

CONSULTATION DOCUMENT

Modification Proposals to the Gas Transmission Transportation Charging Methodology

NTS GCM 14: Constrained LNG Credits

27 November 2008

Table of Contents

EXECUTIVE SUMMARY	1
1 INTRODUCTION	2
Current Arrangements.....	2
Drivers for Change	2
Charging History	2
Scope	2
2 BACKGROUND	3
3 DISCUSSION AND ISSUES	4
Reasons for Change	4
Proposed CLNG Methodology	5
Effect on Existing Credits	7
Effect on Transportation Charges	7
4 NATIONAL GRID'S PROPOSED METHODOLOGY	8
Implementation.....	8
5 JUSTIFICATION.....	9
Licence Relevant Objectives.....	9
EU Gas Regulations.....	9
National Grid NTS's View.....	10
6 QUESTIONS FOR CONSULTATION	11
Appendix A.....	12

Executive Summary

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

This document sets out for consultation options for revising the Gas Transmission Transportation Charging Methodology (the “Charging Methodology”) with regard to the existing credits paid to shippers that book the ‘bundled’ storage service at Constrained LNG (CLNG) storage sites.

The paper takes forward the development work and Industry discussion on CLNG that have taken place within recent Gas Transmission Charging Methodology Forum (TCMF) meetings. At these meetings, National Grid identified and demonstrated that the current CLNG methodology does not appropriately incentivise National Grid.

This consultation paper:

1. describes the prevailing methodology applicable to CLNG storage sites,
2. summarises the issues associated with the existing methodology and suggests an alternative methodology, and
3. invites comment on the proposal prior to developing a final proposal.

In issuing this consultation paper, National Grid believes that, in principle, credits for Users that reduce the costs of Transmission through avoidance of network investment continue to be appropriate. National Grid believes that the level of the credit should reflect the specific costs avoided.

This consultation has been placed on National Grid’s industry information website:

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

1 Introduction

Current Arrangements

- 1.1 There are at present two Constrained LNG (CLNG) sites (Avonmouth and Dynevor Arms) where a credit may be paid via National Grid LNG to shippers that book the 'bundled' storage service. In 2008/9 the credit was only paid to shippers booking the 'bundled' storage service at Avonmouth since there was no requirement for this service at Dynevor Arms. This credit recognises the benefit of storage as a means of Transmission Support as an alternative to National Grid network investment.
- 1.2 Reserve prices for entry capacity are set following the methodology in GCM01. The NTS Transportation Model calculates the Long Run Marginal Costs (LRMCs) of transporting gas from each entry point to an exit point via a 'reference node'. The LRMCs are adjusted within the Tariff Model component of the NTS Transportation Model to maintain an equal split of revenue between Entry and Exit users. Under this methodology any negative reserve prices are set to the minimum level of 0.0001p/kWh/day within the Tariff Model.

Drivers for Change

- 1.3 The methodology for the calculation of the CLNG credits has not been reviewed for some time. In discussions on the general topic of negative entry prices it became clear that the current methodology does not appropriately incentivise National Grid, as it does not effectively reflect the avoided investment costs.

Charging History

- 1.4 NTS GCM01 (November 2006) proposed alternative methodologies for the determination of NTS entry and exit capacity prices. At this time the principle of 'non-negativity' of capacity prices was retained with negative entry reserve prices being set to the minimum of 0.0001p/kWh/day.
- 1.5 Transportation credits for CLNG were last consulted upon in Transco Pricing Consultation PC52 (February 2000) and the methodology given in the consultation report (April 2000) describes the calculation of the credit.

Scope

- 1.6 This consultation paper describes:
 - the prevailing methodology applicable to CLNG storage sites,
 - summarises the issues associated with the existing methodology and suggests an alternative methodology,
 - invites views on whether the proposed changes to our Charging Methodology meet National Grid NTS's relevant GT Licence objectives.

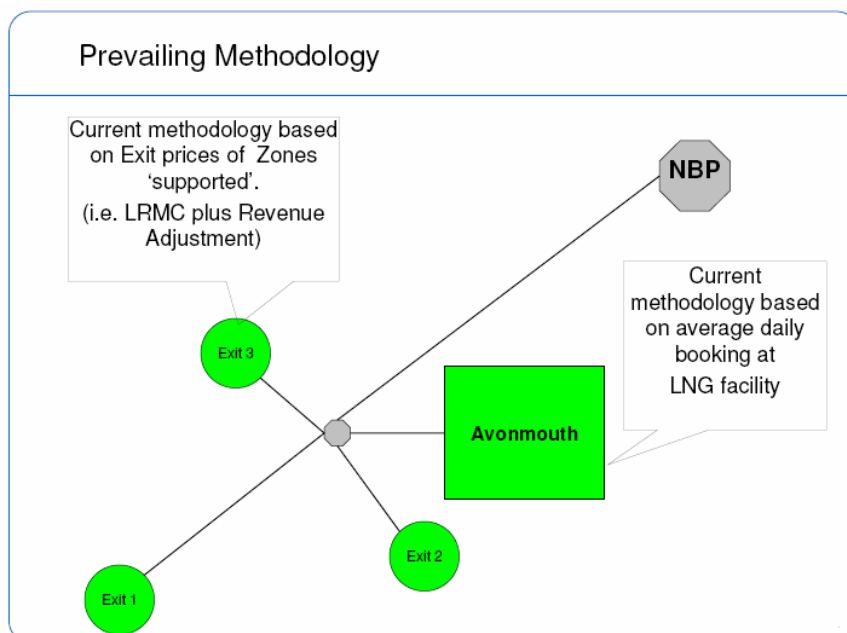
2 Background

- 2.1 The methodology for deriving Transportation credits applicable at CLNG storage facilities was last revised under Pricing Consultation PC52 (Transportation Credits for Constrained LNG issued February 2000). The credit is related to the exit capacity charge rates at the relevant exit zones (i.e. the zones in need of Transmission support) and is applied to the CLNG facility deliverability (net of operating margins) booked by shippers. These credits are available to shippers that book the 'bundled' service offered by National Grid LNG.
- 2.2 The current methodology has not been revised since 2000.
- 2.3 The credit derived under this methodology is based on the average daily CLNG requirements over the 1 in 20 peak day and the 1 in 50 severe winter.
- 2.4 The credit is based on the exit zone charges that the CLNG 'supports'. This therefore reflects the Long Run Marginal Cost of the provision of exit capacity and also includes a revenue adjustment which factors in non-asset and hence non-locational costs.
- 2.5 The present constrained storage sites are at Avonmouth and Dynevor Arms. In 2008/9 the constrained firm service is only required at Avonmouth.
- 2.6 The recent announcement concerning the disposal of the Dynevor Arms LNG storage facility has stated that there is no requirement by National Grid for a constrained service there in future. This means that under current arrangements Avonmouth is the only constrained LNG storage facility from 2009/10.

3 Discussion and Issues

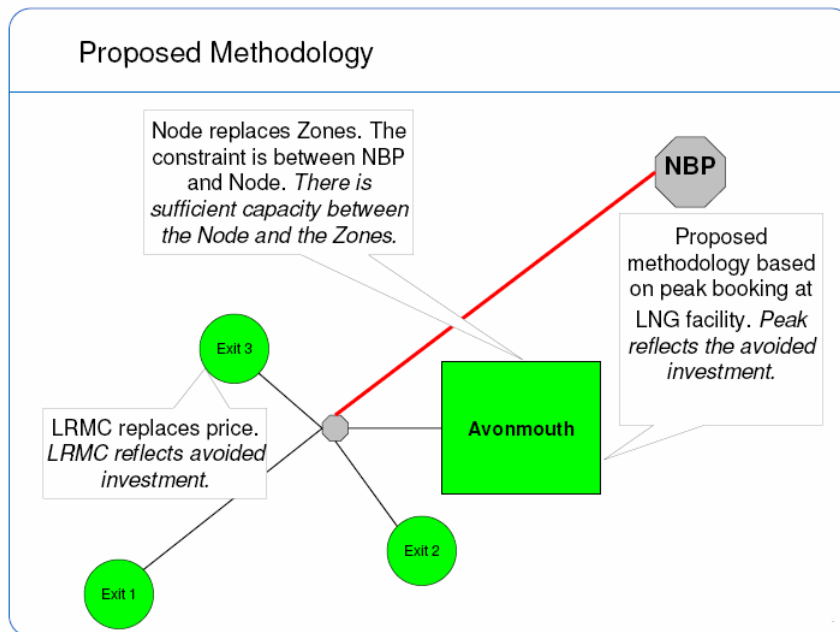
Reasons for Change

- 3.1 National Grid has a Licence obligation to reflect the costs incurred in the development of its charging methodology. The credit under the current CLNG methodology is based on the exit zones that the CLNG 'supports'. This includes a revenue adjustment which factors in non-asset costs. The LRMC would be more cost reflective of the alternative to CLNG i.e. investment in additional exit capacity.
- 3.2 The incentive on National Grid should be to reduce the level of constrained booking to the level just necessary to support its peak day and severe period obligations under the Licence. CLNG should be used in preference to infrastructure investment where it is economic and efficient to do so. The current methodology calculation is based on average daily CLNG requirements. Bookings made at the peak levels rather than average would better reflect the costs of the alternative infrastructure since pipes are built to meet the 1 in 20 peak day requirements.
- 3.3 As stated above, the current methodology uses the exit prices at the zones supported by CLNG. However the constraint is actually between the National Balancing Point (NBP) and the Node, i.e. the constrained entry point (Avonmouth), rather than the Zones supported. There is sufficient capacity between the constrained entry point and the Zones. The diagram below illustrates this.



Proposed CLNG Methodology

- 3.4 The service provided to National Grid in terms of transmission support should receive a credit to reflect the costs of the alternative to transmission support i.e. system investment. This credit should continue to be made available to those shippers booking the 'bundled service' at the constrained storage facilities as offered during the Annual Storage Invitation.
- 3.5 The diagram below illustrates the proposed methodology .



- 3.6 There are three key elements of the proposed methodology, as follows:
- The credit should be based on the **LRMC** rather than exit charges which include a revenue adjustment. This would be more cost reflective of the alternative to CLNG i.e. investment in additional exit capacity.
 - The credit should be based on the **LRMC at the node** rather than at the zones the CLNG supports since there is already sufficient capacity between the constrained entry point and the exit zones.
 - The credit should be based on **peak requirements** since investment in the network is to meet the 1 in 20 peak day Licence requirements. The current methodology gives equal weight to the requirements over a number of days which is less reflective of the costs of investment.
- 3.7 The present constrained storage sites are at Avonmouth and Dynevor Arms. In 2008/9 the constrained firm service is only required at Avonmouth. The requirements at these facilities and associated credits will be made available in the Annual Storage Invitation offered by LNG Storage.
- 3.8 The current CLNG methodology is administered via the 'bundled' storage service available to shippers that book this service at the constrained storage sites.

- 3.9 The following table shows example CLNG credits, for the prevailing and proposed methodologies, using data presented at the Gas TCMF held on 6 November 2008. The initial requirement is assumed to be a daily requirement for 60 GWh on the peak day, 20 GWh on Day 1 and 10 GWh on Day 2. This example shows the impact of reducing these requirement by 5 GWh per day at 2008/9 price levels at Avonmouth.

CLNG Storage Requirement			Indicative Annual Credit (£m)	
Volume (GWh)	Days	Peak Day (GWh/day)	Prevailing Methodology: Average & Exit Charge & Zonal Cost	Proposed Methodology: Peak only & LRMC & Nodal Cost
90	3	60	£2.9m	£2.9m
75	3	55	£2.5m	£2.7m
60	2	50	£2.9m	£2.4m

- 3.10 Appendix A explains the calculation of the credit under the proposed methodology for the example above.
- 3.11 The existing methodology does not incentivise National Grid to appropriately consider investment in relation to CLNG costs since there is an incentive to invest in the first 5 units of capacity to reduce the CLNG requirements from 90GWh to 75GWh but further investment in another 5 units of capacity to bring the requirements down to 60GWh results in increased CLNG costs for National Grid.
- 3.12 The proposed methodology results in reducing costs to National Grid as investment is provided as an alternative to CLNG. National Grid believes this better supports the long term incentive to invest where it is economic and efficient to do so.

Effect on Existing Credits

- 3.13 The existing credit rate at Avonmouth CLNG facility for the gas storage year May 2008 to April 2009 is 0.0032 pence per peak day kWh per day (p/pdkWh/d) and the rate that would have applied under the proposed methodology is 0.0049 p/pdkWh/d.
- 3.14 It can be seen that for bookings at this year's requirement level, the proposed methodology would have resulted in additional costs to National Grid. However, the cost differential may reduce or increase in future years due to the discontinuity of the existing methodology (as shown in 3.9 above). This creates significant uncertainty for National Grid and potentially undermines any investment case.

Effect on Transportation Charges

- 3.15 National Grid has a fixed allowance under the SO incentives with which to procure CLNG for the purposes of Transmission support. The incentive on National Grid is to minimise its expenditure by booking only the necessary level of CLNG. Changes in the CLNG credit methodology as proposed will have no effect on the fixed allowance under the SO incentive scheme and as a consequence there will be no resulting change in the SO commodity charge level. There will be no effect on any other transportation charges.

4 National Grid's Proposed Methodology

- 4.1 National Grid believes that a revision to the methodology for the calculation of the CLNG credits would better meet its Licence conditions.
- 4.2 Therefore, through NTS GCM 14, National Grid proposes that the CLNG credits methodology be revised so that:
- The credit is related to the peak daily CLNG requirement identified by National Grid,
 - The credit is based on the constrained entry node rather than the zone supported,
 - The credit is based on the LRMC of providing exit capacity at the constrained entry node rather than the exit charge.

Implementation

- 4.3 This proposal would be implemented for bookings made at CLNG facilities for the storage year 2009/10. Credits would be applicable from 1 May 2009.
- 4.4 The Notice of the CLNG credits applicable would be published on 1 March 2009.

5 Justification

Licence Relevant Objectives

- 5.1 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.
- 5.2 Where transportation prices are not established through an auction, prices calculated in accordance with the methodology should:
 - (1) Reflect the costs incurred by the licensee in its transportation business;
 - (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.
- 5.3 Where prices are established by means of auctions, either
 - (4) No reserve price is applied or
 - (5) Reserve prices are calculated at a level that promotes efficiency, avoids undue preference in the supply of transportation services and promotes competition between gas shippers and between gas suppliers.
- 5.4 National Grid NTS is obliged to keep the NTS Charging Methodology under review at all times for the purposes of ensuring that it achieves the relevant objectives.

EU Gas Regulations

- 5.5 EC Regulation 1775/2005 on conditions for access to the natural gas transmission networks (binding from 1 July 2006) states that 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.
- 5.6 All but the last of the principles listed above map onto the objectives for National Grid's Transmission Transportation Charging Methodology. In terms of cross border trade, the Regulation recognises that funding for network investment may require different tariffs across different transmission systems.

National Grid NTS's View

Cost Reflectivity

- 5.7 National Grid believes that, in order to comply with its licence obligation for the charging methodology to be cost reflective, CLNG credits (effectively negative charges) should reflect costs avoided.
- 5.8 National Grid believes that a credit, based on the LRMC (rather than the exit charge) at the Node (rather than the Zones) supported, better reflects the costs of the alternative infrastructure investment that would be necessary to support the 1 in 20 peak day requirement.
- 5.9 A credit related to National Grid's peak daily CLNG requirement, as opposed to an average daily requirement, is more cost reflective since investment in infrastructure is for peak day requirements.

Promoting Efficiency

- 5.10 National Grid believes that credits based on the costs of the alternative infrastructure will promote efficiency in that where the costs to National Grid are lower by making use of CLNG, unnecessary investment will be avoided. Where the costs of CLNG are more expensive the more appropriate long term solution of investment will be encouraged. Credits based on peak day requirements rather than average requirements will better promote this.
- 5.11 The proposed methodology will remove the current anomaly where a requirement over a lower number of days (following additional infrastructure investment) results in increased costs to National Grid rather than the expected decrease. This anomaly may lead to sub-optimal investment decisions.

Avoiding Undue Preference

- 5.12 All shippers booking the 'bundled storage service' at the CLNG facilities will receive the same credit.

Promoting Competition

- 5.13 The proposed methodology would facilitate competition by providing appropriate credits to users of CLNG facilities in recognition of the benefits provided through transmission support.

Assessment against EU Gas Regulations

- 5.14 National Grid believes that this proposal (NTS GCM 14) is consistent with the principles of the EU Gas Regulations.

6 Questions for Consultation

6.1 National Grid NTS invites views on whether the proposed changes to its Charging Methodology meet National Grid NTS's relevant GT Licence objectives, specifically that:

The CLNG credits methodology is revised so that:

- The credit is related to the peak booking by National Grid of CLNG,
- The credit is based on the LRMC at the CLNG node rather than the zone supported,
- The credit is based on the LRMC of providing exit capacity at the CLNG node rather than the exit charge.

6.2 The revised methodology would be applicable to bookings made at CLNG sites for the Gas storage year 2009/10. National Grid welcomes comments on the feasibility of this proposal.

The closing date for submission of your responses is **Tuesday 6th January 2009**.

Your response should be e-mailed to debra.a.hawkin@uk.ngrid.com or alternatively by post to Debra Hawkin, Regulatory Frameworks, National Grid, National Grid House, Gallows Hill, Warwick, CV34 6DA. If you wish to discuss any matter relating to this charge methodology consultation then please call ☎ 01926 656317.

Responses to this consultation will be incorporated within National Grid's conclusion report. If you wish your response to be treated as confidential then please mark it clearly to that effect.

Appendix A

Illustrative calculation of the credit under the proposed methodology at Avonmouth

Total Space	Gwh	860.400	860.400	860.400	A
Operating Margin Space	Gwh	177.400	177.400	177.400	B
Period of Actual Deliverability	Days	5.50	5.50	5.50	C
Space Monitor Requirement	Gwh	60.000	55.000	50.000	D
Forecast Maximum Duration	Days	1.0	1.0	1.0	E
Average Deliverability required	Gwh/d	60.000	55.000	50.000	F=D/E
Av CLNG as % of Available after OM		8.8%	8.1%	7.3%	G=D/(A-B)
TO Exit LRMC Apr 09; Avonmouth	p/pdkwh/d	0.0132	0.0132	0.0132	H
CLNG Credit 1 May 2009 (per unit of entry capacity)	p/pdkwh/d	-0.0012	-0.0011	-0.0010	I=-G*H
Annual discount	£'s	-2,890,800	-2,649,900	-2,409,000	J=-F * H * 10000 * 365
Credit pence per kWh of storage space(Excluding operating margins)		-0.42325037	-0.3879795	-0.3527086	= J * 100 / (1000000 * (A - B))