

To: National Grid Gas plc

**Gas Act 1986
Section 23(1)(a)**

**Modification of the special conditions of the gas transporter licence held by
National Grid Gas plc**

1. National Grid Gas plc is the holder of a gas transporter licence ('the Licence') granted or treated as granted under section 7 of the Gas Act 1986 ('the Act').
2. Under section 23(2) of the Act the Gas and Electricity Markets Authority ('the Authority')¹ gave notice on 8 February 2018 ('the Notice') that we propose to modify Special Condition 3D and Special Condition 8K of the Licence. We stated that any representations to the modification proposal must be made on or before 8 March 2018.
3. A copy of the Notice was sent to the Secretary of State in accordance with section 23(4)(b) of the Act, and we have not received a direction that the change should not be made.
4. We received one response to the Notice, which we carefully considered. We have placed all non-confidential responses on our website. Our response to these comments is set out in the accompanying letter.
5. We are making these licence change so that:
 - Two to Five Days Ahead Demand Forecasting Incentive
 - Greenhouse Gas Emissions Incentive
 - Maintenance Incentive

are extended from 1 April 2018 to 31 March 2021.

6. The effect of the modifications is set out in schedule 1. It will amend Special Condition 3D and Special Condition 8K so so that the incentives are extended to 31 March 2021.
7. Where an application for permission to appeal our decision is made to the Competition and Markets Authority (CMA) under section 23B of the Act, Rule 5.7 of the Energy Licence Modification Appeals: Competition and Markets Authority Rules² requires that the appellant must send to any relevant licence holders who are not parties to the appeal a non-sensitive notice setting out the matters required in Rule 5.2. The attached Schedule 2 provides a list of the relevant licence holders in relation to this modification. Section 23(10) of the Act sets out the meaning of 'relevant licence holder'.

Under the powers set out in section section 23(1)(a) of the Act, we hereby modify the special conditions of the gas transporter licence of National Grid Gas plc in the manner specified in attached Schedule 1. This decision will take effect from 22 May 2018.

This document is notice of the reasons for the decision to modify the gas transporter licence held by National Grid Gas plc as required by section 38A of the Act.

¹ The terms "the Authority", "we" and "us" are used interchangeably in this document.

² CMA70 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/655601/energy-licence-modification-appeals-rules.pdf

**The Official Seal of the Gas and Electricity Markets Authority
here affixed is authenticated by the signature of**

Cathryn Scott

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**Partner, Wholesale Markets
Duly authorised on behalf of the
Gas and Electricity Markets Authority**

27 March 2018

Schedule 1 – Licence drafting

Special Condition 3D: NTS System Operator external incentives, costs and revenues

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PART E Quality of Demand Forecasting Incentive Revenue (QDFIR_t)

3D.33 For the purposes of the Principal Formula, QDFIR_t (£m) in respect of the Formula Year t is derived in accordance with the following formula:

$$QDFIR_t = QDAIR_t + QTFIR_t$$

3D.34 In the above formula for QDFIR_t:

QDAIR_t means the Quality of Day Ahead Demand Forecasting Incentive Revenue (£m) in respect of Formula Year t as derived in accordance with paragraph 0 of this condition.

QTFIR_t means the Quality of Two to Five Days Ahead Demand Forecasting Incentive Revenue (£m) in respect of Formula Year t as derived in accordance with paragraph 0 of this condition.

(a) Quality of Day Ahead Demand Forecasting Incentive Revenue (QDAIR_t)

3D.35 For the purposes of paragraph 0 of this condition, QDAIR_t (£m) allowed to the Licensee in respect of the Formula Year t commencing on 1 April 2013 and each subsequent Formula Year t until 31 March 2021 is derived in accordance with Table 4 below:

Table 4

For Formula Year t	
DAFIE _t	QDAIR _t
$0 \leq DAFIE_t < DFA_t$	10
$DFA_t \leq DAFIE_t < 7.65 + DFA_t$	$10 - (1.111x (DAFIE_t - DFA_t))$
$7.65 + DFA_t \leq DAFIE_t < 9.35 + DFA_t$	$15 - (1.7647x (DAFIE_t - DFA_t))$
$9.35 + DFA_t \leq DAFIE_t$	-1.5

where:

DAFIE_t means the Day ahead demand forecasting incentivised average forecast error as derived in accordance with the following formula:

$$DAFIE_t = \sum_d \left(\left| DADF_d - AD_d \right| x \frac{AD_d}{\sum_d AD_d} \right)$$

where:

$\sum_d x$ means the sum of x for all Days d in the Formula Year t.

DADF_d means the Day ahead forecast NTS throughput value (mcm) for all Days in Formula Year t published by the Licensee (in accordance with the network code) on its website not later than 14:00 hours at Day ahead (d-1) in respect of each Day of Formula Year t. Where the day ahead 14:00 forecast NTS throughput value is not published by 14:00 hours at Day ahead (d-1), the next forecast published on the Licensee's website for the Day concerned shall be used.

AD_d means Actual NTS Throughput (mcm) on a given Day d, calculated five Days following the Day (d+5), on each Day of Formula Year t.

DFA_t means the Day ahead demand forecasting adjustment in respect of Formula Year t as derived in accordance with the following formula:

$$DFA_t = \text{Min} [DFSA_t, 1]$$

where :

DFSA_t means the demand forecasting short-cycle storage adjustment in respect of Formula Year t as derived in accordance with the following formula:

$$DFSA_t = 0.038 \times (AIC_t - AIC_{t-1}) + (DFSA_{t-1} \times DFCI_t)$$

and for the Formula Year t commencing on 1 April 2012 shall take the value zero.

where:

AIC_t means the average annual capability to have gas injected (expressed in mcm/d) at Short-Cycle Storage Facilities connected to the NTS in respect of Formula Year t. In respect of the Formula Year t commencing on 1 April 2012 this shall take the value 30.3 and for all subsequent Formula Years will be derived in accordance with the following formula:

$$AIC_t = \left[\frac{\sum_d ASF_{d,t}}{DIY_t} \right]$$

ASF_{d,t} means the aggregate capability of any relevant Short-Cycle Storage Facilities connected to the NTS to have gas injected (expressed in mcm/d) on Day d of Formula Year t as specified in the storage capacity notices submitted by the relevant Storage Operator to the Licensee (and updated from time to time) pursuant to the relevant Storage Connection Agreements.

DFCI_t means the Demand Forecasting Adjustment Continuous Improvement Factor and in Formula Year t shall take the value 0.5.

DIY_t means the number of Days in Formula Year t.

Short-Cycle Storage Facility

means for the purposes of this condition a Storage Facility which regularly utilises its capability both to withdraw and inject gas into the facility on the same Day. The Licensee shall publish, and keep up to date, a list of sites that regularly utilise their capability both to withdraw and inject gas into the facility on the same Day on its website.

(b) Quality of Two to Five Days Ahead Demand Forecasting Incentive Revenue (QTFIR_t)

3D.36 For the purposes of paragraph 0 of this condition, QTFIR_t (£m) allowed to the Licensee in respect of Formula Year t commencing on 1 April ~~2015~~ 2018 and each subsequent Formula Year t until 31 March ~~2018~~ 2021 is derived in accordance with Table 5 below:

Table 5

For Formula Year t	
TFIE _t	QTFIR _t
$0 \leq TFIE_t \leq 15.07$	$10 - (0.729927 \times TFIE_t)$
$15.07 < TFIE_t$	-1

where:

TFIE_t means the two to five Days ahead demand forecasting incentivised average forecast error as derived in accordance with the following formula:

$$TFIE_t = \frac{\sum_{i=2}^5 FE_{d-i}}{4}$$

where:

$$\sum_{i=2}^5 x_{d-i}$$

means the sum of x_{d-i} for all i from $i = 2$ to $i = 5$ where for $i = 2$ the value of x_{d-i} means the value for two Days ahead of the Day and for $i = 5$ the value of x_{d-i} means the value for five Days ahead of the Day.

FE_{d-i} means the average forecast error (mcm) as derived in accordance with the following formula:

$$FE_{d-i} = \sum_d \left(\left| DF_{d-i} - AD_d \right| x \frac{AD_d}{\sum_d AD_d} \right) \quad \text{for } i = 2, 3, 4 \text{ and } 5$$

where:

$\sum_d x$ means the sum of x for all Days d in the Formula Year t .

DF_{d-i} means the demand forecast NTS throughput value (mcm) for all Days in Formula Year t published by the Licensee on its website not later than 16:00 hours at two, three, four and five Days ahead ($d-2$, $d-3$, $d-4$, $d-5$) in respect of each Day of Formula Year t . Where the two, three, four or five Days ahead 16:00 forecast NTS throughput values are not published by 16:00 hours at two, three, four or five Days ahead ($d-2$, $d-3$, $d-4$, $d-5$), the next forecast published on the Licensee's website for the gas Day concerned shall be used.

PART F Greenhouse Gas Emissions Incentive Revenue (GHGIR_t)

3D.37 For the purposes of the Principal Formula, GHGIR_t (£m) allowed to the Licensee in respect of Formula Year t commencing on 1 April ~~2015~~ 2018 and each subsequent Formula Year t until 31 March ~~2018~~ 2021 shall depend on the value of VIPM_t and is derived in accordance with Table 6 below:

Table 6

VIPM _t	GHGIR _t
VIPM _t ≤ VIT _t	0
VIPM _t > VIT _t	[(VIT _t – VIPM _t) x VIRP _t]/1,000,000

where:

VIPM_t means the venting incentive performance measure (in tonnes of natural gas) in respect of Formula Year t which shall be the aggregate amount of natural gas released to the atmosphere by Venting from all Relevant Compressors.

VIT_t means the venting incentive target (in tonnes of natural gas) in respect of Formula Year t and shall take the value as set out in Table 7 below:

Table 7

Formula Year	VIT _t
2015/16	2,744
2016/17	2,897
2017/18	2,897
<u>2018/19</u>	<u>2,897</u>
<u>2019/20</u>	<u>2,897</u>
<u>2020/21</u>	<u>2,897</u>

VIRP_t means the venting incentive reference price (in £/tonne of Natural Gas Vented) in respect of Formula Year t as derived in accordance with the following formula:

$$VIRP_t = NTCP_t \times VF_t$$

where:

NTCP_t means the Non Traded Carbon Price (in £/tCO₂e) in respect of Formula Year t as derived in accordance with the following formula:

$$\text{NTCP}_t = \frac{\sum_{m=1}^{12} [\text{NTMCP}_{m,t,y} \times \text{IF}_{m,t,y}]}{12}$$

where:

$\sum_{m=1}^{12} [x_{m,t}]$ means the sum of $x_{m,t}$ for months $m=1$ to $m=12$ where $m=1$ is the first month of Formula Year t and $m=12$ is the last month of Formula Year t .

$\text{NTMCP}_{m,t,y}$ means the latest Non Traded Central Carbon Price (£/tCO₂e) for month m in Formula Year t as published in advance of month m by the Department of Energy and Climate Change (or any other government department from time to time) in year y prices.

$\text{IF}_{m,t,y}$ means the inflation factor from year y to month m in Formula Year t as derived in accordance with the following formula:

$$\text{IF}_{m,t,y} = \frac{\text{AI}_t}{\text{AI}_y}$$

where:

AI_t means the annual inflation index for Formula Year t and is equal to the arithmetic average of the retail prices index numbers published or determined with respect to each of the six months from July to December (both inclusive) in Formula Year $t-1$.

AI_y means the annual inflation index for year y and is equal to the arithmetic average of the retail prices index numbers published or determined with respect to each of the six months from July to December (both inclusive) in year $y-1$.

VF_t means the venting equivalent factor that represents the number of tonnes of CO₂ equivalent of each tonne of natural gas Vented in respect of Formula Year t shall take the value 21.

Greenhouse Gas Emissions Project Costs (GHGC_t)

3D.38 For the purposes of the Principal Formula, GHGC_t shall be of a positive or zero value as directed by the Authority for the purposes of paragraph 8D.3 of Special Condition 8D (Requirement to undertake a Scheme of Work to facilitate the establishment of a long term external gas system operator incentive to reduce targeted greenhouse gases). In the event that the Licensee incurs costs in fulfilling its obligations pursuant to Special Condition 8D that it considers should be recovered via GHGC_t, the Licensee shall by 31 July in the Formula Year t following the Formula Year in which those costs are incurred provide a statement to the Authority detailing the costs incurred in Formula Year $t-1$ and

justification that those costs were efficiently incurred. Upon receipt of the statement, the Authority will determine the extent to which the Licensee's costs were efficiently incurred and, if appropriate, shall issue a direction specifying the value of GHGC_t . The value of GHGC_t in Formula Year t shall be zero or as directed by the Authority.

3D.39 For the purpose of Part F of this condition:

Relevant Compressor means gas and electrically powered gas compression equipment forming part of the pipeline system to which this licence relates that is used by the Licensee to increase the pressure of gas in part of that pipeline system.

Venting means the release of natural gas from a Relevant Compressor as a result of:

- (a) starting a compressor;
- (b) purging a compressor;
- (c) depressurising a compressor; or
- (d) the leakage of gas through a seal around the shaft of a compressor.

PART G The Maintenance Incentive Revenue (MIR_t)

3D.40 For the purposes of the Principal Formula, MIR_t (£m) allowed to the Licensee in respect of Formula Year t commencing on 1 April ~~2015~~ 2018, 1 April ~~2016~~ 2019 and 1 April ~~2017~~ 2020 is derived in accordance with the following formula:

$$MIR_t = MCIR_t + MDIR_t$$

In the above formula for MIR_t:

MCIR_t means, the Maintenance Change Incentive Revenue (£m) allowed to the Licensee in respect of Formula Year t as derived in accordance with paragraph 0 of this condition.

MDIR_t means the Maintenance Days Incentive Revenue (£m) allowed to the Licensee in respect of Formula Year t as derived in accordance with paragraph 0 of this condition.

(a) The Maintenance Change Incentive Revenue (MCIR_t)

3D.41 For the purposes of paragraph 0 of this condition, MCIR_t (£m) is derived in accordance with the following formula:

if $MCICD_t < MCITD_t$, then:

$$MCIR_t = \text{Min}[MCIPM_t \times 0.05, MCICAP_t];$$

otherwise:

$$MCIR_t = \text{Max}[MCIPM_t \times 0.05, MCIFLOOR_t]$$

In the above formula for MCIR_t:

MCIPM_t means the Maintenance Change Incentive Performance Measure in respect of Formula Year t as derived in accordance with the following formula:

$$MCIPM_t = MCITD_t - MCICD_t;$$

where:

MCICD_t means the total number of actual Maintenance Change Days in Formula Year t.

MCITD_t means the Maintenance Change Incentive Target (Days) in respect of Formula Year t as derived in accordance with the following formula:

$$MCITD_t = 0.0725 \times MW_t$$

where:

MW_t means the Maintenance Workload (Days) in respect of Formula Year t and shall be equal to the number of Maintenance Plan Days in Formula Year t.

$MCICAP_t$ means the Maintenance Change Incentive cap, and in Formula Year t shall take the value of £0.5m.

$MCIFLOOR_t$ means the Maintenance Change Incentive floor, and in Formula Year t shall take the value of -£0.5m.

(b) The Maintenance Days Incentive Revenue ($MDIR_t$)

3D.42 For the purpose of paragraph 0 of this condition $MDIR_t$ (£m) is derived in accordance with the following formula:

if $MD_t \leq 4$, then:

$$MDIR_t = (MDPM_t - 6) \times 0.025 + 6 \times 0.015$$

if $5 \leq MD_t \leq 10$, then:

$$MDIR_t = MDPM_t \times 0.015$$

otherwise:

$$MDIR_t = \text{Max}[MDPM_t \times 0.02, MDIFLOOR_t]$$

3D.43 In the above formula for $MDIR_t$:

$MDPM_t$ means the Maintenance Days Performance Measure in respect of Formula Year t as derived in accordance with the following formula:

$$MDPM_t = MDT_t - MD_t;$$

where:

MD_t means the total number of Maintenance Plan Days, other than Advice Notice Days, on which the Licensee has undertaken Maintenance in respect of Valve Operations in Formula Year t. Where a Maintenance Plan Day is used for activities other than Valve Operations, it shall not be included within MD_t .

MDT_t means the target number of Maintenance Plan Days in respect of Valve Operations, other than Advice Notice Days, in the Formula Year t and shall take the value of 11 (unless otherwise directed by the Authority following notification to it by the Licensee of a change made to maintenance and operational policy to comply with new or revised safety regulations including but not limited to The Pipeline Safety Regulations 1996 (SI 1996 No 825)).

MDIFLOOR_t means the Maintenance Days Incentive floor, and in Formula Year t shall take the value of -£0.5m.

3D.44 For the purpose of Part G of this condition:

Advice Notice Day shall be any Maintenance Plan Day in relation to which the Licensee has formally notified the customer of a maintenance activity to be carried out in alignment with that customer's maintenance programme as agreed following bilateral discussions between the customer and the Licensee.

shall be any Maintenance Plan Day, where the Licensee has initiated a change compared to the Maintenance Plan, unless:

Maintenance Change Day (i) the Licensee has requested the change to facilitate the requirements of another Maintenance Relevant Party;

(ii) in the case of where the customer has cancelled an Advice Notice Day, the licensee deemed it reasonably necessary to initiate another Maintenance Plan Day for the same maintenance activity; (iii) in the case of an Advice Notice Day, the Licensee has requested the change to align its maintenance activities with a customer and the change continues to align with the same customer maintenance programme or another maintenance programme agreed with the customer; or

(iv) in the case of an Advice Notice Day, the Advice Notice Day includes more than one maintenance activity and the Licensee has requested the change to move some of the maintenance activity to another maintenance programme agreed with the customer.

Changes for the purposes of this term result in:

(a) a change in date, including a change to the number of days that one or more Maintenance Relevant Parties are affected by a Maintenance Plan Day; and

(b) a cancellation of a Maintenance Plan Day.

Maintenance Plan shall be the year ahead plan that is made up of the notifications of Maintenance Plan Days that the Licensee sends to Maintenance Relevant Parties on or before 1 April for the Formula Year t in respect of Maintenance Plan Days.

Maintenance Plan Day shall be any planned Maintenance Day included within the Maintenance Plan or any planned Maintenance Day subsequently added to the

Maintenance Plan after 1 April in the relevant Formula Year that is related to one or more of the following maintenance activities (for the avoidance of doubt, (a) where a single Maintenance activity affects multiple Maintenance Relevant Parties on a day, this will be construed as a single Maintenance Plan Day; and (b) this includes Advice Notice Days):

- (a) routine maintenance (e.g. routine valve operations);
- (b) planned asset replacement and reinforcements, including but not limited to boiler replacements, work to facilitate the replacement of compressors to enable compliance with emissions related legislation and incremental capacity requirements; and
- (c) In-Line Inspections where these activities affect one or more Maintenance Relevant Parties where this party is a NTS Supply Point or an NTS Connected System Exit Point. For the avoidance of doubt, this does not include activities that cannot reasonably be planned in advance of the draft Maintenance Plan in respect of Formula Year t including work following a network gas supply emergency or force majeure, work following a fault or defect, pipeline feature inspections or any activities carried out on behalf of one or more third parties.

Maintenance Relevant Party; NTS Supply Point; NTS Connected System Exit Point; Maintenance Day

shall have the meanings given to those terms in the network code.

Valve Operations

means the work necessary to undertake an inspection of valves on the pipeline system to which this licence relates or any part or parts of it.

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Special Condition 8K: Requirement to report on the length of Short and Long In-Line Inspections (ILIs)

Introduction

8K.1 The purpose of this condition is to set out the obligations of the Licensee in respect of reporting on the length of both Short and Long In-Line Inspections (ILIs).

Part A: Licensee's obligations under this condition

8K.2 The Licensee shall by 1 June 2016 and every subsequent twelve months thereafter, or by such other dates as directed by the Authority, publish an ILI Report in respect of Formula Year t commencing on 1 April 2015 and each subsequent Formula Year t until 31 March ~~2018~~ 2021.

Part B: Interpretation

8K.3 For the purposes of this condition:

ILI Report	means a report undertaken by the Licensee detailing the length of time taken by the Licensee to complete both Short ILIs and Long ILIs and comparing this against previous annual reporting figures and any other relevant benchmarks.
Long ILI	means work necessary to undertake an In Line Inspection of a section of the pipeline system to which this licence relates where the length of pipeline concerned is more than 10km and requiring one or more Maintenance Plan Days.
Maintenance Plan Day	shall take the meaning set out in Special Condition 3D.44
Short ILI	means work necessary to undertake an In Line Inspection of a section of the pipeline system to which this licence relates where the length of pipeline concerned is 10km or less and requiring one or more Maintenance Plan Days.

Schedule 2 – Relevant Licence Holders³

National Grid Gas plc

³ Gas licence holders are listed at: <https://www.ofgem.gov.uk/publications-and-updates/all-gas-licensees-registered-addresses>