

## 8Stage 01: Modification

0XXX: *(Joint Office to insert number)*

# Review of the Supply Matching Merit Order in Setting Capacity Charges

At what stage is this document in the process?

- 01 Modification
- 02 Workgroup Report
- 03 Draft Modification Report
- 04 Final Modification Report

The Merit Order within the Transportation Model used in calculating capacity charges was implemented as part of GCM16 in 2009. At the time the Merit Order reflected the utilisation of supply. The Merit Order should be kept under review and updated if required.

In recent years there has been a change in the utilisation of supply around the Liquefied Natural Gas (LNG) and Mid Range Storage (MRS). There has been an increase in the amount of MRS utilised in recent years and a decrease in the amount of LNG that is being utilised. Though both these sources have been utilised on any cold day in the past 4 years, the change in utilisation should be reflected in the Merit Order in TPD UNC Section Y.



The Proposer recommends that this modification should be:

- assessed by a Workgroup



High Impact:



Medium Impact:



Low Impact:

National Grid Transmission, Gas Distribution Network Operators, Shippers and Suppliers

0xxx

Modification

Day Month 2014

Version 1.0

Page 1 of 10

© 2015 all rights reserved

## Contents

1	Summary	3
2	Why Change?	4
3	Solution	5
4	Relevant Objectives	6
5	Implementation	8
6	Legal Text	9
7	Recommendation	10

## About this document:

This modification will be presented by the proposer to the panel on 16 Oct 2014.

The panel will consider the proposer's recommendation and agree whether this modification should be:

- issued for consultation, or
- referred to a workgroup for assessment.



Any questions?

Contact:  
Code Administrator



enquiries@gasgovern  
ance.co.uk



0121 288 2107

Proposer:  
National Grid NTS



laura.butterfield@natio  
nalgrid.com



01926 656160

Additional contacts:  
Colin Williams



colin.williams@nation  
algrid.com



01926 655916

0xxx

Modification

Day Month 2014

Version 1.0

Page 2 of 10

© 2015 all rights reserved

# 1 Summary

## Is this a Self-Governance Modification?

Self-Governance does not apply to this Modification.

## Is this a Fast Track Self-Governance Modification?

Fast Track Self-Governance does not apply to this Modification.

## Why Change?

The Merit Order within the Transportation Model was implemented as part of GCM16 in 2009. At the time the Merit Order reflected the utilisation of supply. National Grid must keep the charging methodology under review as part of its Licence conditions. Therefore the ordering of the supply source groups should be kept under review to reflect further developments in supplies and be consistent with what happens on the network.

In recent years there has been a change in selective utilisation of Liquefied Natural Gas (LNG) and Mid Range Storage (MRS). We have seen an increase in the use of MRS and ~~and~~ a decrease in the amount of LNG that is being utilised. Both these sources have been utilised on any cold day in recent years.

## Solution

It is proposed to amend the current Merit Order which is specified in UNC TPD Section Y so that it aligns to the current utilisation of the supplies in the current years.

This Modification proposes to amend the Merit Order to combine the supply which is against MRS and LNG into one group within the Merit Order and prorate as currently specified in the methodology.

## Relevant Objectives

Implementation of this Modification Proposal would facilitate the following Relevant Objectives:

- a) Save in so far as paragraphs (aa) or (d) apply, that compliance with the charging methodology results in charges which reflect the costs incurred by the licensee in its transportation business;
- aa) That, in so far as prices in respect of transportation arrangements are established by auction, either:
  - (i) no reserve price is applied, or
  - (ii) that reserve price is set at a level -
    - (I) best calculated to promote efficiency and avoid undue preference in the supply of transportation services; and
    - (II) best calculated to promote competition between gas suppliers and between gas shippers;
- b) That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business;

## Implementation

No implementation timescales are suggested at this time. National Grid NTS will discuss this through the workgroups.

## Does this modification affect the Nexus delivery, if so, how?

This does not affect the Nexus delivery.

0xxx

Modification

Day Month 2014

Version 1.0

Page 3 of 10

© 2015 all rights reserved

## 2 Why Change?

The Transportation Model calculates the Entry and Exit Capacity reserve prices. Within the Transportation model there is a specific Merit Order to scale the supplies to meet demand. For the Transportation Model to run the supplies must equal the demand. This Merit Order should reflect supply utilisation and the merit order to use supply types is specified within TPD UNC Section Y – Section 2.5.1(c).

The Merit Order used within the Transportation Model was implemented as part of GCM 16 which was implemented in 2009. At the time the Merit Order which is currently specified within Section Y and the Transportation Model reflected the supply utilisation.

The current Merit Order within the UNC and Transportation Model is specified as below and the adjustment shall be carried out by reducing supplies in the following order to the point at which supplies equal the forecast demand:

- (i) short range Storage Facilities;
- (ii) mid range Storage Facilities;
- (iii) LNG Importation Facilities;
- (iv) long range Storage Facilities;
- (v) pipeline interconnectors; and
- (vi) beach terminals.

In recent years the utilisation of supply on a highest demand day data based on the percentage of supplies has changed. There has been an increase in MRS and a decrease in LNG utilised over recent years.

<b>Financial Year</b>	<b>LNG</b>	<b>MRS</b>
<b>2010/2011</b>	<b>17.36%</b>	<b>3.77%</b>
<b>2011/2012</b>	<b>18.70%</b>	<b>12.12%</b>
<b>2012/2013</b>	<b>7.70%</b>	<b>16.79%</b>
<b>2013/2014</b>	<b>2.47%</b>	<b>13.24%</b>

The data above shows a change in the amount of LNG and MRS supply used on the cold day in the applicable year. With the reductions in LNG over these years being representative of the general trend in use of LNG as a supply source, the value for 2013/14 may be lower than it would otherwise have been due to additional global factors at the time such as the use of LNG in Japan.

LNG and MRS have both been used during cold days over the past 4 years therefore we are proposing an amendment to the Merit Order within the Transportation Model.

The utilisation at entry points has changed since GCM16 was implemented in 2009 and we recognise that this could change in the future and therefore the merit order will need to continue to be reviewed as and when it may be required to be consistent with what happens on the network.

0xxx

Modification

Day Month 2014

Version 1.0

Page 4 of 10

© 2015 all rights reserved

### 3 Solution

It is proposed to amend UNC TPD Section Y – Section 2.5.1 (c) to ensure that the Merit Order specified in the UNC is reflective of how supplies are currently utilised.

This proposal seeks to amend the Merit Order to combine MRS and LNG into one group within the Merit Order and prorate the supplies (i.e. use an equal % of each group to achieve the supply and demand match required) when matching demand in accordance with the process specified in the methodology.

#### User Pays

Classification of the modification as User Pays, or not, and the justification for such classification.

No User Pays service would be created or amended by implementation of this modification and it is not, therefore, classified as a User Pays Modification.

Identification of Users of the service, the proposed split of the recovery between Gas Transporters and Users for User Pays costs and the justification for such view.

Not applicable

Proposed charge(s) for application of User Pays charges to Shippers.

Not applicable

Proposed charge for inclusion in the Agency Charging Statement (ACS) – to be completed upon receipt of a cost estimate from Xoserve.

Not applicable

0xxx

Modification

Day Month 2014

Version 1.0

Page 5 of 10

© 2015 all rights reserved

## 4 Relevant Objectives

Impact of the modification on the Relevant Charging Methodology Objectives:	
Relevant Objective	Identified impact
a) Save in so far as paragraphs (aa) or (d) apply, that compliance with the charging methodology results in charges which reflect the costs incurred by the licensee in its transportation business;	Positive
aa) That, in so far as prices in respect of transportation arrangements are established by auction, either: (i) no reserve price is applied, or (ii) that reserve price is set at a level - (I) best calculated to promote efficiency and avoid undue preference in the supply of transportation services; and (II) best calculated to promote competition between gas suppliers and between gas shippers;	Positive
b) That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business;	Positive
c) That, so far as is consistent with sub-paragraphs (a) and (b), compliance with the charging methodology facilitates effective competition between gas shippers and between gas suppliers; and	None
d) That the charging methodology reflects any alternative arrangements put in place in accordance with a determination made by the Secretary of State under paragraph 2A(a) of Standard Special Condition A27 (Disposal of Assets).	None
e) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.	None

- a) Save in so far as paragraphs (aa) or (d) apply, that compliance with the charging methodology results in charges which reflect the costs incurred by the licensee in its transportation business;

The implementation of this modification would align to the current supply source utilisation and ensure that the Entry and Exit reserve prices are reflective and consistent with what happens on the network.

- aa) That, in so far as prices in respect of transportation arrangements are established by auction, either:  
(iii) no reserve price is applied, or  
(iv) that reserve price is set at a level -  
(I) best calculated to promote efficiency and avoid undue preference in the supply of transportation services; and  
(II) best calculated to promote competition between gas suppliers and between gas shippers;

The implementation of this modification would align to the current supply source utilisation and ensure that the Entry and Exit reserve prices are reflective and consistent with what happens on the network.

- b) That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business;

This modification will take into account developments that have taken place since the current Merit Order was introduced as part of GCM16 in 2009. This modification seeks

0xxx

Modification

Day Month 2014

Version 1.0

Page 6 of 10

© 2015 all rights reserved

to update UNC TPD Section Y to amend the Merit Order to reflect the current supply utilisation.

This modification does not conflict with:

- (i) paragraphs 8, 9, 10 and 11 of Standard Condition 4B of the Transporter's Licence; or
- (ii) paragraphs 2, 2A and 3 of Standard Special Condition A4 of the Transporter's Licence;

0xxx

Modification

---

Day Month 2014

---

Version 1.0

---

Page 7 of 10

---

© 2015 all rights reserved

## 5 Implementation

If a decision is made between 01 October in gas year Y and 31 March in gas year Y then the first charges this methodology change would impact would be Exit Capacity on 01 October of gas year Y+1.

If a decision is made between 01 April in gas year Y and 30 September in gas year Y then the first charges this methodology change would impact would be QSEC Auction of gas year Y+1.

Example:

Decision between 01 October 2014 and 31 March 2015 then implementation would be for Exit Capacity from 01 October 2015 and impact QSEC 2016 Auction onwards.

Decision between 01 April 2015 and 30 September 2015 then implementation would be for QSEC 2016 Auction and first impact on Exit Capacity Prices from 01 October 2016.

No implementation timescales are suggested at this time. National Grid NTS will discuss this through the Workgroups.

No implementation costs are anticipated.

0xxx

Modification

Day Month 2014

Version 1.0

Page 8 of 10

© 2015 all rights reserved



## 6 Legal Text

Amendment to the text within TPD Section Y of the UNC is to combine Mid range Storage Facilities and LNG Importation Facilities into one group within the Merit Order of Supply used to set the Entry and Exit Capacity Charges within the Transportation Model.

Inclusion of wording to state how the supplies are reduced in the balancing group within the Merit Order, to ensure that supply equals demand.

### 2.5.1 The Transport Model

#### Model Input Data

- (a) The Transport Model calculates the marginal costs of investment required in the National Transmission System as a consequence of an increase in demand for gas or supply of gas at each System Point or node on the National Transmission System. Such calculation is based upon analysis of peak conditions on the National Transmission System and the costs of investment which are expressed in £/GWhkm. Where there is an increase in demand for gas or supply of gas at a System Point the marginal changes in flow distances (measured in GWhkm) for a small energy injection to the system (measured in GWh) shall be estimated initially by reference to the increases or decreases in units of kilometres of the National Transmission System.
- (b) The Transport Model requires a set of inputs which are consistent with the costs incurred by National Grid NTS in making NTS Exit (Flat) Capacity available on the National Transmission System:
- (i) Nodal supply and demand data (GWh)
- (A) Demand data shall be derived in relation to each NTS Exit Point as the lesser of:
- (1) the National Grid NTS forecast undiversified 1-in-20 peak day demand at the relevant NTS Exit Point, provided that:
- (aa) for any NTS Connected Offtake System which is a Storage Facility or a pipeline interconnector and which has a physical entry capability, demand at the relevant NTS Connected System Exit Point shall be deemed to be zero;
- (bb) for NTS/LDZ Offtakes, the National Grid NTS forecast undiversified 1-in-20 peak day demand in the relevant LDZ shall be prorated between the relevant NTS/LDZ Offtakes on the basis of the amount of NTS Exit (Flat) Capacity registered at each of the relevant NTS/LDZ Offtakes;

For the purposes of this paragraph, “National Grid NTS forecast undiversified 1-in-20 peak day demand” means the 1-in-20 peak day demand for the National Transmission System that is derived from the summation of the forecast peak demands and load duration curves for each NTS Supply Point, NTS CSEP and NTS/LDZ Offtake; and

0xxx  
Modification

Day Month 2014

Version 1.0

Page 9 of 10

© 2015 all rights reserved

- (2) the aggregate of the Baseline NTS Exit (Flat) Capacity and incremental NTS Exit (Flat) Capacity in respect of the relevant NTS Exit Point,

provided that paragraph (2) above shall be ignored for the purposes of setting or determining any indicative NTS Exit (Flat) Capacity Charges;

- (B) Aggregate System Entry Point supplies
  - (ii) Transmission pipelines between each node (measured in km) and calculated by reference to;
    - (1) Existing pipelines
    - (2) New pipelines expected to be operational on or before the start of the Gas Year under analysis
  - (iii) Identification of a reference node.

### Model Inputs

- (c) The nodal supply data for the Transport Model shall be derived from the supply/demand data set out in the most recent Ten Year Statement<sup>3</sup> for each Gas Year for which prices are being determined. The aggregate supply flow shall be adjusted to ensure that the values for supply and demand are equal. This adjustment shall be carried out by reducing supplies in the following order to the point at which supplies equal the forecast demand:

- (i) short range Storage Facilities;
- (ii) mid range Storage Facilities [and LNG Importation Facilities](#);
- ~~(iii) [LNG Importation Facilities](#);~~
- ~~(iii\*)~~ long range Storage Facilities;
- (iv) pipeline interconnectors; and
- (vi) beach terminals.

[Within the group which balance the supplies against the demand the supplies will be pro-rated based on supply numbers specified in the Ten Year Statement.](#)

The supply figures for Individual System Entry Points at Storage Facilities and/or pipeline interconnectors may be set at a level that is less than or equal to the expected entry point capability.

- (d) Nodal demand data for the Transport Model shall be derived from a range of different data sources as more particularly described in paragraph 2.5.1(b)(i).
- (e) National Transmission System network data for the charging year will be based on data taken from National Grid NTS's most recent Ten Year Statement.

## 7 Recommendation

The Proposer invites the Panel to:

- Progress to Workgroup assessment/Consultation.

Oxxx

Modification

Day Month 2014

Version 1.0

Page 10 of 10

© 2015 all rights reserved

<sup>3</sup> See Appendix C for definitions.