWE agree “that this change is implemented from 1st July 2009 such that it applies to the next round of QSEC auctions, whenever they may be.”

EON “have no objection to the arrangements being implemented with effect from 1st July 2009 and hence apply to any QSEC auction held thereafter; provided at least the minimum required notice period for change is provided to Users.”

National Grid’s View

National Grid welcomes support for this aspect of the proposal.

Summary of Responses by Relevant Objectives***Reflect the Cost Incurred by the Licensee***Respondents’ Views

EDF comments “The Licence requires NGG to develop a charging methodology so that transportation prices ‘reflect the costs incurred by the licensee in its transportation business’. However this proposal appears only to address issues in developing the P0 price for sites with a positive LRMC and not negative LRMCs. Whilst we recognise that this may be more cost reflective than the current arrangements we believe that this issue should be addressed.”

EDF “recognises that the intent of this proposal is to ensure that the P0 prices at two ASEPs that are close together are similar and not constrained to close to zero for new entry points. We believe that this is a flaw in the current arrangements highlighted by NGG and so will allow other Shippers to exploit this loophole if they so wished. We would note that the current arrangements actually override the outcomes of the Transportation model and so develop P0 prices for new entry points that are not cost reflective. EDF Energy supports cost reflective charges and so welcome the implementation of this proposal”.

National Grid's View

National Grid believes that the proposed revision to the methodology would better meet its Licence conditions as detailed in Section Eight below.

Facilitate effective competition between gas shippers and between gas suppliers

Respondents' Views

SSE notes "While the obligated entry capacity level is zero at new entry points, capacity can actually be released at the zero P0 price due to the UNC quarterly entry capacity allocation rules and there is evidence that this has occurred. Capacity can be released at the P0 price when the economic test has been passed through bids at earlier quarters. The NPV of the bids required to pass the economic test is 50% of the project value. This suggests that later capacity sales in other auctions will cover the other 50%. This is unlikely to be the case if significant capacity has already been released at a zero price and this could lead to a potential cross subsidy."

EDF comments "NGG's Licence also requires NGG to develop a charging methodology that facilitates effective competition between gas Shippers. EDF Energy would note that this proposal should facilitate competition by ensuring charges are cost reflective at new entry points with a positive LRMC only. It would appear new entry points with a negative LRMC and Shippers at storage sites are paying more than they should and so creating a cross subsidy. This issue should therefore also be addressed to meet NGG's Licence requirements."

EON do not disagree with National Grid NTS 'that for new entry points, the P0 price within the QSEC price stack should be calculated consistently with the P0 price for all existing entry points.' This would seem to be consistent with the regulatory principles of eliminating undue discrimination and removing a potential cross subsidy."

National Grid's View

National Grid continues to believe that, in removing a potential source of cross subsidy, the proposed revision to the methodology would better meet its Licence conditions as detailed in Section Eight Below.

Other issues raised during the Consultation

EDF "would like to provide qualified support for implementation of this proposal provided that the additional issues identified by EDF Energy are addressed through future changes."

NPV Test**Respondents' Views**

EDF “note that in the consultation document (paragraph 4.3) NGG suggests that the NPV test is designed to ensure that new projects meet 50% of the value, and allowing Shippers to secure their capacity at a 0.0001p/kWh/day P0 Price will result in other Shippers having to cover the other 50% therefore creating a cross subsidy. However in the QSEC auctions Shippers can only secure capacity out to 17 years in the future, which in general is a lot shorter than the average life of the gas assets. With the development of substitution and transfer and trades, it appears unlikely that Shippers will not book long term entry capacity to secure their assets at future QSECs. However NGG appears to be ignoring these future revenues when meeting the project value. We would also note that the project value is developed by the Transportation model, and is not linked to the investment required. There is therefore equally a chance that when meeting the NPV test new ASEPs are creating a cross subsidy to existing Users if no investment is required. EDF Energy therefore believes that the NPV test needs reviewing in light of NGG’s comments. In particular it would appear that there may be a requirement to link the NPV test to the actual investment.”

National Grid's View

National Grid welcomes feedback on the economic test and will take the views expressed into account in future development of incremental entry capacity pricing.

Negative LRMCs**Respondents' Views**

EDF “note that currently the Transportation model is constrained so that it cannot develop negative charges. This creates issues were the site benefits from a negative LRMC; however the benefits to the system are not reflective of charges. In addition for storage points this creates the issue in that charges should net to zero, however the Transportation model prevents this. This again would appear to create a cross subsidy and is not reflected in either the NPV test or the development of charges. We therefore believe that this issue should also be addressed.”

National Grid's View

National Grid welcomes feedback on the capacity pricing methodology and will take the views expressed into account in future development of the charging methodology. Prices at storage sites do not net to zero as the benefits of negative LRMCs are linked to flows that are guaranteed such as those realised through the constrained LNG arrangements. Prices at storage sites could only justifiably net to zero if flows out of the system were guaranteed to match flows into the system at that point and clearly this would not be the case for a storage site which is procuring the right to flow in (entry capacity) independently of its right to flow out (exit capacity). Without guaranteed flows, the application of the minimum charge for either entry or exit, where a negative LRMC applies, can be justified as cost reflective but negative prices could not be justified. National Grid will keep this area of the charging methodology under review in regard to the combined impact of entry and exit capacity and commodity charges at storage sites and the potential for double counting.

6 Changes to the Original Proposal in the light of Representations Made

- 6.1 National Grid believes that no changes to the proposal are required in light of responses and questions raised throughout the GCM17 consultation process. The final proposal is therefore the same as the original proposal and is detailed in Section Seven below.

7 Final Proposal

- 7.1 National Grid proposes that:

- For new entry points, the P0 price within the QSEC price stack should be calculated consistently with the P0 price for all existing entry points.
 - The P0 price for existing entry points is the transportation model derived annuitised long run marginal cost for the relevant entry point with that point flowing at the obligated level.
- It is proposed that these arrangements are implemented with effect from 1st July 2009 and hence in relation to any QSEC auction held two months after that date.

8 Justification

Assessment against Licence Objectives

- 8.1 The National Grid Gas plc Gas Transporter Licence in respect of the NTS requires that proposed changes to the Charging Methodology shall achieve the relevant methodology objectives.
- 8.2 Where transportation prices are not established through an auction, prices calculated in accordance with the methodology should:
- 1) (a) Where transportation prices are not established through an auction, prices calculated in accordance with the methodology should reflect the costs incurred by the licensee in its transportation business;
 - 1) (bb) Where prices are established by auction, either
 - no reserve price is applied, or
 - that reserve price is set at a level best calculated to promote efficiency and avoid undue preference in the supply of transportation services; and
 - best calculated to promote competition between gas suppliers and between gas shippers;
 - 2) So far as is consistent with (1) properly take account of developments in the transportation business;
 - 3) So far as is consistent with (1) and (2) facilitate effective competition between gas shippers and between gas suppliers.
- 8.3 National Grid believes that GCM17 would satisfy the relevant objectives as it would remove a potential cross subsidy and hence avoid undue preference in the supply of transportation services.
- 8.4 GCM17 should remove the potential for perverse or speculative bidding behaviour at new ASEPs and hence should promote efficiency.
- 8.5 GCM17 should prevent cross subsidies between Users at different ASEPs and between entry Users and exit Users and hence should facilitate effective competition between gas shippers and between gas suppliers.
- 8.6 While the cost reflectivity obligation does not apply in regard to auction reserve prices, the proposal should ensure that other prices, particularly commodity prices, can be set in a more cost reflective manner.

Assessment against EU Gas Regulations

8.7 EC Regulation 1775/2005 on conditions for access to the natural gas transmission networks (binding from 1 July 2006) are summarised below. The principles for network access tariffs or the methodologies used to calculate them shall:

- Be transparent
- Take into account the need for system integrity and its improvement
- Reflect actual costs incurred for an efficient and structurally comparable network operator
- Be applied in a non-discriminatory manner
- Facilitate efficient gas trade and competition
- Avoid cross-subsidies between network users
- Provide incentives for investment and maintaining or creating interoperability for transmission networks
- Not restrict market liquidity
- Not distort trade across borders of different transmission systems.

8.8 National Grid believes that GCM17 is consistent with the principles listed above, specifically the amended methodology should;

- Reflect actual costs incurred for an efficient and structurally comparable network operator
- Be applied in a non-discriminatory manner
- Avoid cross-subsidies between network users
- Not distort trade across borders of different transmission systems.