

**NETWORK ENTRY AGREEMENT**

**between**

**NATIONAL GRID GAS PLC**

**and**

[ ]

**in respect of**

[ ]



**National Grid Legal  
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**THIS AGREEMENT** is made the \_\_\_\_\_ day of \_\_\_\_\_

**BETWEEN:**

1. **National Grid Gas plc**, (registered in England and Wales under number 02006000), whose registered office is at 1-3 Strand, London, WC2N 5EH ("**National Grid**"); and
2. [ \_\_\_\_\_ ], (registered in [England and Wales] under number [ \_\_\_\_\_ ]), whose registered office is at [ \_\_\_\_\_ ] for and on behalf of itself in its capacity as the operator of the Delivery Facility and on behalf of the Delivery Facility Owners (the "**DFO**").

**RECITALS:**

- A. The DFO is the operator of the Delivery Facility.
- B. National Grid is the owner and operator of the Entry Facility and a Gas Transporter pursuant to the Gas Act.
- C. The Network Code provides that the specification, entry pressure, point of delivery and basis of measurement of Natural Gas delivered to the System at a System Entry Point will, and certain other matters may, be set out in Network Entry Provisions forming part of a Network Entry Agreement between National Grid and the operator of a Connected Delivery Facility and refers to Local Operating Procedures that will be agreed between them.
- D. The Parties wish to agree procedures and terms with regard to the provision of Natural Gas flow related information to each other in respect of the System Entry Point so as to facilitate the safe and efficient operation of the Delivery Facility, the Entry Facility and the System.
- E. National Grid and the DFO wish to enter into this Agreement, which shall be the Network Entry Agreement relating to the System Entry Point for the purposes of the Network Code.

**NOW IT IS HEREBY AGREED:**

**1. Definitions and Interpretation**

- 1.1 In this Agreement the following words and expressions shall, unless the context requires otherwise, have the following meanings:

"**Actual Flow Rate**" shall mean the total instantaneous volumetric flow rate, in the form of Natural Gas, expressed in MSCM/D that is being delivered at the System Entry Point;

"**Affiliate**" means, in relation to any company, any subsidiary, subsidiary undertaking or holding company of such company, and any subsidiary or subsidiary undertaking of any such holding company for the time being as such terms are defined in section 1159 of the Companies Act 2006;

“**Agent**” shall mean the representative duly appointed by System Users to be responsible for the apportionment of Natural Gas between them immediately downstream of the System Entry Point;

“**Agreement**” shall mean this agreement, being a Network Entry Agreement, and the Schedules attached hereto, as may be amended by written agreement of the Duly Authorised Representatives of the Parties hereto, from time to time;

“**Barg**” shall mean bar gauge;

“**Competent Authority**” shall mean the Gas and Electricity Markets Authority, or any local, national or supra national agency, authority, department, inspectorate, minister, ministry, court, tribunal or official or public or statutory person (whether autonomous or not) of, the United Kingdom (or the government thereof) or of the European Union which has jurisdiction over National Grid or the DFO or the subject matter of this Agreement;

“**Confidential Information**” shall have the meaning given in Clause 5.2;

“**Connected Delivery Facility**” shall have the meaning specified the Network Code;

“**D-1 Gas Day**” shall mean the Day before the Gas Day;

“**D Gas Day**” shall mean the Gas Day;

“**D+1 Gas Day**” shall mean the Day after the Gas Day;

“**Daily Flow Notification**” or “**DFN**” shall mean the notification given by facsimile (or other agreed means) by the DFO to National Grid in respect of a Gas Day showing the daily notifications in paragraph 2.2 of Schedule 1 and substantially in the form of Attachment B to Schedule 1;

“**Day**” shall mean the period from 06.00 hours on one day to 06.00 hours on the following day;

“**Delivery Agreement**” shall mean an agreement made between the DFO and another person for the delivery of gas into and receipt of gas from the Delivery Facility;

“**Delivery Facility**” shall mean the [onshore] terminal operated by the DFO at [ ] from which Natural Gas may be tendered for delivery at the System Entry Point and, for the avoidance of doubt, is a Connected Delivery Facility. The Delivery Facility is more particularly described in paragraph 1 of Schedule 7;

“**Delivery Facility Owners**” shall mean the owners of the Delivery Facility from time to time, with the owners of the Delivery Facility at the date hereof being the companies listed in Schedule 2;

“**DFO Representative**” shall mean the person notified in writing by the DFO from time to time to

National Grid as its representative for the provision and receipt of information in accordance with the Local Operating Procedures set out in Schedule 1;

**“Directive”** shall mean any present or future directive, request, requirement, instruction, code of practice, direction or rule of any Competent Authority, (but only, if not having the force of law, if it is reasonable in all the circumstances for it to be treated as though it had legal force) and includes any modification, extension or replacement thereof;

**“Duly Authorised Representative”** shall mean any of those employees of a Party whose names have been notified in writing to the other Party as having authority to bind the Party in circumstances where its agreement is required hereunder and, until otherwise notified, shall in the case of National Grid be such person who from time to time shall occupy the position of [Customer Services Manager, Transmission] and in the case of the DFO, shall be such person who from time to time shall occupy the position of [ ]. For the avoidance of doubt, the Duly Authorised Representative will not be the DFO Representative or the National Grid Shift Representative;

**“Emergency Shut Down Condition”** shall mean any condition requiring National Grid acting reasonably and prudently, in accordance with the relevant emergency procedures, to cease forthwith to accept Natural Gas at the System Entry Point in the interest of preventing possible damage to the System or the injury or death of any person;

**“End of Day Volume”** shall mean the total volume of Natural Gas, in MSCM, delivered at the System Entry Point during the Gas Day;

**“End of Day Energy Quantity”** shall mean the total quantity of energy of Natural Gas, in kWh, delivered at the System Entry Point during the Gas Day;

**“Entry Facility”** shall mean the National Grid facilities at which Natural Gas may be received into the System at [ ]. The Entry Facility is more particularly described in paragraph 2 of Schedule 7;

**“Exact Hour”** shall mean the time in full hours and no minutes (e.g. 15.00 hours is an Exact Hour);

**“Expected End of Day Volumetric Quantity”** shall mean the total volume of Natural Gas, in MSCM, reasonably estimated by the DFO to be delivered at the System Entry Point by the end of the Gas Day;

**“Expected Flow Rate”** shall mean, in respect of any Gas Day, the total instantaneous volumetric estimated flow rate for each remaining hour of such Gas Day expressed in MSCM/D that the DFO expects in its reasonable opinion will be delivered at the System Entry Point;

**“Gas Act”** shall mean the Gas Act 1986 and any regulations issued thereunder, as such Gas

Act and regulations are amended or supplemented from time to time;

**“Gas Day”** shall mean the period of hours beginning at 06.00 hours on any calendar day and ending at 06.00 hours on the following calendar day such original day being specified on the DFN;

**“Gas Entry Conditions”** shall mean in respect of the System Entry Point the limits and other requirements as to the composition, pressure, temperature and other characteristics of Natural Gas delivered or tendered for delivery at the System Entry Point as set out in paragraph 1 of Schedule 3;

**“Gas Transporter”** shall mean a holder of a gas transporter licence granted (or treated as granted) under section 7(2) of the Gas Act, together with any successor or assignee thereof;

**“Individual System Entry Point”** shall mean a point on the System at which gas can flow into the System;

**“Joule”** shall mean a joule as defined in ISO 1000-1981(E);

**“kWh”** shall mean a kiloWatt hour or three million six hundred thousand (3,600,000) Joules;

**“Legal Requirement”** shall mean any Act of Parliament, regulation, licence or Directive of a Competent Authority;

**“Local Operating Procedures”** shall mean the procedures set out in Schedule 1, as amended from time to time;

**“Measurement Provisions”** shall mean those procedures, methods and standards in place in respect of the measurement and determination of the volume, calorific value, quantity and delivery characteristics of Natural Gas delivered or tendered for delivery at the System Entry Point as set out in Schedule 4;

**“Megajoules”** shall mean one million (1,000,000) Joules;

**“MMJ”** shall mean millions of Megajoules;

**“MMJD”** shall mean millions of Megajoules per Gas Day;

**“MJ/SCM”** shall mean Megajoules per Standard Cubic Metre;

**“MSCM”** shall mean millions of Standard Cubic Metres;

**“MSCM/D”** shall mean millions of Standard Cubic Metres per Day;

**“National Grid Shift Representative”** shall be the person or post notified by National Grid from time to time to the DFO as its representative for the provision and receipt of information in accordance with the Local Operating Procedures;

“**Natural Gas**” shall mean any hydrocarbons or mixture of hydrocarbons and other gases consisting primarily of methane which at Standard Temperature and Standard Pressure are or is predominantly in the gaseous state;

“**Network Code**” shall mean the document prepared by National Grid pursuant to its gas transporter’s licence governing transportation arrangements for Natural Gas on the System dated 1st March 1996, as may be modified and supplemented from time to time, including any replacement thereof;

“**Network Emergency Coordinator**” shall mean the person who is, from time to time, the network emergency coordinator in respect of the System in accordance with the Gas Safety (Management) Regulations 1996;

“**Network Entry Agreement**” shall mean this Agreement;

“**Network Entry Provisions**” shall mean the terms and conditions which specify the requirements in respect of the delivery of Natural Gas to the System at the System Entry Point including, inter alia, the Gas Entry Conditions, the Measurement Provisions and the points of delivery [and the Special Delivery Arrangements] set out in Schedule 3;

“**Parties**” shall mean the companies or persons as are from time to time party to this Agreement and “**Party**” shall be construed accordingly;

“**Permitted Range**” shall mean the range specified in the table set out in paragraph 2.8 of Schedule 4;

[“**Post Commingling Point Gas Entry Conditions**” shall mean those conditions set out in paragraph 7 of Schedule 3, that enable the Gas Entry Conditions to permit the delivery of gas at the System Entry Point which does not comply with the conditions which would otherwise require to be included;]

“**Producers**” shall mean the owners and operators of Natural Gas and production facilities delivering Natural Gas through the Delivery Facility;

“**Reasonable and Prudent Operator**” shall mean a person acting, in good faith, to perform its contractual obligations and, in so doing and in the general conduct of its undertaking, exercising that degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected from a skilled and experienced operator engaged in the same type of undertaking under the same or similar circumstances;

[“**Special Delivery Arrangement**” shall mean those Natural Gas commingling arrangements and requirements as set out in paragraph 6 of Schedule 3;]

“**Standard Cubic Metre**” shall mean that amount of Natural Gas that, at Standard Temperature and Standard Pressure and being free of water vapour, occupies one cubic metre;

“**Standard Pressure**” shall mean one decimal zero one three two five (1.01325) bar;

“**Standard Temperature**” shall mean fifteen degrees Celsius (15°C);

“**System**” shall mean the pipeline system operated by National Grid for the conveyance of Natural Gas through which is authorised by the licence granted to National Grid as a Gas Transporter;

“**System Capacity**” shall have the meaning given in the Network Code;

“**System Entry Point**” shall mean the point on the System comprising the [one/two etc] Individual System Entry Point[s] located on the incomer pipeline from the Delivery Facility to the Entry Facility which is so defined in Attachment A to Schedule 1;

“**System Users**” shall mean the companies licensed under Section 7A of the Gas Act that are party to the Network Code and from time to time delivering Natural Gas into the Entry Facility at the System Entry Point;

“**Terajoules**” or “**TJ**” shall mean one million (1,000,000) Megajoules;

“**TJ/day**” shall mean Terajoules per Day;

“**Tolerances**” shall mean (unless otherwise agreed between the Parties Duly Authorised Representatives from time to time):

- (a) for changes to the Expected Flow Rate a tolerance of plus or minus [ ] MSCM/D;
- (b) for changes to the DFO’s estimated calorific value a tolerance of plus or minus [ ] MJ/SCM; and
- (c) for changes to the DFO’s estimated Expected End of Day Volumetric Quantity a tolerance of plus or minus [ ] MSCM.

“**Transportation Arrangement**” means an arrangement made by National Grid with any person for the transportation of Natural Gas in the System from the System Entry Point and a reference to a Transportation Arrangement shall include the Network Code;

“**TFA**” shall be the advice given by facsimile (or other agreed means) by National Grid to the DFO whenever:

- (a) the Expected Flow Rate notified by the DFO or the Actual Flow Rate will not, in National Grid’s reasonable opinion, be able to be accommodated by the System;
- (b) gas tendered for delivery at the System Entry Point does not, in National Grid’s reasonable opinion, comply with the Gas Entry Conditions;

and shall be as described in paragraph 4.3 of Schedule 1 and substantially in the form set out in



Attachment C to Schedule 1; and

“**Validation**” shall mean validation of the metering system, which requires each installed component of the Measurement Equipment to be checked to ensure it is still operating in the manner required by the design specification, and “**Validated**” shall be construed accordingly.

- 1.2 The Clause, paragraph and other headings in this Agreement are for convenience only and shall not affect its interpretation or construction.
- 1.3 Any reference in this Agreement to the singular shall (save where the context requires otherwise) include a reference to the plural (and vice versa).
- 1.4 Reference in this Agreement to any statute, statutory instrument or statutory provision includes any amendment, re-enactment or supplement thereto.
- 1.5 References to a Schedule shall, unless the context requires otherwise, include the Attachments thereto.

## **2. Scope and Application**

- 2.1 This Agreement comprises the main body hereof and the documents contained in the Schedules attached hereto. In the case of any conflict, the provisions of the main body hereof shall prevail over the provisions of the documents contained in the Schedules attached hereto.
- 2.2 Without prejudice to any other agreement (including any Delivery Agreement or Transportation Arrangement) between the Parties, nothing in this Agreement shall:
  - (a) impose any obligation or confer any entitlement on the DFO to deliver Natural Gas to the System, or as to the rates, quantities, pressure and quality of Natural Gas so delivered; nor
  - (b) make any provision of any Transportation Arrangement or Delivery Agreement binding as between National Grid and the DFO nor is any provision of this Agreement deemed to amend or vary any such Transportation Arrangement or Delivery Agreement.
- 2.3 Without prejudice to any other agreement (including any Delivery Agreement or Transportation Arrangement) between the Parties, this Agreement shall not require National Grid or the DFO to increase the flow rate capacity of any part of the System or (as the case may be) Delivery Facility, or to take any other step with a view to it being feasible to accept the delivery of Natural Gas into the System from the Delivery Facility at the System Entry Point in any quantities or at any rate, nor to accept an application by any System User for any particular System Capacity or capacity in the Delivery Facility.
- 2.4 Save as expressly provided otherwise in this Agreement, each Party will perform its duties under this Agreement in accordance with the standard of a Reasonable and Prudent Operator.

2.5 The DFO enters into this Agreement on behalf of itself and the Delivery Facility Owners: provided that National Grid shall look only to the DFO for due performance of this Agreement.

### **3. Implementation of Local Operating Procedures**

3.1 The Parties agree that, with effect from 06.00 hours on [the Day following the date hereof] (or as otherwise agreed between the Parties in writing), the Local Operating Procedures shall apply between the Parties. The Parties shall keep under review, and (as may be appropriate for reasons of safety or prudent operation) from time to time revise, the prevailing Local Operating Procedures, provided that no revision shall be effective unless signed by duly authorised representatives on behalf of each of the Parties.

3.2 Each Party shall provide information to the other in accordance with, and otherwise comply with, the Local Operating Procedures.

### **4. Duration**

4.1 This Agreement shall continue in full force and effect unless and until terminated by agreement in writing between the Parties' Duly Authorised Representatives or pursuant to Clause 4.3.

4.2 Subject to Clause 4.3, if at any time after the date of this Agreement either Party wishes to terminate this Agreement, then the Parties hereby agree to meet in good faith to discuss and agree all matters pertaining to a termination of this Agreement, including the timing thereof.

4.3 The DFO shall be entitled to terminate this Agreement upon giving not less than eighteen (18) months prior notice to National Grid. Following the giving of such notice, the Parties hereby agree to meet in good faith to discuss and agree all matters pertaining to such termination of this Agreement. National Grid shall be entitled to notify System Users that the DFO has given notice to terminate this Agreement and to advise System Users of the date of such notice and the date on which such termination will take effect.

4.4 Upon termination of this Agreement or the Delivery Facility otherwise ceasing to be connected to the Entry Facility, each Party shall be responsible for the costs of any decommissioning and disassembly or removal of its facilities.

### **5. Confidentiality and Use of Information**

5.1 The provision of information by either Party to the other pursuant to this Agreement shall be made in good faith by the Party disclosing such information but without any liability for or warranty as to the accuracy or completeness of such information. If either Party acts upon information provided by the other, that Party shall do so at its own risk.

5.2 For the purposes of this Agreement, in relation to a Party "Confidential Information" means the terms of this Agreement and any information disclosed to that Party by the other (whether orally or in writing or in some other permanent form) in connection with this Agreement, which at the

relevant time:

- (a) has not already been, or could not already have been, lawfully acquired by the Party to whom the disclosure is made; or
- (b) is not already in the public domain (other than as a result of a breach of the terms of this Clause 5).

5.3 Except with the prior written consent of the other Party, and subject to Clause 5.4, each Party shall keep confidential, and shall not disclose to any third party or use other than for a purpose connected with this Agreement, all Confidential Information. In the event of a breach of any provision of this Clause 5, the provisions of Clause 6.2 or 6.3 (as the case may be) shall apply.

5.4 A Party may disclose Confidential Information:

- (a) to that Party's legal counsel, other professional consultant or adviser, insurer, accountant, underwriter or provider of finance or financial support, or their legal counsel and advisers, provided that such disclosure is solely to assist the purpose for which such person was engaged;
- (b) if required and to the extent required by any Legal Requirement, or by a Competent Authority, or by the rules of any recognised stock exchange upon which the share capital or debt of the Party making the disclosure is or is proposed to be from time to time listed or dealt in;
- (c) to any of its Affiliates;
- (d) to directors and employees of that Party and of its Affiliates, to the extent required for the proper performance of their work;
- (e) to any bona fide intended assignees of a Party's interests under this Agreement;
- (f) to any expert appointed in accordance with Schedule 5;
- (g) in respect only of the contents of the Local Operating Procedures attached in Schedule 1 (with the exception of the contents of Attachment D thereto) and the Network Entry Provisions attached in Schedule 3, to any System User;
- (h) in the case of National Grid, in respect only of the End of Day Energy Quantity and any revisions thereto and the calculated calorific value figures provided by the DFO pursuant to paragraph 3.2 of Schedule 1, to any Agent of System Users and in addition to System Users, provided that National Grid notifies or has notified such System User's Agent and the System Users that the DFO accepts no liability for the data and it is used entirely at their own risk;
- (i) in the case of the DFO:

- (i) in respect only of information received by it pursuant to paragraph 3.3 of Schedule 1, and then only with the prior written consent of National Grid (such consent not to be unreasonably withheld or delayed), to its Producers, but only to the extent reasonably necessary to demonstrate to such Producers that in acting upon such information the DFO was acting in compliance with its current agreements with such Producers;
- (ii) in respect only of any TFA (or any part thereof), to its Producers.

5.5 Except as otherwise provided in this Clause 5.5, a Party shall ensure that any person to which it discloses information pursuant to Clause 5.4 (other than Clause 5.4(b)) undertakes to hold such Confidential Information subject to confidentiality obligations equivalent to those set out in Clause 5.3 (excluding legal counsel). Where National Grid discloses information pursuant to Clause 5.4(h), it shall ensure that any person to which it discloses information pursuant to Clause 5.4(h) undertakes to hold such Confidential Information subject to the confidentiality obligations specified in the relevant Transportation Arrangement.

5.6 The foregoing obligations with regard to Confidential Information shall remain in effect for three (3) years after this Agreement is terminated or expires.

## **6. Limitation of Liability**

6.1 Save as provided in Clauses 6.2, 6.3 and 10.3, each Party hereby agrees that it shall have no liability to the other Party nor any recourse against the other Party, whether in contract, in tort (including negligence) breach of statutory duty or otherwise arising out of or in connection with the subject matter of this Agreement. Without prejudice to the foregoing:

- (a) the DFO shall not be liable to National Grid in respect of any failure of Natural Gas delivered to the System Entry Point to comply with the Gas Entry Conditions;
- (b) National Grid shall not be liable to the DFO in respect of any failure of National Grid to accept (for whatever reason) gas tendered for delivery at the System Entry Point;
- (c) each of National Grid and the DFO agrees that it shall have no liability to the other nor any recourse against the other whether in contract, in tort (including negligence), breach of duty (whether statutory or otherwise) or otherwise arising out of or in connection with the Local Operating Procedures or any part thereof; and
- (d) neither Party will be liable to the other for any failure to comply with any of the terms and conditions contained in the Network Entry Provisions.

6.2 If National Grid breaches its obligations under Clause 5, its liability to the DFO shall be limited in aggregate to [five hundred thousand pounds sterling (£500,000)] in respect of all claims made by the DFO for each period of twelve (12) months during the term of this Agreement (the first such period commencing on the date of this Agreement).

- 6.3 If the DFO breaches its obligations under Clause 5, its liability to National Grid shall be limited in aggregate to [five hundred thousand pounds sterling (£500,000)] in respect of all claims made by National Grid for each period of twelve (12) months during the term of this Agreement (the first such period commencing on the date of this Agreement).
- 6.4 The exclusion and limitation of liability contained in this Clause 6, as it relates to an act or omission of the DFO, shall be deemed to extend to the benefit of and protect all of the Delivery Facility Owners and the exclusion and limitation of liability contained in this Clause 6, as it relates to an act or omission of National Grid, shall be deemed to extend to the benefit of and protect National Grid from any claim in respect of any loss or any liability to each and any of the Delivery Facility Owners.
- 6.5 Nothing in this Agreement shall exclude or limit the liability of either Party in respect of death or injury caused by its negligence.

## **7. Network Entry Provisions**

- 7.1 The Network Entry Provisions applicable in respect of the System Entry Point shall be as set out in Schedule 3. The DFO recognises and acknowledges that the Network Entry Provisions are designed to protect the System and to ensure that National Grid can safely transport Natural Gas within the System in compliance with its safety case, and other legislative and contractual requirements.
- 7.2 Subject to Clause 7.3, the Network Entry Provisions shall not be amended except by written agreement of the Duly Authorised Representatives of the Parties. The DFO acknowledges that National Grid will not be able to agree to any change to the Network Entry Provisions until after National Grid has followed the process set out in the Network Code, and has obtained the necessary consents or approvals. For the avoidance of doubt, the obtaining of such necessary consents or approvals will not oblige either Party to agree to any such change in the Network Entry Provisions.
- 7.3 Where any Party identifies a relevant Legal Requirement relating to the flow composition or other characteristics of Natural Gas processed by the Delivery Facility or delivered to or conveyed by the System that in its opinion have not been complied with in this Agreement, then Duly Authorised Representatives of the Parties will meet as soon as reasonably practicable in good faith in order to discuss and seek to agree any written amendments which may be required to this Agreement in order to comply with such Legal Requirement.

## **8. Accession and Retirement**

- 8.1 In the event that the DFO proposes to transfer the operation of the Delivery Facility, the DFO shall use reasonable endeavours to procure that the transferee accedes to this Agreement.
- 8.2 Subject to Clause 9.1, National Grid is authorised to enter into an agreement in the form

contained in Schedule 6 with any applicant that has applied to National Grid to become a Party (in its capacity as the DFO) and provided National Grid with the following details:

- (a) its name;
- (b) the legal nature of the applicant and, where the applicant is not a company incorporated under the Companies Act 1985 (as amended), such further information concerning the constitution of the applicant as National Grid may reasonably require;
- (c) the address and telephone and facsimile numbers of the applicant, and the individual(s) for whose attention such notices are to be marked, for the purposes of notices under this Agreement;
- (d) where the applicant is not a company incorporated under the Companies Act 1985 (as amended), an address for service of process on its behalf in any proceedings;
- (e) a warranty that it has entered into an agreement with the Delivery Facility Owners whereby, or pursuant to which, it shall become the operator of the Delivery Facility on the proposed date of accession to this Agreement.

8.3 On the "Accession Date" as defined in any agreement entered into between National Grid and the applicant pursuant to Clause 8.2, the applicant shall become a Party to this Agreement and shall be subject to the rights and obligations of the DFO under this Agreement.

8.4 In the event that the DFO intends to cease being the operator of the Delivery Facility, it shall notify National Grid at least fourteen (14) days prior to such cessation, specifying the date on which such cessation will occur.

8.5 In the event that the DFO serves a notice pursuant to Clause 8.4 it shall cease to be a Party on the date specified in such notice as being the date on which it will cease to be the operator of the Delivery Facility.

## **9. Assignment**

9.1 Subject to Clauses 9.2 and 9.3, neither Party shall assign its rights and obligations under this Agreement in whole or in part without the prior written consent of the other Party whose consent shall not be unreasonably withheld.

9.2 The DFO shall be entitled to assign its rights and obligations under this Agreement in whole or in part without the prior written consent of National Grid where the DFO also assigns the operation of the Delivery Facility to a third party. In this event, the DFO shall use reasonable endeavours to procure that such third party agrees with National Grid to be bound by the terms of this Agreement.

9.3 National Grid shall be entitled to assign its rights and obligations under this Agreement in whole or in part without the prior written consent of the DFO where National Grid also assigns

operation of that part of the System including the Entry Facility to a third party holding a Gas Transporter's licence for that part of the System including the Entry Facility. In this event, National Grid shall use reasonable endeavours to procure that such third party agrees with the DFO to be bound by the terms of this Agreement.

## **10. Compatibility of the Delivery Facility and the Entry Facility**

10.1 The provisions of paragraph 5 of Schedule 3 shall apply between the Parties.

10.2 If National Grid proposes to modify the Entry Facility or the DFO proposes to modify the Delivery Facility, in each case such that the Entry Facility and the Delivery Facility would cease to be technically and operationally compatible following such modification, then the Party proposing the modification shall give the other Party as much advance notice of the same as is reasonably practicable. Following the giving of such notice, the Parties shall meet as soon as reasonably practicable to discuss in good faith the implications of the proposed modification on the Delivery Facility or Entry Facility (as the case may be).

10.3 Notwithstanding the foregoing, where by reason of any modification made or to be made by National Grid to the Entry Facility or by the DFO to the Delivery Facility, the Entry Facility and the Delivery Facility cease or will cease to be technically and operationally compatible then in the case of modifications to the Entry Facility the DFO shall promptly modify the Delivery Facility and in the case of modifications to the Delivery Facility National Grid shall promptly modify the Entry Facility so as to restore the compatibility between the Delivery Facility and the Entry Facility. The Party whose modifications have caused the incompatibility between the Delivery Facility and the Entry Facility shall reimburse the other Party for any expenditure reasonably incurred by the other Party in carrying out those modifications necessary to address the incompatibility that directly results from the initial modifications, except where such initial modifications are made in order to comply with any Legal Requirement which did not previously exist in relation to the Entry Facility or the Delivery Facility (as the case may be).

10.4 For the avoidance of doubt:

- (a) National Grid shall in no circumstances be liable for any modifications required to any plant, equipment or facilities upstream of the Delivery Facility;
- (b) the DFO shall in no circumstances be liable for any modifications required to any part of the System downstream of the Entry Facility;
- (c) National Grid shall not be liable to pay the DFO any costs in respect of modifications to the Delivery Facility that arise as a result of any modifications to the System (other than the Entry Facility); and
- (d) the DFO shall not be liable to pay National Grid any costs in respect of modifications to the Entry Facility that arise as a result of any modifications to any

plant, equipment of facilities upstream of the Delivery Facility.

**11. Notices**

11.1 Any notice or other communication to be given by one Party to the other pursuant to the terms of this Agreement shall be personally delivered to the addressee or sent by prepaid recorded delivery post or facsimile and shall be deemed to have been given: (a) on the day when delivered if delivered by hand; (b) on the day when received in legible form if sent by facsimile (subject only to confirmation or satisfactory completion of such transmission to the correct number); or (c) when received if sent by post. Any notice or communication given by facsimile (other than routine notices and communications pursuant to the Local Operating Procedures in Schedule 1) shall be promptly confirmed by letter sent by prepaid recorded delivery or by hand but without prejudice to the validity of the original notice if received.

11.2 Unless otherwise specified and subject to the service of notices for the purposes of the Local Operating Procedures to the addresses set out in Attachment D to Schedule 1, the addresses to which notices and communications under and pursuant to this Agreement shall be sent shall be as follows:

(a) If to National Grid:

National Grid Gas plc

[National Grid House

Warwick Technology Park

Gallows Hill

Warwick

CV34 6DA]

Marked for the attention of: [Customer Services Manager, Transmission]

Facsimile: [01926 656605]

(b) If to the DFO:

[DFO]

[ ]

[ ]

Marked for the attention of: [ ]

Facsimile: [ ]



**12. Amendment**

12.1 Any amendment to the terms of this Agreement (including for the avoidance of doubt the Schedules hereto) shall be agreed between the Parties' Duly Authorised Representatives in writing.

**13. Entirety of Agreement**

13.1 The documents forming the Agreement shall be read as one and shall constitute the entire express agreement between the Parties with respect to the subject matter hereof and shall prevail and supersede all prior agreements, understandings, statements, representations, commitments, warranties and communications between the Parties hereto with respect to the subject matter hereof and no Party shall rely on or be bound by any of the foregoing not appearing in or incorporated by specific reference into the Agreement. Nothing in this Clause shall operate to exclude a Party's liability to the other for fraudulent misrepresentation.

**14. Survival**

14.1 The provisions of the Agreement which by their nature or from their context are intended to, or would naturally, continue to have effect after termination of the Agreement shall survive after termination.

**15. Severability**

15.1 If any term or provision in the Agreement shall be held to be illegal or unenforceable in whole or in part, under any enactment or rule of law, such term or provision or part shall to that extent be deemed not to form part of the Agreement but the validity and enforceability of the remainder of the Agreement shall not be affected.

**16. Third Party Rights**

16.1 Subject to any rights which may accrue to any successor or permitted assign of the Parties, no provision of the Agreement shall or may be construed as creating any rights enforceable by a third party and all third party rights as may be implied by law are hereby excluded to the fullest extent permitted by law from the Agreement.

**17. Governing Law**

17.1 This Agreement and any dispute or claim arising out of or in connection with it or its subject matter or formation (including non-contractual disputes or claims) shall be governed by and construed in accordance with the law of England and Wales.

17.2 The Parties irrevocably agree that, save in respect of decisions to be made by an expert pursuant to Schedule 5, the courts of England and Wales shall have exclusive jurisdiction to settle any dispute or claim that arises out of or in connection with this agreement or its subject

matter or formation (including non-contractual disputes or claims).

**IN WITNESS** of which the duly authorised representatives of the Parties have executed this Agreement on the day and year first above written.

**SIGNED** for and on behalf of

**SIGNED** for and on behalf of

**National Grid Gas plc**

[    ]

as DFO for and on behalf of itself and the Delivery Facility Owners

Signed: .....

Signed: .....

Name: .....

Name: .....

Position: .....

Position: .....

**Schedule 1 - LOCAL OPERATING PROCEDURES****1. Introduction**

1.1 This Schedule 1 sets out Local Operating Procedures between the DFO and National Grid for the provision of Natural Gas flow related information to each other so as to facilitate the safe and efficient operation of the Delivery Facility, the Entry Facility and the System.

**2. Routine Notifications**

## 2.1 Notices

- (a) Notices given by the DFO to National Grid in accordance with these Local Operating Procedures will be made to the National Grid Shift Representative.
- (b) Notices given by National Grid to the DFO in accordance with these Local Operating Procedures will be made to the DFO Representative.
- (c) The telephone, facsimile numbers and the addresses of the Parties for service of notices given in accordance with these Local Operating Procedures are set out in Attachment D. In the event of the telephone number, facsimile number or other details being changed, the Party whose number or details are subject to such change shall notify the other Party as soon as it is reasonably practicable and in any event in advance of such changes taking place.

## 2.2 Daily Notifications of Natural Gas Expected Flow Rate, Calorific Value and Expected End of Day Volumetric Quantity

- (a) The DFO will notify National Grid at the earliest practicable opportunity but no later than 20.00 hours on D-1 Gas Day of the Expected Flow Rate, Expected End of Day Volumetric Quantity and its good faith estimate of the calorific value of the Natural Gas that is estimated will be delivered on the D Gas Day.
- (b) The notification will be in the form of a completed Daily Flow Notification to be notified by facsimile or other agreed means by the DFO to National Grid.
- (c) The DFN shall be in a form substantially similar to the pro forma set out in Attachment B.

## 2.3 Re-notification of Natural Gas Expected Flow Rate, Calorific Value and Expected End of Day Volumetric Quantity

- (a) On D-1 Gas Day
  - (i) Before D Gas Day commences the DFO will, as soon as is reasonably

practicable following the time at which it is made aware of any changes requiring an update to the DFN, notify the National Grid Shift Representative of any such changes that exceed the relevant Tolerances. Any revision to the previous DFN will be provided in the form of additional information on the previous notice. Notification of such change will be made by facsimile or other agreed means.

- (ii) The revised Expected Flow Rate on the DFN will indicate when the change is likely to take effect and will show the Expected End of Day Volumetric Quantity that is estimated will be delivered on that Gas Day with an estimate of the calorific value of the Natural Gas that is estimated will be delivered on that Gas Day.
- (b) Within D Gas Day
- (i) Within D Gas Day the DFO will, subject to the relevant Tolerances, notify National Grid of any changes to the Expected End of Day Volumetric Quantity and/or Expected Flow Rate and/or the estimated calorific value of such Natural Gas, as soon as is reasonably practicable following the time at which it is made aware of such changes.
  - (ii) Notification will be made by facsimile or other agreed means. The revised completed DFN will indicate the revised Expected Flow Rate (showing when the change is likely to take effect), the revised Expected End of Day Volumetric Quantity and a good faith estimate of the calorific value of the Natural Gas that is estimated will be delivered for the remainder of D Gas Day.
  - (iii) Where the change is not due to a renomination, the DFO shall indicate this fact on the DFN. The DFO may at its sole discretion provide additional information related to the reason for the change.
  - (iv) Notified variations to the Expected Flow Rate will be effective from a specified Exact Hour. However, the Actual Flow Rate may change within fifteen (15) minutes before or after the Exact Hour.
  - (v) The DFO shall use all reasonable endeavours to secure that (after allowing for the time required to implement an increase or decrease in the rate of delivery):
    - (A) the rate at which Natural Gas is delivered to the System at the System Entry Point changes only with effect from the start of the Day and (within the Day) with effect from the time specified for such change in the prevailing DFN; and

- (B) Natural Gas is delivered to the System at the System Entry Point at the prevailing Expected Flow Rate.

### **3. Confirmation of Natural Gas Quantities Delivered at the System Entry Point**

- 3.1 The National Grid Shift Representative will contact the DFO Representative by telephone from time to time as reasonably required with a view to avoiding any disparities in the Parties' measurement of the End of Day Energy Quantity, calorific value and volume of Natural Gas delivered at the System Entry Point during the Gas Day.
- 3.2 Not later than 08.00 hours on each D+1 Gas Day the DFO will advise National Grid Operational Data team (whose contact details are in Attachment D) by facsimile (or other agreed method) of the End of Day Volume determined to have been delivered at the System Entry Point on D Gas Day. The notification shall be substantially in the form set out in Attachment E.
- 3.3 National Grid will notify the DFO of any revision made to the calculated calorific value in accordance with Schedule 4 as soon as reasonably practicable by telephone and then confirmed by facsimile (or other agreed method).

### **4. Other Notifications/Communications**

#### **4.1 General Communication**

Subject to the Party's duty of confidentiality to any third party the DFO Representative and the National Grid Shift Representative will at all times keep each other informed of all matters likely to have, or which are already having, a significant effect on Natural Gas flow, pressure or quality at the System Entry Point. Both Parties will use reasonable endeavours to give as much notice to the other as possible.

#### **4.2 Planned Flow Changes due to Maintenance Procedures**

- (a) Both Parties shall, in good faith, seek to coordinate their maintenance activities at the System Entry Point in order to minimise disruption to each other.
- (b) Representatives of the DFO and National Grid shall meet at least once per year and on other occasions as required to discuss their respective planned maintenance programmes, emergency shut down tests, pipeline operations and procedures associated with these activities to assist the integrity and safety of the Delivery Facility and the Entry Facility. In addition, representatives of the DFO and National Grid shall meet at least once per year and on other occasions as required to discuss any new supplies and changes to existing supplies to assist the integrity and safety of the Delivery Facility and the Entry Facility. The two meetings referred to above may be held separately from each other or combined to form a single meeting, as the Parties may agree from time to time.

- (c) If any need to deviate from a uniform flow profile as a result of planned maintenance is made known at such meetings it will be discussed and both Parties will make reasonable efforts to accommodate the requirements of the other and any other planned maintenance, by telephone one week before they are intended to take effect. The maintenance related flow profiles will subsequently be detailed on the Daily Flow Notification in accordance with paragraph 2.

#### 4.3 TFA

- (a) If in National Grid's reasonable opinion, the System will be unable to accommodate any Expected Flow Rate or Expected End of Day Volumetric Quantity as notified on the DFN, or any Actual Flow Rate, National Grid may advise the DFO by means of a TFA facsimile, which will be in substantially the form set out in Attachment C. In so doing, National Grid will advise the DFO as to the flow rates and End of Day Quantity that it anticipates the System may be able to accommodate. National Grid will provide the DFO with a reason for its TFA.
- (b) If National Grid believes that gas tendered for delivery at the System Entry Point is reasonably expected not to comply with the Gas Entry Conditions, National Grid may advise the DFO of the specification parameter that is reasonably expected to be in breach and request that the DFO take action to prevent a such a breach.
- (c) If gas tendered for delivery at the System Entry Point does not comply with the Gas Entry Conditions, National Grid may issue a TFA that advises of the specification parameter that is being breached and requesting a reduction in, or a cessation of, the flow of gas being tendered for delivery.
- (d) If the gas tendered for delivery at the System Entry Point is brought back within the Gas Entry Conditions, then National Grid will then advise that the TFA is removed and that the DFO may return to its expected flowrate. If, once the TFA has been removed, the DFO requires to increase its expected gas flowrate in order to meet its notified Expected End of Day Volumetric Quantity, then the DFO shall resubmit its Expected Flow Rates in accordance with paragraph 2.3(b).
- (e) If the gas tendered for delivery at the System Entry Point is not brought back within the Gas Entry Conditions within a reasonable timeframe then National Grid may issue a further TFA requesting a further reduction in, or a cessation of, flow, or may isolate the Delivery Facility from the System by closing the necessary valves at the Entry Facility.
- (f) The DFO recognises and acknowledges that National Grid issues a TFA to protect the System either from contamination by gas outside the agreed specification or from over-pressurisation. Where National Grid has issued a TFA to the DFO, the

DFO shall reduce or cease flow (as the case may be) such that the flow from the Delivery Facility is less than or equal to the flow rate specified in the TFA. If the DFO fails to comply with the TFA in a timely manner, it may become necessary for National Grid to isolate the flow from the Delivery Facility (by closing the necessary valves at the Entry Facility) to prevent over-pressurisation of the System or to prevent gas outside the agreed specification entering the System.

- (g) Where National Grid issues a TFA pursuant to this paragraph 4.3, the DFO shall resubmit its Expected Flow Rates in accordance with paragraph 2.3(b) based on the flow of gas specified in the TFA.

#### 4.4 Minimum Flows

- (a) In the event that the DFO's Expected End of Day Volumetric Quantity is less than the Delivery Facility can reasonably tolerate at uniform rates, then the DFO will notify National Grid as soon as is reasonably practicable and the Parties will co-operate in defining mutually acceptable flow rates.
- (b) In the event that the DFO's Expected End of Day Volumetric Quantity is less than the Entry Facility can reasonably tolerate at uniform rates, then National Grid will notify the DFO as soon as is reasonably practicable and the Parties will co-operate in defining mutually acceptable flow rates.

#### 4.5 Information Quality

If it becomes apparent over a period of time that the estimates of the changes do not reasonably reflect the actual changes, then the representatives will meet to discuss the relevant data with a view to improving the accuracy of such estimates in future. If reasonably requested by National Grid, the DFO will use its reasonable endeavours to co-operate in the provision of additional information to National Grid regarding DFN changes in any analysis of the balancing of the System.

#### 4.6 Ramp Rates

In the event that either Party anticipates a significant change to the Actual Flow Rate then that Party will notify the other Party as soon as is reasonably practicable and the Parties will co-operate in defining mutually acceptable ramp rates.

#### 4.7 Unplanned Supply Reduction

Whenever any reduction to the Expected Flow Rate and/or Expected End of Day Volumetric Quantity is due to any reason other than a normal planned flow rate change, the DFO will:

- (a) where such reduction is less than 10 MSCM/D of Expected Flow Rate or 10 MSCM

of the Expected End of Day Volumetric Quantity, as soon as is reasonably practicable taking account of safety considerations, provide National Grid with all the following information through an updated DFN:

- (i) the revised Expected Flow Rate in MSCM/D and Expected End of Day Volumetric Quantity in MSCM.
- (ii) reason for the reduction in Expected Flow Rate and/or Expected End of Day Volumetric Quantity (e.g. compressor trip, onshore process plant etc).
- (iii) anticipated flow rates for the remainder of the Gas Day.
- (iv) the forecast Maximum Available Terminal Capacity (expressed in MSCM/D), that the Delivery Facility could reasonably be expected to achieve having due regard to the expected availability of pipeline, plant and processing facilities, where "Maximum Available Terminal Capacity" shall be the forecast maximum hourly rate at which gas might subsequently be tendered for delivery at the Delivery Facility for entry to the System. Such capability shall take account of known pipeline, plant and processing facility availability local to the Delivery Facility following the unplanned supply reduction.

The DFO shall provide National Grid with updated DFNs as and when the situation changes.

Should two or more coincident unplanned supply reductions occur such that National Grid considers the aggregate effect to exceed the threshold defined for paragraph (b) below, then National Grid may request that the DFO follows the process for significant supply failures outlined in paragraph (b) below instead.

- (b) where such reduction is equal to or more than 10 MSCM/D of Expected Flow Rate or 10 MSCM of the Expected End of Day Volumetric Quantity, as soon as is reasonably practicable due to safety considerations telephone the appropriate National Grid Control Room to provide a verbal confirmation that a significant supply reduction has happened, including an initial view on the likely significance of the loss (magnitude and duration). This will be subsequently followed by the completion of an updated DFN as per the process in paragraph (a).

National Grid will assess the impact of the reduction against the conditions on the System, and the availability of alternative gas sources to balance the System. Where National Grid believes the reduction warrants such action, it will inform the DTI Duty Officer providing details as requested in accordance with the "Upstream Oil and Gas Industry Crisis Management Briefing Pack".

The DFO will provide to National Grid regular updates on the status of the supply outage



and amendments to the anticipated deliverability as may be reasonably available through the re-issue of DFNs and telephone communications. These updates will be targeted to be on an hourly basis subject to any safety considerations prevailing at the time. Any verbal update indicating different values to DFN information already communicated shall subsequently be confirmed through the re-issue of a DFN.

In all cases and at all stages the DFO should undertake reasonable endeavours to provide National Grid with their most realistic indication of potential outturn. National Grid recognise that the very nature of unplanned supply losses means that data is uncertain but require realistic data to determine the most appropriate onshore response to manage the situation effectively and efficiently.

#### 4.8 Notification of Upstream Maintenance

- (a) The DFO will, by 15th September each year, provide National Grid with all available details of planned onshore and offshore maintenance activities for the following calendar year that, in the DFO's reasonable opinion, could impact on the deliverability of gas to the System. Information should be provided for any onshore and offshore maintenance activity that may affect the availability of gas delivery to the System.
- (b) The following information should be provided in a form substantially the same as Attachment F:
  - (i) activity reference number
  - (ii) the start and finish dates of the maintenance activity.
  - (iii) the anticipated reduction in gas deliverability (in MSCM/D) at the point at which the Delivery Facility is connected to the System as a consequence of the maintenance activity.
  - (iv) details of the onshore and offshore maintenance activity
  - (v) whether the details of the maintenance activity are provisional or confirmed.
  - (vi) contact details for a specific person/role within the DFO's organisation from whom National Grid could request additional information if required.
- (c) The completed planned maintenance proforma should be faxed or emailed to National Grid who will confirm receipt of the maintenance information.
- (d) If National Grid has not received the maintenance information by the 15th September, then National Grid will contact the DFO and request that this information be provided as soon as reasonably practicable.

- (e) On a quarterly basis, no later than the 15th day of each relevant month (December, March, June and September), the DFO will advise National Grid of all changes to their scheduled planned maintenance programme as submitted to National Grid pursuant to this paragraph 4.8. Updated information shall be provided for any existing or new onshore and offshore maintenance activity that may affect the deliverability of gas at the Delivery Facility.
- (f) This information, including a null response, if there have been no change from the previous submission, should be faxed or emailed to National Grid using the proforma in Attachment F. National Grid will confirm receipt of the update.
- (g) If National Grid has not received the maintenance information by the relevant date, then National Grid will contact the DFO and request that this information be provided as soon as reasonably practicable.
- (h) If the DFO becomes aware of any change to maintenance plans between the quarterly updates, then the DFO should provide National Grid with an updated maintenance form as soon as reasonably practicable.
- (i) In the last few months through to the maintenance activity actually being undertaken, the DFO shall give greater priority in informing National Grid of any changes to previously communicated planned maintenance dates that subsequently occur.

## **5. Information related to the Local Security of the Delivery Facility and the System**

- 5.1 If there is a complete cessation of the flow from the Delivery Facility, National Grid may shut the necessary valves to the Entry Facility to safeguard the System. When the Delivery Facility is able to resume flows the DFO Representative will telephone the National Grid Shift Representative and confirm by facsimile or other agreed means that the Delivery Facility is again capable of delivering the Expected Flow Rate. Both Parties will then co-operate in returning to normal conditions as soon as practicable.
- 5.2 In the event of an Emergency Shut Down Condition on the System, National Grid will close the necessary valves at the Entry Facility and/or elsewhere on the System. National Grid will as soon as is practicable following such event inform the DFO Representatives of the reasons and the likely duration of the Emergency Shut Down Condition.
- 5.3 In the event of an emergency at the Delivery Facility requiring immediate cessation of supply, the DFO Representative will close the necessary valves at the Delivery Facility. The DFO will inform the National Grid Shift Representative as soon as possible of the emergency, give the reasons therefore and, if possible, estimate the likely duration of the emergency.

5.4 It is acknowledged that emergency procedures are in place at both the Delivery Facility and the Entry Facility. In the event of an emergency at either facility, that could have an impact on the Natural Gas flows, this paragraph 5 provides for the appropriate communications to be made. Such communications will be made as soon as is reasonably practicable.

**6. Additional Site Specific Arrangements.**

6.1 [This paragraph 6 shall include any particular arrangements that National Grid has already agreed, or may wish to agree with the DFO such as low flow management etc.]

**7. Revision of Local Operating Procedures**

7.1 The Parties agree to meet as requested by either Party to review and consider amendments to the Local Operating Procedures. Such meeting shall occur within one (1) calendar month of the request being made, unless otherwise agreed by the Parties acting reasonably. The Parties shall discuss and negotiate any such proposed amendments in good faith, and shall use reasonable endeavours to agree the extent of any such proposed amendments. For the avoidance of doubt, the provisions of Clause 3.1 shall apply to any such amendment.

**Attachment A to Schedule 1**

**SCHEMATIC DIAGRAM OF THE CONNECTION  
BETWEEN THE FACILITIES**

Showing inter-connections with the Entry Facility.

Attachment B to Schedule 1 - DAILY FLOW NOTIFICATION

**DAILY FLOW NOTIFICATION FOR: [DELIVERY FACILITY]**  
 FOR GAS DAY COMMENCING 06:00 HOURS ON: [ ]

Gas to Transco Gas Operations  
 File No. [Appropriate No.]

Date	Expansion/Infin Day: Revision 1								Unit	COMMENTS Including reason for reduction in flow rate
	1	2	3	4	5	6	7	8		
06:00	Expected Flow Rate	Expected Flow Rate	Expected Flow Rate	Expected Flow Rate	Expected Flow Rate	Expected Flow Rate	Expected Flow Rate	Expected Flow Rate	MCM/D	
07:00									MCM/D	
08:00									MCM/D	
09:00									MCM/D	
10:00									MCM/D	
11:00									MCM/D	
12:00									MCM/D	
13:00									MCM/D	
14:00									MCM/D	
15:00									MCM/D	
16:00									MCM/D	
17:00									MCM/D	
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21:00									MCM/D	
22:00									MCM/D	
23:00									MCM/D	
00:00									MCM/D	
01:00									MCM/D	
02:00									MCM/D	
25 Hr Day									MCM/D	
03:00									MCM/D	
04:00									MCM/D	
05:00									MCM/D	
Expected EOD									MCM	
Expected CV									MJm <sup>3</sup>	

Updated - Maximum Available Terminal Capacity for this gas day: \_\_\_\_\_ MCM/D

- Note 1:
- 1) Reduced flow rate to be reported in Expected Flow Rate column (8)
  - 2) Reason for updated supply reduction to be reported in Comments column 1.
  - 3) Following an updated supply reduction, anticipated flow rates for the rest of the day to be reported in Expected Flow Rate column (8). For supply reductions expected to continue beyond end of gas day, duration to be reported in the Comments column 1.
  - 4) Expected end of day quantity to be reported in Expected EOD cell.
  - 5) For all updated terminal capacity reductions an update to the maximum available terminal capacity during all supply reductions > 10 minutes should be required (update as noted) to Transco, as may be reasonably available through updated DRFs and applicable communications.

Attachment C to Schedule 1

	<b>Transportation Flow Advice (TFA)</b>
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<b>ENTRY POINT</b>	<b>DFO</b>
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<b>GAS DAY</b>	
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National Grid hereby notifies you that, due to a [constraint on the System][breach of the Gas Entry Conditions], the System is unable to accept, to the extent identified in this TFA, natural gas from the DFO's connected delivery facility at the rate and/or amount specified in the latest DFN. The instantaneous delivery rate should not exceed the specified TFA rate.

HOURLY BAR	Current DFN	TFA Rate	Change with this TFA	Constraint in place	Note
Units >>>	MSCM/D	MSCM/D	MSC/D	Yes/No	
06.00					
07.00					
08.00					
09.00					
10.00					
11.00					
12.00					
13.00					
14.00					
15.00					
16.00					
17.00					
18.00					
19.00					
20.00					
21.00					
22.00					
23.00					
24.00					
01.00					
02.00					
03.00					
04.00					
05.00					
EoD calculated as sum of rates					

DFO EoD (if different)		
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<b>ISSUED</b>	
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The information contained in the facsimile is confidential and may be privileged. This facsimile is intended only for the DFO named above. If you are not the intended recipient any review, dissemination or copying of this facsimile is prohibited. If you have received this facsimile by accident, please notify the Network Manager immediately by telephone on 0870 191 0630

Attachment D to Schedule 1

COMMUNICATIONS

1. National Grid Shift Representative

Network Manager

National Grid Gas plc

Gas Operations

National Grid House

Warwick Technology Park

Gallows Hill

Warwick CV34 6DA

Telephone:	(Switchboard)	01926 653000
	(Control Room - Ops)	0870 191 0632
	(Control Room - DFNs)	0870 191 0635
	(Operational Data team)	01926 654641
Facsimile:	(Control Room)	0870 191 0647
	(Operational Data team)	01926 656616

2. DFO Representative

[Position]

[DFO Name]

[Address]

Telephone: [ ]

Facsimile: [ ]

**Attachment E to Schedule 1  
GAS QUANTITY DELIVERY STATEMENT**

From: [DFO]	To: National Grid
Address: [ ]	Address: [ ]
Fax: [ ]	Fax: [ ]
Tel: [ ]	Tel: [ ]

**Gas Delivery Statement for [Delivery Facility]**

Date: [ ] Time: [ ]

Gas Day commencing 0600 hours on: [ ]

Volume Delivered (MSCM): [XX.XXXXX]

Energy Delivered (kWh): [XXX,XXX,XXX]

Average Calorific Value (MJ/SCM): [XX.XX]

Signature: \_\_\_\_\_

Position: \_\_\_\_\_



**Attachment F to Schedule 1**

**NOTIFICATION OF MAINTENANCE – By Delivery Facility**

This form is used to notify National Grid of the maximum gas flow of which a Delivery Facility is capable, at the System Entry Point to the System, taking into account all information available to the DFO, concerning planned maintenance activities both onshore and offshore.

This information is provided in good faith based upon best judgement of the DFO without liability.

To be returned by 15th of each quarter: **September** (for that calendar year and the following calendar year)

**December** (for the following calendar year)

**March** and **June** (for that calendar year)

In between each quarterly update any changes to previously communicated planned maintenance should be provided to National Grid (on the same proforma), as soon as they are known.

<b>To:</b>	<b>Company Name</b>	National Grid Gas plc
	<b>Contact Name</b>	
	<b>Telephone Number</b>	
	<b>Fax Number</b>	
	<b>E-mail Address</b>	

<b>From:</b>	<b>Company Name</b>	
	<b>Location</b>	
	<b>Contact Name</b>	
	<b>Telephone Number</b>	
	<b>E-mail Address</b>	
	<b>Signed</b>	

**MAINTENANCE DETAILS:**

<b>Ref. No.</b>	<b>Start Date</b>	<b>Finish Date</b>	<b>Onshore or Offshore Maintenance Activity (with details where appropriate)</b>	<b>Resulting gas flow capability at Terminal Facility (mscm/d)</b>	<b>Provisional or Confirmed</b>

**Schedule 2 - DELIVERY FACILITY OWNERS**

[ ]

**Schedule 3 - NETWORK ENTRY PROVISIONS****1. Connected Delivery Facility and Individual System Entry Point(s)**

- 1.1 The Delivery Facility is a Connected Delivery Facility.
- 1.2 The Individual System Entry Point(s) comprised in the System Entry Point are shown in the drawing attached as Attachment A to Schedule 1

**2. Gas Entry Conditions**

- 2.1 These Gas Entry Conditions shall apply at the System Entry Point.
- 2.2 Gas tendered for delivery by System Users to the System at the System Entry Point shall comply with the System's statutory safety requirements, including any Legal Requirement regarding the composition of gas to be conveyed in the System (including without limitation, schedule 3 of the Gas Safety (Management) Regulations 1996).
- 2.3 Gas tendered for delivery by System Users to the System at the System Entry Point shall not contain any solid, liquid or gaseous material which would interfere with the integrity or operation of the System or any pipeline connected to such System or any appliance which a consumer might reasonably be expected to have connected to the System. In addition, all gas delivered to the System at the System Entry Point shall be in accordance with the following values:
- |     |                                    |  |
|-----|------------------------------------|--|
| (a) | Hydrogen Sulphide                  | not more than 3.3 ppm.   |
| (b) | Total Sulphur                      | not more than 15 ppm.  |
| (c) | Hydrogen Content                   | not more than 0.1 mol%.  |
| (d) | Oxygen Content                     | not more than 10 ppm.  |
| (e) | Hydrocarbon Dewpoint               | not more than minus two degrees Celsius (-2°C) at any pressure up to the delivery pressure provided in paragraph (p).                    |
| (f) | Water Dewpoint                     | not such as would cause a water dewpoint more than minus ten degrees Celsius (-10°C) at the delivery pressure provided in paragraph (p). |
| (g) | Wobbe Number                       | shall be between 47.2 MJ/SCM, and 51.41 MJ/SCM.  |
| (h) | Incomplete Combustion Factor (ICF) | not more than 0.48.  |
| (i) | Soot Index (SI)                    | not more than 0.60.  |

- |     |                       |  |
|-----|-----------------------|--|
| (j) | Odour                 | [it shall have no odour that may cause National Grid to fail to meet its obligation under Part 1 of Schedule 3 of the Gas Safety (Management) Regulations 1996.] [it shall be odourised as follows: with odourant NB (80% tertiarybutyl mercaptan, 20% dimethyl sulphide), and the odourant injection rate will be 6 mg/scm and may be varied at National Grid's request by up to plus or minus 2 mg/scm to meet operational circumstances.] |
| (k) | Carbon Dioxide        | not more than 2.0 mol%.  |
| (l) | Nitrogen              | not more than 5.0 mol%.  |
| (m) | Total Inerts          | not more than 7.0 mol%.  |
| (n) | Gross Calorific Value | shall be within the range 36.9 to 42.3 MJ/SCM. (real gross dry);   |
| (o) | Delivery Temperature  | shall be between one and thirty eight degrees Celsius (1°C and 38°C).  |
| (p) | Pressure              | shall be that required to deliver gas into the System taking account of the back pressure as the same shall vary from time to time. The delivery pressure shall not exceed eighty five bar gauge (85 barg).  |
| (q) | Organo Halides        | Not more than 1.5 milligrams per SCM.  |
| (r) | Radioactivity         | Not more than 5 Becquerals per gram.   |
| (s) | Ethane                | Not more than 12 mol%.   |

Incomplete combustion factor (ICF) and Soot Index (SI) have meanings as defined in Part 1 of Schedule 3 of the Gas Safety (Management) Regulations 1996.

- 2.4 Pursuant to the provisions of the Gas Safety (Management) Regulations 1996 (the "Regulations"), the National Emergency Coordinator may, where it is necessary to prevent a supply emergency, authorise (for a specified period) gas not conforming with the requirements specified in Part I of Schedule 3 to the Regulations to be conveyed in the System if the gas conforms with the requirements specified in Part II of Schedule 3 to the Regulations. In the event that the National Emergency Coordinator does so authorise gas not conforming with the requirements specified in Part I of Schedule 3 to the Regulations to be conveyed in the System from the System Entry Point, the requirements in relation to Wobbe Number and incomplete Combustion Factor (ICF) set out in paragraph 2.3 above shall be amended as set out below for the period specified by the National Emergency Coordinator:-

- (a) Wobbe Number shall be between 46.5 MJ/SCM, and 52.85 MJ/SCM.
- (b) Incomplete Combustion Factor (ICF) shall be not more than 1.49.

2.5 In order to meet the calibration ranges for typical analysis equipment, unless agreed otherwise by the Parties, the concentration ranges of the following components in the gas delivered shall be as follows:

Component	% mole	
	low	high
Methane	78.00	98.00
Ethane	0.00	12.00
Propane	0.00	7.00
i-Butane	0.00	1.00
n-Butane	0.00	1.00
neo-Pentane	0.00	0.35
i-Pentane	0.00	0.35
n-Pentane	0.00	0.35
C6+ fraction	0.00	0.35

### 3. Measurement Provisions

3.1 The Measurement Provisions shall be as set out in Schedule 4.

### 4. Points of Delivery

4.1 The points of delivery at the System Entry Point shall be those illustrated in the diagram contained in Attachment A to Schedule 1.

### 5. Additional Requirements

5.1 The DFO shall maintain, repair and operate the Delivery Facility to the standard of a Reasonable and Prudent Operator, and National Grid shall maintain, repair and operate the Entry Facility to the standard of a Reasonable and Prudent Operator. In the event that either Party believes that the other Party is not complying with its obligations set out above, then (without prejudice to any rights the first Party may have under any Delivery Arrangement or Transportation Arrangement) it shall notify the other Party accordingly. Following the giving of such notice, the Parties shall meet as soon as reasonably practicable to discuss the matter in good faith.

### 6. [Special Delivery Arrangement

6.1 This paragraph 6 sets out the commingling requirements and procedures which will be followed

under this Special Delivery Arrangement when either Party becomes aware that a specific component level is likely to be in breach of any gas safety requirement, including without limitation schedule 3 of the Gas Safety (Management) Regulations 1996 notwithstanding that it is or may be in compliance with the as Gas Entry Conditions set out above in paragraph 2.

- 6.2 In the above circumstances, the gas must be commingled with other gas entering the System at [ ] (the “Commingling Point”) to comply with the safe entry requirements as set out in the Post Commingling Point Gas Energy Conditions, which are intended to comply with schedule 3 of the Gas Safety (Management) Regulations 1996, and will continue to be subject to review in compliance with Clause 7.3 of this Agreement to ensure that they comply with any relevant statutory requirement.
- 6.3 The information exchange arrangements will be substantially the same as set out in the Local Operating Procedures set out in Schedule 1, such that the relevant Party will inform the other that commingling with other gas is to be initiated at the Commingling Point.
- 6.4 If the Daily Flow Notification issued by the DFO is, or may be, targeting a situation where the commingled gas would fail to meet these post blend requirements, because of the limited availability of other gas at the Entry Facility commingling point the gas flow at the system entry point will be cut back, as advised by National Grid on a TFA marked “commingling capacity”.
- 6.5 If it is impractical for National Grid to advise the DFO in time, National Grid will cut back the gas directly and inform the DFO by a TFA marked “commingling capacity” as soon as reasonably practicable.
- 6.6 In both cases the gas flow at the System Entry Point will be reduced until its proportion in the commingled gas is reduced sufficiently such that the commingled gas will continue to meet the Post Commingling Point Gas Entry Conditions after the Commingling Point.
- 6.7 Whenever significant additional quantities of other gas become available, another TFA marked “commingling capacity” will be issued to the DFO by National Grid as soon as is reasonably practicable, to remove or reduce (as the case may be) any commingling capacity flow restriction.

## **7. Post Commingling Point Gas Entry Conditions**

- 7.1 All Natural Gas leaving the Commingling Point shall not contain any solid, liquid or gaseous material which would interfere with the integrity or operation of the System or any pipeline connected to such System or any appliance which a consumer might reasonably be expected to have connected to the System. In addition, all Natural Gas leaving the Commingling Point shall be in accordance with the following values:

- (a) Hydrogen Sulphide not more than 3.3 ppm.
- (b) Total Sulphur not more than 15 ppm.

- |     |                                       |  |
|-----|---------------------------------------|--|
| (c) | Hydrogen Content                      | not more than 0.1 mol%.  |
| (d) | Oxygen Content                        | not more than 10 ppm.  |
| (e) | Hydrocarbon Dewpoint                  | not more than minus two degrees Celsius (-2°C) at any pressure up to the delivery pressure provided in paragraph (p).  |
| (f) | Water Dewpoint                        | not such as would cause a water dewpoint more than minus ten degrees Celsius (-10°C) at the delivery pressure provided in paragraph (p).   |
| (g) | Wobbe Number                          | shall be between 48.14 MJ/SCM, and 51.41 MJ/SCM.   |
| (h) | Incomplete Combustion<br>Factor (ICF) | not more than 0.48.  |
| (i) | Soot Index (SI)                       | not more than 0.60.  |
| (j) | Odour                                 | [it shall have no odour that may cause National Grid to fail to meet its obligation under Part 1 of Schedule 3 of the Gas Safety (Management) Regulations 1996.] [it shall be odourised as follows: with odourant NB (80% tertiarybutyl mercaptan, 20% dimethyl sulphide), and the odourant injection rate will be 6 mg/scm and may be varied at National Grid's request by up to plus or minus 2 mg/scm to meet operational circumstances.] |
| (k) | Carbon Dioxide                        | not more than 2.0 mol%.  |
| (l) | Nitrogen                              | not more than 5.0 mol%.  |
| (m) | Total Inerts                          | not more than 7.0 mol%.  |
| (n) | Gross Calorific Value                 | shall be within the range 36.9 to 42.3 MJ/SCM. (real gross dry);   |
| (o) | Delivery Temperature                  | shall be between one and thirty eight degrees Celsius (1°C and 38°C).  |
| (p) | Pressure                              | shall be that required to deliver gas into the System taking account of the back pressure as the same shall vary from time to time. The delivery pressure shall not exceed eighty five bar gauge (85 barg).  |

Incomplete combustion factor (ICF) and Soot Index (SI) have meanings as defined in Part 1 of

Schedule 3 of the Gas Safety (Management) Regulations 1996.



## Schedule 4 - MEASUREMENT PROVISIONS

### 1. Measurement Equipment

1.1 The Measurement Provisions shall be as set out in this Schedule 4. The provisions of this Schedule 4 as to the measurement of flow (and determination of volume and energy) and the determination of gas quality, including calorific value of gas, delivered to the System shall apply to the System Entry Point.

### 2. Installation, Commissioning, Operation and Maintenance of the Measurement Equipment comprised within the Delivery Facility:

2.1 This Schedule 4 specifies the metering, sampling, analysis and other equipment (the "Measurement Equipment") at the System Entry Point. The Measurement Equipment shall be installed and maintained to meet the requirements of the Gas (Meters) Regulations 1983, the Gas Safety (Management) Regulations 1996, the Gas Act 1986 and the Gas (Calculation of Thermal Energy) Regulations 1996 (as appropriate).

#### 2.2 General Requirements:

- (a) The Measurement Equipment at the Delivery Facility shall comply with standards that allow for the determination of the gas quality parameters as stated within the Gas Entry Conditions.
- (b) The Measurement Equipment shall also determine the volume and energy of all gas transferred between the System and the Delivery Facility under the relevant contractual and regulatory obligations, where applicable. The requirements for these determinations that must be met or exceeded are set out within these Measurement Provisions.
- (c) The Measurement Equipment shall be Validated prior to any gas flow being allowed to or from the System.

#### 2.3 Gas Quality

- (a) [National Grid][The DFO] shall install, commission, operate and maintain equipment to determine the characteristics defined in the Gas Entry Conditions of any gas that is passed from the Delivery Facility to the System.
- (b) The Parties agree that, notwithstanding paragraph 2.10, the equipment referred to in this paragraph 2.3 shall constitute the sole equipment for the measurement of gas quality at the System Entry Point. This equipment shall, subject to continuing and satisfactory maintenance and calibration by [National Grid][the DFO] acting as a Reasonable and Prudent Operator, be accepted by both Parties as providing accurate and reliable measurements.

- (c) Either Party may request a Validation of the gas quality measurement equipment in which event paragraph 2.10 shall apply except that such Validation shall be undertaken within 24 hours of such request and both Parties shall be entitled to witness the Validation. Both Parties accept that it may not be possible to give adequate advance notification of the timing of such Validation, but the Party arranging the Validation will use reasonable endeavours to ensure that the other Party is able to witness the Validation. Until such time as Validation is complete the gas quality measurement equipment shall be considered to be operating in a true and accurate manner.
- (d) Such equipment shall meet the following criteria:
- (i) All measurement biases shall as far as is practicable be eliminated or compensated for;
  - (ii) The uncertainty of measurement shall be such that the risk of the DFO and National Grid flowing gas that they are both unaware is outwith Schedule 3 of the Gas Safety (Management) Regulations 1996 is minimised. The uncertainties shall be better than those in the specified ranges;
  - (iii) The sampling system used to obtain the sample of gas for quality measurements shall ensure that the sample is representative of the gas passed between the System and the Delivery Facility and that no change to the gas composition occurs between the sample point and the analytical instrument; and
  - (iv) Measurements and Validation of equipment to make such measurement shall, where feasible, be traceable to national or international standards.

## 2.4 Energy and Volume

The DFO shall install, commission, operate and maintain flow measurement equipment to determine instantaneous and integrated volume and energy flows out of the Delivery Facility such that:

- (a) All volume and energy flows to the System shall comply with this paragraph;
- (b) All volumes shall be corrected to metric Standard Temperature and Standard Pressure conditions, and reported as cubic metres of gas;
- (c) The measurement of volume shall be without bias and with an uncertainty of better than plus or minus 1.0% of reading over the specified flow range; and
- (d) The uncertainty of the energy flow shall be better than  $\pm 1.1\%$  of reading over the specified flow range.

## 2.5 Volume and Energy Calculation

- (a) Volume flowrate shall be calculated in accordance with the appropriate standard using a dedicated flow computer that shall accept all signals necessary for the calculation of the total station volume and energy flowrate.
- (b) The live input signals from each orifice plate metering stream shall include but not be limited to:
  - (i) differential pressure transmitter low range;
  - (ii) differential pressure transmitter high range;
  - (iii) pressure transmitter;
  - (iv) temperature transmitter;
  - (v) line density (if a chromatograph is not installed);
  - (vi) relative density (if a chromatograph is not installed); and
  - (vii) gas composition (if a chromatograph is installed).
- (c) The live input signals from each turbine metering stream shall include but not be limited to:
  - (i) turbine meter pulses;
  - (ii) pressure transmitter;
  - (iii) temperature transmitter;
  - (iv) line density (if a chromatograph is not installed);
  - (v) relative density (if a chromatograph is not installed); and
  - (vi) gas composition (if a chromatograph is installed).
- (d) The live input signals from each ultrasonic metering stream shall include but not be limited to:
  - (i) ultrasonic meter pulses (or ultrasonic meter parameters via serial link);
  - (ii) pressure transmitter;
  - (iii) temperature transmitter;
  - (iv) line density (if a chromatograph is not installed);
  - (v) relative density (if a chromatograph is not installed); and

- (vi) gas composition (if a chromatograph is installed).
- (e) The flow computer shall accept the results of a calibration carried out at a suitably accredited facility to minimise the error of measurement. For turbine and ultrasonic meter calibrations, the number of calibration points that can be entered shall not be less than five.

## 2.6 Volume Measurement

- (a) The flow Measurement Equipment shall be designed, built and installed to BS EN 1776. Further guidance is given in the Institute of Gas Engineers' reports IGE/GM/1 and IGE/GM/4. In addition, the following standards/guidelines shall also apply:
  - (i) For orifice plate metering systems, BS EN ISO 5167;
  - (ii) For turbine metering systems, BS 7834 (ISO 9951);
  - (iii) For ultrasonic metering systems, BS 7965, BS ISO/TR 12765, AGA 9; and
  - (iv) For any other metering system, such standards/guidelines as may be agreed by National Grid.
- (b) The uncertainty of the Measurement Equipments must be assessed in accordance with ISO5168 and the relevant parts of ISO5167, ISO9951 and BS 7965 as may be applicable (or such other standards as may be agreed between the Parties).
- (c) The calculation of density for the purpose of calculating volume flow and for correction to standard conditions shall be such that:
  - (i) All densities shall be determined as kilograms per cubic metre (kg/CM<sup>3</sup>);
  - (ii) The line density shall be [measured using an in-line densitometer. One densitometer shall be installed for each metering stream and these shall be installed in a 'pressure recovery' mode of operation to minimize the amount of gas vented to atmosphere.] [calculated from a gas composition obtained via a [gas chromatograph.] The calculation of line density will be in accordance with the latest version of the ISO 12213 using a live pressure and temperature; and
  - (iii) The reference density shall be calculated from [reference density determined using a relative density transducer] [gas composition obtained via a [gas chromatograph.] The calculation of reference density will be in accordance with the latest version of the ISO 12213 using Standard Pressure and Standard Temperature.
- (d) The measurement of temperature for the purpose of calculating volume flow and for

correction to standard conditions shall be such that:

- (i) Temperatures shall be determined as degrees Celsius (°C); and
  - (ii) The requirements of the relevant parts of ISO5167, ISO9951 and BS 7965 as may be applicable (or such other standards as may be agreed between the Parties) are met.
- (e) The measurement of pressure for the purpose of calculating volume flow and for correction to standard conditions shall be such that:
- (i) Pressure shall be determined as bar gauge; and
  - (ii) The requirements of the relevant parts of ISO5167, ISO9951 and BS 7965 as may be applicable (or such other standards as may be agreed between the Parties) are met.

## 2.7 CV Measurement

- (a) The DFO shall install, commission, operate and maintain calorific value measurement equipment that operates by [chromatography], [combustion calorimetry] [other means] such that:
- (i) All calorific values shall be corrected to Standard Temperature and Standard Pressure, and reported as Megajoules per cubic metre (MJ/SCM); and
  - (ii) The equipment shall read without bias and the uncertainty of the calorific value must be better than plus or minus 0.1% of reading over the specified calorific value range. The determination of uncertainty shall be traceable to national or international standards as appropriate.
- (b) The design and operation of the Measurement Equipment shall follow all relevant national or international standards, specifically:
- (i) Where the calorific value is determined by analysis of the gas composition, it shall typically be determined according to ISO 6976 (1995) or better; and
  - (ii) Where an on-line analytical system is used, its performance shall normally be evaluated according to ISO 10723 (1995) or better.
- (c) National Grid may evaluate all instruments used in the determination of the CV and witness the calibrations or perform tests on the apparatus.
- (d) [As the Gas (Calculation of Thermal Energy) Regulations 1996 (as amended) apply at the System Entry Point, then the apparatus used for the determination of calorific value will be operated and maintained under direction from Ofgem and will be used

for the purposes of calculating flow weighted average calorific value (FWACV) applied to that charging area.]

## 2.8 Permitted Ranges

- (a) The range of measurement (the “**Permitted Range**”) and the uncertainty of parameters determined by the Measurement Equipment shall be better than the values defined in the table below, and the frequency with which measurements are taken shall be not less than that specified in the table below:

Characteristic	Unit	Permitted Range	Uncertainty	Frequency
Volume Flow Rate	CM/hour	[]	±1% of flow	
Energy Flow Rate	MJ/hour	[]	±1.1% of flow	
Gas Pressure	barg	[0 – 85]	±[0.5] barg	
Gas Temperature	°C	[0 – 40]	±[1] °C	
[Hydrocarbon Dewpoint]	°C at [27] barg	[-60 - +20]	±[2] °C	
[Water Dewpoint]	°C at [85] barg	[-30 - +10]	±[2] °C	
[Oxygen]	Mole %	[0 -0.25]	±[0.01]	
[Hydrogen Sulphide]	mg/CM	[0 – 6]	±[0.1] mg/CM	
[Total Sulphur]	mg/CM	[0 – 60]	±[1] mg/CM	
[Incomplete Combustion factor]		[-3 - +2]	±[0.02]	
[Soot Index]		[0 – 1]	±[0.02]	
[Inert Gases (including Carbon Dioxide and Nitrogen)]	Mole%	[1 – 10]	±[0.1]mole%	
[Nitrogen]	Mole%	[0 – 10]	4 % of measurement	
[Carbon Dioxide]	Mole%	[0-5]	4% of measurement	
CV	MJ/SCM	[35 – 44]	±[0.1] MJ/SCM	
Relative Density		[0.5 - 0.8]	±[0.01]	
[Wobbe]	MJ/SCM	45 - 55	±[0.1] MJ/SCM	

- (b) For the avoidance of doubt, the maximum hourly flow rate set out in the table above is quoted in respect of volume, as Standard Cubic Metres of gas and, in respect of

energy, in Megajoules, both as defined in this Agreement. Such rate does not constitute for the purposes of the Network Code or otherwise an indication of the available capacity in respect of the System Entry Point.

## 2.9 Communication Interface

- (a) Communications are required for two purposes; operational monitoring and control and measurement Validation.
- (b) The DFO shall install, commission, operate and maintain communication equipment to provide signals to National Grid of type, quality, quantity and frequency to be agreed between National Grid and the DFO. The requirement shall include but may not be limited to:

Characteristic	Unit	Permitted Range	Transmittal mode	Frequency
Instantaneous standard volume flow rate	MSCM/day	[ - ]	Analogue	
Instantaneous energy flow rate	TJ/day	[ - ]	Analogue	
Integrated standard volume flow	MSCM/day		Digital	
Integrated energy flow	TJ/day		Digital	
Gas Pressure	barg	[0 – 85]	[Analogue]	
Gas Temperature	°C	[0 – 40]	[Analogue]	
[Hydrocarbon Dewpoint]	°C at [27] barg	[-60 - +20]	[Analogue]	
[Water Dewpoint]	°C at [85] barg	[-30 - +10]	[Analogue]	
[Oxygen]	Mole %	[0 -0.25]	[Analogue]	
[Hydrogen Sulphide]	mg/CM	[0 – 6]	[Analogue]	
[Total Sulphur]	mg/CM	[0 – 60]	[Analogue]	
[Incomplete Combustion factor]		[-3 - +2]	[Analogue]	
[Soot Index]		[0 – 1]	[Analogue]	
[Inert Gases (including Carbon Dioxide and Nitrogen)]	Mole%	[1 – 10]	[Analogue]	

[Nitrogen]	Mole%	[0 – 10]	[Analogue]	
[Carbon Dioxide]	Mole%	[0-5]	[Analogue]	
CV	MJ/SCM	[35 – 44]	[Analogue]	
Relative Density		[0.5 - 0.8]	[Analogue]	
[Wobbe]	MJ/SCM	45 - 55	[Analogue]	
Flow measurement fault alarm			Digital	
GS(M)R compliance alarm			Digital	

- (c) [National Grid shall install, commission, operate and maintain communication equipment to provide signals to the DFO of type, quality, quantity and frequency to be agreed between National Grid and the DFO. The requirement shall include but may not be limited to:]

Characteristic	Unit	Permitted Range	Transmittal mode	Frequency
[Oxygen]	Mole %	[0 -0.25]	[Analogue]	
[Hydrogen Sulphide]	mg/CM	[0 – 6]	[Analogue]	
[Total Sulphur]	mg/CM	[0 – 60]	[Analogue]	
[Incomplete Combustion factor]		[-3 - +2]	[Analogue]	
[Soot Index]		[0 – 1]	[Analogue]	
[Inert Gases (including Carbon Dioxide and Nitrogen)]	Mole%	[1 – 10]	[Analogue]	
[Nitrogen]	Mole%	[0 – 10]	[Analogue]	
[Carbon Dioxide]	Mole%	[0-5]	[Analogue]	
[GS(M)R compliance alarm]			[Digital]	

- (d) The signals provided pursuant to this paragraph 2.9 shall be provided as [4-20 mA or volt-free contact signals] [RS232] [RS485] [modbus] [] as agreed by both Parties.

## 2.10 Validation

- (a) The Measurement Equipment shall be Validated prior to any gas flow being allowed to or from the System.



- (b) The procedures for the Validation and subsequent re-Validation shall be agreed between both Parties.
- (c) Either Party may request that the Measurement Equipment be Validated at any time in which case any such Validation shall be carried out as soon as reasonably practicable. Subject to paragraph 2.10(d), the costs and expense of such Validation, and any adjustment or replacement of the components of the Measurement Equipment made as a result of any Validation made pursuant to this paragraph 2.10(c) shall, if the Measurement Equipment is found to read without discernable bias and within the Permitted Range, be paid by the Party requesting the Validation and in any other case by the operator of the relevant part of the Measurement Equipment.
- (d) Either Party may request that the Measurement Equipment be Validated if the previous Validation took place more than one (1) month previously, and any Validation pursuant to this paragraph 2.10(d) shall be carried out as soon as reasonably practicable. The operator of the relevant part of the Measurement Equipment shall bear the costs and expenses of such Validation and any adjustment or replacement of the components of the Measurement Equipment made as a result thereof.
- (e) Immediately following Validation as specified in paragraph 2.10(c) or (d), the individual components of the Measurement Equipment shall be adjusted or replaced as necessary so that the Measurement Equipment reads without bias and within the Permitted Range. Each individual component of the Measurement Equipment shall read within its recommended tolerance. Where the Measurement Equipment is found when so Validated to read with a discernable bias, regardless of whether it is within the Permitted Range, then:
  - (i) the Measurement Equipment shall be assumed to have read with bias during the latter half of the period since last Validated and found to be without bias or, if later, since last adjusted to read without bias (except in the case where it is proved that the Measurement Equipment has begun to read outside the Permitted Range on some other date);
  - (ii) for the purposes of calculating the amount of allowance to be made to or the surcharge to be made on System Users, the quantities read as offtaken from or delivered to the System during the period when the Measurement Equipment is assumed to have read with bias shall be adjusted by an amount corresponding to the amount by which the Measurement Equipment was found on Validation to be in error.
- (f) Immediately following Validation as specified in paragraph 2.10(c) or (d), the

individual components of the Measurement Equipment shall be adjusted or replaced as necessary so that the Measurement Equipment reads without bias and within the Permitted Range. Each individual component of the Measurement Equipment shall read within its recommended tolerance. Where the Measurement Equipment is found when so Validated to read without bias and outside the Permitted Range then, for the purposes of calculating the amount of allowance to be made to or the surcharge to be made on System Users the quantities read as offtaken from or delivered to the System during the period when the Measurement Equipment is assumed to have read outside the Permitted Range shall be accepted without adjustment.

- (g) Any Validation pursuant to this paragraph 2.10 shall be conducted by the operator of the relevant part of the Measurement Equipment, and the operator of the relevant part of the Measurement Equipment shall give reasonable advance notice of such Validation to the other Party, and such other Party shall be entitled to be present. The operator of the relevant part of the Measurement Equipment shall provide a Validation report to the other Party within fourteen (14) days of any Validation stating the results of such Validation.
- (h) The results of any Validation shall be binding on System User(s), National Grid and the DFO unless the DFO or National Grid shall within fourteen (14) days after receiving the Validation report specified in paragraph 2.10(g), give notice to the operator of the relevant part of the Measurement Equipment that it disputes the accuracy of such Validation. The DFO or National Grid shall not be entitled to dispute the accuracy of such Validation solely on the grounds that it did not attend such Validation.
- (i) At the request of either Party, the Parties shall meet and discuss and endeavour to settle any dispute or failure to agree arising from the application of the provisions of this paragraph 2.10 and if within thirty (30) days after such request they shall have been unable to agree the matter may be referred to an expert for determination (at the request of either Party) in accordance with the provisions set out in Schedule 5.

## 2.11 Inspection Rights

- (a) Either Party shall have the right, upon giving reasonable notice to the operator of the relevant part of the Measurement Equipment to inspect the such part of the Measurement Equipment and the charts and other measurements or test data of the operator of the relevant part of the Measurement Equipment but the reading calibration and adjustment of such and the changing of any charts shall be carried out only by the operator of the relevant part of the Measurement Equipment who shall preserve all original test data, charts and other similar records for a period of three (3) years and shall, at the expense of the other Party, make a copy thereof

available to or National Grid upon request.

- (b) The operator of the relevant part of the Measurement Equipment shall maintain auditable logs that shall include but not be limited to:
  - (i) System alarms contributing to flow Measurement Equipment fault alarm and to any equipment within the Measurement Equipment;
  - (ii) Configuration of flow computers and programmable devices within Measurement Equipment; and
  - (iii) Tests or Validations of the Measurement Equipment.

## 2.12 Measurement Failure

- (a) In the event of failure of the equipment for measuring quality of gas to be installed in respect of the System Entry Point:
  - (i) either:
    - (A) spot samples shall be taken and analysed at any approved laboratory with sufficient frequency to monitor properly changes in operating conditions. The method and equipment used and installed for taking samples shall be subject to reasonable agreement by the Parties (such agreement not to be unreasonably withheld or delayed); or
    - (B) where there is no laboratory at the Delivery Facility then National Grid shall use reasonable endeavours to determine gas quality at the System Entry Point from other equipment on its System, and the DFO shall take such steps as would be expected of a Reasonable and Prudent Operator to ensure that all gas delivered at the SEP continues to comply with the limits set out in the Network Entry Provisions; and
  - (ii) the operator of the relevant part of the Measurement Equipment shall rectify such failure as soon as reasonably practicable. Rectification shall include, inter alia, recalibration within 24 hours of the operator becoming aware of the failure. Any further remedial works required as a consequence of such failure shall be notified to the other operator no later than the next working day;
- (b) The intention is to exchange information between the Parties such that no significant energy measurement errors are allowed to accumulate and an agreed end of day number is always achieved. As such:
  - (i) whenever a significant energy measurement error occurs, other than as included in paragraph 2.10 it will be documented in a mis-measurement report and the reconciliation of the metering errors will be in accordance with

reconciliation procedures that will have been agreed with National Grid;

- (ii) where details of the error are known, to include but not be limited to the start and end dates, error quantity (to include fixed or variable), the error shall be calculated from the available data; and
  - (iii) where the full details of the error are not known then the normal principle used for reconciliation is that a correction for half of the measurement error shall be applied to the volume/energy for the entire period between the correction to the measurement error and the previous Validation check or point at which it can be demonstrated that there was no measurement error.
- (c) Reconciliation will be calculated using the end of day data previously recorded on UK-Link.
- (d) Where the error cannot be agreed [the method of allocation in the LOP shall be used to determine the quantity of gas delivered or offtaken] [(i) subject to paragraph (ii), the quantity of gas delivered or offtaken shall be assumed to be equal to the quantity which was delivered or offtaken on the same Day in the preceding week; (ii) in relation to each of the first Days (on or after the Effective Date) on which gas is offtaken, and is delivered, from or to the System, and (in each case) each of the following six (6) Days, the quantity of gas delivered or offtaken shall be the quantity determined by National Grid.] [the matter may be referred to an expert for determination (at the request of either Party) in accordance with the provisions set out in Schedule 5.]

### 2.13 Modifications

The operator of the relevant part of the Measurement Equipment shall provide not less than three (3) months prior written notice to the other Party of any intended modifications to that part of the Measurement Equipment which may affect the measurement of the flow or quality of gas at the System Entry Point. The other Party shall accept the Measurement Equipment (as modified) for flow of gas once the Measurement Equipment (as amended) has been Validated (as appropriate). Agreement to the proposed change or modification to any part of the Measurement Equipment not to be unreasonably withheld.

**Schedule 5 - EXPERT DETERMINATION****1. Introduction**

1.1 This Schedule 5 shall comprise the provisions of Sections A1 and A2 of the General Terms of the Uniform Network Code, which forms part of the Network Code, which shall be adopted mutatis mutandis, subject to the amendments set out in paragraph 2 below.

**2. Amendments to Section A of the General Terms of the Uniform Network Code**

2.1 Section A 1.1.1 shall not apply;

2.2 Section A.1.1.2 shall be deleted and replaced with the following:

- (a) a “dispute” is any dispute or difference arising between National Grid and/or the DFO and/or System User(s) under paragraph 2.10 or 2.12(d) of Schedule 4;
- (b) “User” means the DFO and/or System User(s);
- (c) “Transporter” or “Transporters” means National Grid;
- (d) in respect of any dispute “parties” means National Grid and the User or Users party to such dispute and “party” shall be construed accordingly;
- (e) subject to (v) below, a reference to “the Code”, “the Framework Agreement” or any “Ancillary Agreement” shall mean a reference to “this Agreement”;
- (f) the “Uniform Network Code Committee” shall for the purposes of this Schedule 5 be the same committee as that designated under the Uniform Network Code;
- (g) a reference to “Section A” shall for the purposes of this Agreement be interpreted as a reference to this “Schedule 5”.

2.3 Section A1.3 and Section A3 shall not apply.

2.4 Section A1.5.2 shall not apply.

**Schedule 6 - ACCESSION AGREEMENT**

**ACCESSION AGREEMENT**

**between**

**NATIONAL GRID GAS PLC**

**and**

[ ]

**nationalgrid**

**National Grid Legal  
National Grid House  
Warwick Technology Park  
Gallows Hill  
Warwick CV34 6DA  
T: 01926 653000  
F: 01926 655630**

**THIS AGREEMENT** is made the \_\_\_\_\_ day of \_\_\_\_\_

**BETWEEN:**

1. **National Grid Gas plc**, (registered in England and Wales under number 02006000), whose registered office is at 1-3 Strand, London, WC2N 5EH ("**National Grid**"); and
2. [ \_\_\_\_\_ ], (registered in [England and Wales] under number [ \_\_\_\_\_ ]), whose registered office is at [ \_\_\_\_\_ ] (the "**Applicant**").

**RECITALS:**

- (A) National Grid is authorised pursuant to the Network Entry Agreement dated [ \_\_\_\_\_ ] in respect of [ \_\_\_\_\_ ] made between National Grid and the other Party named therein as DFO and as now in force pursuant to Accession Agreements (if any) entered into by National Grid and any replacement DFO before the date of this Agreement (the "NEA"), to enter into this Agreement .
- (B) The Applicant has complied with the requirements set out in Clause 8 of the NEA and wishes to be admitted as DFO under the NEA.

**IT IS HEREBY AGREED as follows:**

1. In this Agreement words and expressions defined in the NEA and not otherwise defined herein shall have the meanings ascribed thereto under the NEA.
2. The Applicant has by prior written notice advised National Grid, of the date on which it is to become the DFO and provided an address and telephone and facsimile for the purposes of service of notices under the NEA.
3. National Grid hereby admits the Applicant as a Party under the NEA on the terms and conditions hereof as from the "**NEA Accession Date**", being the date on which the Applicant becomes the DFO.
4. The Applicant hereby accepts its admission as a Party to the NEA on the NEA Accession Date and undertakes with National Grid to perform and to be bound by the NEA as a Party as from the NEA Accession Date.
5. For all purposes in connection with the NEA the Applicant shall as from the NEA Accession Date be treated as if it has been a signatory of the NEA in the capacity of the DFO, and as if this Agreement were part of the NEA, and the rights and obligations of the Parties shall be construed accordingly.
6. This Agreement and the NEA shall be read and construed as one document and any reference (in or pursuant to the NEA) to the NEA (howsoever expressed) should be read and construed as a reference to the NEA and this Agreement.

**IN WITNESS** of which the duly authorised representatives of the parties have executed this Agreement on the day and year first above written.

**SIGNED** for and on behalf of

**SIGNED** for and on behalf of

**National Grid Gas plc**

[     ]

Signed: .....

Signed: .....

Name: .....

Name: .....

Position: .....

Position: .....



**Schedule 7 - The Delivery Facility and the Entry Facility**

**1. The Delivery Facility**

1.1 [ ]

**2. The Entry Facility**

2.1 [ ]