OPERATING MANUAL

Exhibit A to the General Terms and Conditions Forward Flow and Reverse Flow July 2019

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1. GENERAL PROVISIONS

1.1 Terms defined in the *Conditions* shall have the same meaning when used herein. This *Operating Manual* shall form part of the *Conditions* as amended from time to time and where it modifies provisions in or conflicts with the *Conditions,* the *Conditions* shall govern and take precedent.

For the purposes of this Exhibit A, except where it expressly provides otherwise, the following expressions shall have the meanings ascribed to them in this Article 1.1 and shall include the plural as well as the singular:

"Cumulative Gas Balance"
shall mean the aggregation of the *Hourly Gas Balances.*

"*D"*
shall mean the *Gas Day* on which the transmission and/or other services which is/are nominated is/are meant to be performed by *BBL Company*, and *D*-1 means the *Gas Day* preceding *D*. *D* starts at 6.00 hours *LET* and ends at 6.00 hours *LET* the next *Gas Day*.

"Day" and "*Daily"*
shall have the same meaning as *Gas Day* in the *Conditions*.

"*Downstream Party*"
shall mean a third party receiving *Gas* from *Shipper* at *TTF* or the *Exit Point*.

"*Prevail Rule*"
shall mean with respect to the *Quantity of Gas* (re)nominated by *Shipper* and the *Quantity of Gas* (re)nominated by the relevant *Upstream Party* or *Downstream Party*, that the *Properly (Re)Nominated Quantity of Gas* by *Shipper* at the *Entry Point reverse Flow* or the *Exit Point* shall prevail.

"*Pair of Shipper Codes"*
shall mean the *Shipper Code* of *Shipper* together with the shipper code of an *Upstream Party* or a *Downstream Party* under a *(Re)Nomination* made by *Shipper*.

"Transfer Point BBL – Trading zone" or *"TPBT"*
shall mean the virtual transfer point that administers the transfer of *Gas* from the trading zone to the BBL balancing zone (or vice versa).

"*TTF-Trading Message*"
shall mean a (re) nomination for trading on *TTF*.

"*Upstream Party*"
shall mean a third party delivering *Gas* to *Shipper* at the *Entry Point Reverse Flow* or TTF.

1.2 *BBL Company* and *Shipper* shall conduct their respective operations in a prudent and efficient manner. *Parties* will inform each other as soon as reasonably possible, of any foreseeable condition or occurrence that could affect the *Quantity of Gas,* quality of *Gas* or pressure of *Gas* at the *Entry Point Reverse Flow* or at the *Exit Point.*

1.3 Both *Parties* shall be reachable twenty-four (24) hours a day and every day of the year by phone and any mutually agreed other communication system.

1.4 *Parties* shall use NOMINT and NOMRES messages according to Edig@s, as the protocol for exchanging dispatching information, where Edig@s is a subset of 'EDI/EDIFACT' (Electronic Data Interchange/Electronic Data Interchange for Administration Commerce and Transport) as described in detail at http://www.edigas.org.

1.5 A communication test will be performed in accordance with Article 3.1 (b) of the *Conditions* to check whether the *BBL-Shipper* (or a third party acting on behalf of the *BBL-Shipper*) has the means of handling messages with *BBL Company* according to the Edig@s protocol. Such a communication test can take up to five (5) *Business Days*.

1.6 In case *Parties* are temporarily not able to use Edig@s messages, because of e.g. system malfunction, *Parties* shall temporarily exchange messages via fax or through a mutually agreed other means of communication. *Parties* will take appropriate action to restore, as soon as possible, the Edig@s communication.

1.7 Any *(Re)Nomination, TTF Trading Message* and *Confirmation* under this *Operating Manual* shall relate to *LET* and shall be expressed in *kWh* (rounded to the nearest *kWh*) unless agreed otherwise in writing.

1.8 In accordance with the Edig@s Message Implementation Guidelines (MIG) Version 3.2 dated 01-04-2005, the quantities transmitted in the Edig@s messages can have a positive or negative value. In order to avoid any misunderstanding in the meaning of those quantities Edig@s has defined the following sign convention:

- (Minus sign) qualifies a *Quantity of Gas* as delivered at *TTF* or at *the Entry Point Reverse Flow* by an *Upstream Party*.
+ (Plus sign) qualifies a *Quantity of Gas* as received from the *BBL-Facilities* at the *Exit Point or received at TTF* by a *Downstream Party*.

Alternately *BBL-Shippers* may, instead of the sign convention, use the following code:

Z02 qualifies a *Quantity of Gas* as delivered at *TTF* by an *Upstream Party*.
Z03 qualifies a *Quantity of Gas* as retrieved from the *BBL-Facilities* at the *Exit Point* by a *Downstream Party*.

1.9 All documents, notices or other information, other than *Nominations* and *Confirmations,* required to be supplied under this *Operating Manual* should be exchanged by a secure data communication system.

1.10 The basic operating philosophy chosen for the *BBL-Facilities* is a system where the pipeline is kept at a more or less constant average pressure and the flow into and from the pipeline is kept equal as much as possible. Only for operational optimisation (e.g. very low inlet pressures at the grid of *National Grid*) the pipeline pressure will be lowered to either save compression power or heating power for the *BBL-Facilities*.

1.11 This *Operating Manual* will have a temporary status, because after the start date of offering physical *Reverse Flow* transmission capacity by *BBL Company* an evaluation period will start. During such period *BBL Company* will assess the operation of the *BBL Facilities* with regard to *Reverse Flow* and as a result amendment of this *Operating Manual* may be necessary. The evaluation period will end ultimately at 30 September 2020.

2. NOMINATION PROCEDURE

2.1a Nomination procedure *Forward Flow*

This procedure describes how to (*Re)Nominate* in a *Forward Flow Direction* situation.

2.1a.1 Weekly *Nominations*

Shipper (or a third party acting on behalf of *Shipper)* shall at the latest on Friday of each week before 14:00 hours *LET* provide *BBL Company* with a weekly *Nomination* containing for each *Gas Day* of the following week, starting on Monday 06:00 *LET*, the *Shipper Codes* of the relevant *Downstream Parties*, and the *Daily Quantities of Gas* to be made available by *Shipper* to such *Downstream Parties*.

In case *Shipper* fails to send the weekly *Nomination* before the specified due time above, *BBL Company* will deem the weekly *Nomination* to be zero (0) for each *Gas Day* of the following week.

2.1a.2 *Daily Nominations*

Shipper (or a third party acting on behalf of *Shipper)* shall provide *BBL Company* with a *Nomination* for each *Hour* of each *Gas Day D* for the *Exit Point.* This set of twenty four (24) *Nominations* is defined as a *Daily Nomination* (twenty three (23) & twenty five (25) during the switches to respectively from the daylight saving periods).
Any *Nomination* or*,* with respect to each *Hour* for which a *(Re)Nomination* is issued, *(Re)Nomination* shall contain for each *Hour* the *Shipper Codes* of the relevant *Downstream Parties* and the *Quantities of Gas* to be made available by *Shipper* to each *Downstream Party.* If applicable, the *Nomination* shall also include the *Quantities of Gas* to settle the *Gas Balance* in accordance with Article 8.3 of this *Operating Manual*.

Shipper (or a third party acting on behalf of *Shipper)* may send a *Nomination* up to 179 *Gas Days* in advance of Gas *Day D*. Any *Nomination* will remain valid until it is replaced by a *(Re)Nomination*.

A *Nomination* for *Gas Day D* must be received by *BBL Company* at the latest at 14:00 hours *LET* on *Gas Day D*-1.

In case *Shipper* exceeds the *Nomination* deadline for *Gas Day D*, the nominated *Hourly Quantities of Gas* shall be deemed to be equal to the *Daily Quantities of Gas* from the weekly *Nomination* divided by twenty four (24), unless (re)nominated in accordance within the *(Re)Nomination* deadline.

In case *Shipper's (Re)Nomination* for one (1) or more *Hours* exceeds the *Transmission Capacity* on the *Exit Point* for said *Hour(s),* this *(Re)Nomination* shall be rejected by *BBL Company* whereby the reason of this rejection will be mentioned in the *Confirmation*.

(Re)Nominations before or within *Gas Day D* regarding *Hour* H, received by *BBL Company* at least two (2) full clock hours in advance of that *Hour* H, will be processed by *BBL Company* in accordance with this *Operating Manual* prior to that *Hour* H.

Any limitation which is technically necessary may be applied with respect to the rate at which the flow is allowed to change in accordance with the *Transmission Capacity* (e.g. the flow rate is allowed to change with some percentage of the *Transmission Capacity*).

Single Sided Nominations

A shipper (or a third party acting on behalf of shipper) can provide a *Nomination* for a *Shipper* by sending a single sided *Nomination* to *National Grid*. The *Shipper* must inform *BBL Company* via a *Nomination* authorisation *Edig@s* message in which the shippers are declared that are allowed to nominate at the *BBL Company Exit Point* on behalf of the *Shipper*.

2.1b Nomination procedure *Reverse Flow*

This procedure describes how to (*Re)Nominate* in a *Reverse Flow Direction* situation.

2.1b.1 Weekly *Nominations*

Shipper (or a third party acting on behalf of *Shipper)* shall at the latest on Friday of each week before 14:00 hours *LET* provide *BBL Company* with a weekly *Nomination* containing for each *Gas Day* of the following week, starting on Monday 06:00 *LET*, the *Shipper Codes* of the relevant *Upstream Parties*, and the *Daily Quantities of Gas* to be off taken by *Shipper* from such *Upstream Parties*.

In case *Shipper* fails to send the weekly *Nomination* before the specified due time above, *BBL Company* will deem the weekly *Nomination* to be zero (0) for each *Gas Day* of the following week.

2.1b.2 *Daily Nominations*

Shipper (or a third party acting on behalf of *Shipper)* shall provide *BBL Company* with a *Nomination* for each *Hour* of each *Gas Day D* for the *Entry Point Reverse Flow.* This set of twenty four (24) *Nominations* is defined as a *Daily Nomination* (twenty three (23) & twenty five (25) during the switches to respectively from the daylight saving periods).
Any *Nomination* or*,* with respect to each *Hour* for which a *(Re)Nomination* is issued, *(Re)Nomination* shall contain for each *Hour* the *Shipper Codes* of the relevant *Upstream Parties* and the *Quantities of Gas* to be off taken by *Shipper* from each *Upstream Party.* If applicable, the *Nomination* shall also include the *Quantities of Gas* to settle the *Gas Balance* in accordance with Article 8.3 of this *Operating Manual*.

Shipper (or a third party acting on behalf of *Shipper)* may send a *Nomination* up to 179 *Gas Days* in advance of Gas *Day D*. Any *Nomination* will remain valid until it is replaced by a *(Re)Nomination*.

A *Nomination* for *Gas Day D* must be received by *BBL Company* at the latest at 14:00 hours *LET* on *Gas Day D*-1.

In case *Shipper* exceeds the *Nomination* deadline for *Gas Day D*, the nominated *Hourly Quantities of Gas* shall be deemed to be equal to the *Daily Quantities of Gas* from the weekly *Nomination* divided by twenty four (24), unless (re)nominated in accordance within the *(Re)Nomination* deadline.

In case *Shipper's (Re)Nomination* for one (1) or more *Hours* exceeds the *Transmission Capacity* on the *Entry Point Reverse Flow* for said *Hour(s),* this *(Re)Nomination* shall be rejected by *BBL Company* whereby the reason of this rejection will be mentioned in the *Confirmation*.

(Re)Nominations before or within *Gas Day D* regarding *Hour* H, received by *BBL Company* at least two (2) full clock hours in advance of that *Hour* H, will be processed by *BBL Company* in accordance with this *Operating Manual* prior to that *Hour* H.
Any limitation which is technically necessary may be applied with respect to the rate at which the flow is allowed to change in accordance with the *Transmission Capacity* (e.g. the flow rate is allowed to change with some percentage of the *Transmission Capacity*).

Single Sided Nominations

A shipper (or a third party acting on behalf of shipper) can provide a *Nomination* for a *Shipper* by sending a single sided *Nomination* to *National Grid*. The *Shipper* must inform *BBL Company* via a *Nomination* authorisation *Edig@s* message in which the shippers are declared that are allowed to nominate at the *BBL Company Exit Point* on behalf of the *Shipper*.

2.2 Nomination procedure *TTF*

2.2.1 Shipper shall send a *TTF Trading Message* for each *Hour* H of each *Gas Day D*. A *TTF Trading Message* may relate to more than one consecutive *Gas Days*. Any *TTF Trading Message* shall contain for each *Hour* the shipper codes of all upstream parties and downstream parties and, taking into account the sign convention or Edig@s codes as provided for in Article 1.7 of this *Operating Manual*, the *Quantities of Gas* to be offtaken by *Shipper* from such upstream parties and *Quantities of Gas* to be made available by *Shipper* to such downstream parties.

Shipper may send a *TTF Trading Message* to the *TZM* up to 400 gas days in advance of *Gas Day D*. Only *TTF Trading Messages* prior to or within *Gas Day D* regarding *Hour* H, received by the *TZM* at least thirty minutes prior to that *Hour* H, are taken into account by the *TZM* as of that *Hour* H.

The nominating procedure for a gas exchange operator or its clearing party and its customers differs from the above as follows. A gas exchange operator or its clearing party shall (re)nominate, not only for itself, but also instead and on behalf of its customers regarding (re)nominations with that gas exchange operator or its clearing party as counter party

2.3 Netting of *Nominations*

The total sum of *Forward Flow Nominations* and *Reverse Flow Nominations* by all *Shippers* as described in article 2.1a and 2.1b above will be netted off against each other when they occur for the same *Hour* on a *Gas Day*.

For any *Hour* the physical flow direction of the BBL pipeline can either be in the *Forward Flow Direction* or in the *Reverse Flow Direction*.

BBL Company will publish on its website the flow direction of the BBL pipeline.

The situation can arise that the net *Nominations* of all *Shippers* are in the *Forward Flow Direction* whilst the BBL pipeline flows in the *Reverse Flow Direction*, or the other way around.

If this is the case, *BBL Company* will apply the Net Nomination Tool ('tool') to guarantee all nominations.

The tool will be triggered after *Nominations* of all *Shippers* under the articles 2.1a, 2.1b and 2.2 are confirmed. The matching and confirmation process for any *Hour* is performed in the usual way as described in article 4 of this *Operating Manual*.

After this the following steps will take place:

1. *BBL Company's* dispatchers will notice via an automatically generated IT message that net *Nominations* of all *Shippers* are in the *Forward Flow Direction* whilst the BBL pipeline flows in the *Reverse Flow Direction*, or the other way around.
2. *BBL Company's* dispatchers will then apply an additional nomination which will be automatically generated for a contracted third party.
3. This additional nomination will be added to those *Shipper Nominations* that have already been confirmed such that all *Nominations* are netted off.
4. This will resolve the situation where the net nominations and the BBL flow direction are not in line with each other.

The application of this tool does not change and cannot influence the contracted positions of *BBL Shippers* and/or *Nominations* either by *BBL Company* or by the third party, since the matching and confirmation process already has taken place.
The application of this tool does therefore not affect *Shipper*'s rights and obligations under the articles 2.1a, 2.1b and 2.2 above.

3. INTERRUPTIBLE SPECIFICS

Nominations for Interruptible Transmission Capacity will be subject to the same procedure as described in Article 2 of this *Operating Manual*. The availability of *Interruptible Transmission Capacity* can be constrained by the aggregate of *Firm Forward Flow Direction* n*ominations* and *Firm Reverse Flow Direction* n*ominations*.

If the aggregate of all *BBL-Shippers' Firm* and *Interruptible Forward Flow Direction* and/or *Reverse Flow Direction* n*ominations* exceeds the maximum *Firm* capacity of the *BBL-Facilities*, the *Interruptible Confirmations* will be reduced such that the aggregate of all *Confirmations* is equal to the maximum *Firm* capacity of the *BBL-Facilities*. This reduction shall be performed using the pro rata principle.

If, due to *(re)nominations* of one or more *BBL-Shippers*, the available *Interruptible Transmission Capacity* changes, the *Interruptible confirmations* will be recalculated. If this recalculation leads to a changed *Interruptible Confirmation* for *Shipper, Shipper* will receive a new *Confirmation* message.

4. MATCHING AND CONFIRMATION

4.1 Any *Daily (Re)Nomination* received by *BBL Company* will be validated against the conditions of the *Agreement* and be matched with the data from *National Grid*.

In addition *BBL Company* will perform a matching procedure consisting of comparing the sum of *Shipper's (Re)Nominations* at the *Entry Point Reverse Flow* or the *Exit Point* with those for the *National Grid* entry/*exit* point. If they are not equal, after taking into account any settlement of the *Gas Balance*, the *(Re)Nomination* will either be deemed to be zero (0) *kWh* or the *Prevail Rule* will be applied, as described under Article 4.2 of this *Operating Manual*.

4.1.1 Any *TTF Trading Message* sent by the *BBL Shipper* to the *Trading Zone Manager* for trading at the *TTF* will be validated by the *Trading Zone Manager* and be matched by *Trading Zone Manager* with the nomination data from upstream and/or downstream counter shippers at the *TTF*.

4.2 Upon execution of Article 4.1 of this *Operating Manual*, *BBL Company* will apply the following matching rules to each *(Re)Nomination* made for any *Hour*:

1) if the *Pairs of Shipper Codes* do not match, the *Quantities of Gas* (re)nominated by *Shipper* for that *Hour* shall be deemed to be zero (0) *kWh* with respect to such *Pairs of Shipper Codes* (zero rule);
2) if the (re)nominated sign or code (by *Shipper)* with respect to a *Pair of Shipper Codes* is equal to the (re)nominated sign or code of the relevant *Upstream Party* or *Downstream Party*, the (re)nominated *Quantity of Gas* (by *Shipper)* for that *Hour* shall be deemed to be zero (0) *kWh* with respect to such *Pairs of Shipper Codes* (zero rule);
3) if the (re)nominated *Quantity of Gas* (by *Shipper)* with respect to a *Pair of Shipper Codes* is not equal to the (re)nominated *Quantity of Gas* of the relevant *Upstream Party* or *Downstream Party*, the *Quantity of Gas* (re)nominated (by *Shipper)* shall be deemed to be equal for that *Hour* to the *Quantities of Gas* nominated by *Shipper* at the *Entry Point Reverse Flow* or the *Exit Point* (*Prevail Rule*).

Where none of (1) to (3) above applies there is a "match" and the *Quantity* of *Gas* (re)nominated for the relevant *Pair of Shipper Codes* for that *Hour* shall be accepted by *BBL Company*.

4.3 After validation and matching according to Article 4.2 of this *Operating Manual*, *BBL Company* shall issue a *Confirmation*. Any *Confirmation* shall contain for each *Hour* of *Gas Day D* besides the *Shipper Codes* of the relevant *Upstream Parties* or *Downstream Parties,* the *Quantities of* Entry Gas Reverse Flow *or Exit Gas* to be made available by *Shipper* to such *Upstream Parties* or *Downstream Parties* and the *Quantities of Gas* to settle the *Gas Balance*.

BBL Company shall send a new *Confirmation* due to any changes resulting from any validation and/or matching according to Article 4.2 of this *Operating Manual*.

4.4 After validation and matching according to Article 4.2 of this *Operating Manual*, *BBL Company* shall inform the *Trading Zone Manager* of the matched *Quantities of Gas* to ensure the transfer of Gas at *TTF* for *Shipper*.

The *Trading Zone Manager* shall send a confirmation for *Gas Day D* at *TTF* to *Shipper* as soon as reasonably possible before the next *Hour*. Any imbalances between the *Shipper* portfolio and the

Balancing Portfolio at *TTF* will be allocated to the *Balancing Portfolio* by the *Trading Zone Manager*.

4.5 *BBL Company* shall send a *Confirmation* for *Gas Day D* at the *Entry Point Reverse Flow* or the *Exit Point* and the *TPBT* to *Shipper* as soon as reasonably possible between 15:30 hours *LET* and 16:00 hours *LET* on *Gas Day D*–1.

In case of a *(Re)Nomination BBL Company* shall send a *Confirmation* as soon as reasonably possible, in any case before the beginning of the *Hour* to which the *(Re)Nomination* refers if such *(Re)Nomination* has been provided in accordance with the lead time as provided for in Article 2.3 of this *Operating Manual*.

If a reduction in *Transmission Capacity* occurs due to a quality deficient and/or capacity restrictions, *Shipper* shall be informed by phone about the reason, the expected duration and the amount of capacity reduction followed by a reduced *Confirmation* message.

BBL Company shall use the quantities indicated on the last sent *Confirmation* referring to *Gas Day D* as the basis for allocation calculations regarding *Gas Day D*.

For the avoidance of doubt:

- confirmed quantities may be lower than the corresponding (re)nominated quantities, and
- confirmed quantities may exceed the corresponding (re)nominated quantities, and
- it is *Shipper's* responsibility to check for the receipt of the *Confirmation*, to take notice of the content of the *Confirmation* and to decide if further actions by *Shipper* (e.g. notification of *Shipper's* customer*)* are required, and
- *BBL Company* is not allowed to change or withdraw any issued *Confirmation,* subject to Article 4.5 of this *Operating Manual*.

4.6 In case *BBL Company* faces constraints with respect to the deliveries and offtakes at the *Entry Point Reverse Flow* or the *Exit Point* (for reasons including mismatches, non availability of *Interruptible* capacity, *Entry Gas Reverse Flow* or *Exit Gas* which does not comply with the quality and/or pressure provisions of the *Conditions,* or maintenance) in such a way that a *Nomination* can not be met, *BBL Company* shall issue a *Confirmation* containing the remaining quantities to be received by *Shipper* from *Upstream Parties* and the quantities to be made available by *Shipper* to *Downstream Parties*.
The available capacity will be allocated between *Shippers* in accordance with Article 8.3 of the *Conditions* i.e. nominations within *Firm* capacity will have the first priority. Capacity will be allocated in the ratio of the *Shippers' Firm Transmission Capacity* holding to the aggregate *Firm* capacity of the pipeline.
Where the constraint is not caused by maintenance, damage to the *BBL Company* transmission pipeline or quality or pressure deficiency of *Gas, BBL Company* will respect the priority as laid down in Article 8.3 of the *Conditions* when determining the figures for the confirmations.

5. MEASUREMENT OF QUANTITIES

5.1 Introduction

The flow of *Gas* is measured at both the *Entry Point Reverse Flow* and the *Exit Point* respectively by facilities owned and operated by *BBL Company*.

5.2 Measurement differences

In the event that incorrect operation of the measuring equipment is ascertained at the *Entry Point Reverse Flow* or *Exit Point*, *Shipper* shall not be required to accept any retroactive allocation with regard to the *Entry Point reverse Flow* or *Exit Point* where an *OBA* exists.

In case no *OBA* exists at the *Entry Point Reverse Flow* or *Exit Point* and *BBL Company* ascertains incorrect operation of the metering equipment which measures the flow to or from the transmission grid operated by *BBL Company*, but the date of such incorrect operation cannot be determined, then such incorrect operation shall be deemed to have commenced on a date halfway between the date on which such incorrect operation is ascertained and the date of the last preceding uncontested check of metering equipment. The *Quantities of Gas* delivered under the *Agreement* during the period of incorrect operation of the metering equipment will be adjusted according to the reasonable estimate of *BBL Company*. The period within which delivered quantities will be readjusted shall be limited to the period from the date of the last preceding uncontested check of metering equipment. The date incorrect operation is ascertained will be deemed to be the date the check was performed which showed the incorrect operation of the metering equipment. Reallocation during that period will be performed pursuant to the provisions of the *Allocation Rules*; readjustment of delivered *Quantities of Gas* will be settled via the accumulated *Gas Balance or OBA*, depending on the agreed amendment regime with *National Grid*.

5.3 Minimum flow rates

The minimum flow rate of both the *Entry Point Reverse Flow* and the *Exit Point* technical facilities is 200,000 *kWh*/h. At this flow rate the total uncertainty of the amount of energy on an *Hourly* basis shall not exceed zero decimal seven five percent (0.75%) as provided for in Article 6.1.1 of the *Conditions*.

5.4 Publication of measured quantities

The measured quantities on the *Entry Point Reverse Flow* and on the *Exit Point* will be published on the *Web Site* (www.bblcompany.com) insofar this information can be published without jeopardising confidentiality and does not harm the commercial position of *Shipper*.

6. OPERATIONAL CONTROL

6.1 General

After having completed the matching procedure at both the *Entry Point Reverse Flow* and *Exit Point* the compressor(s) at the *Connection Point* and the flow control valve at the *Entry Point Reverse Flow* and *Exit Point* will be set to the aggregate flow rate for the relevant *Hour*.

BBL Company will control the flow at the *Connection Point* and at the *Entry Point Reverse Flow* and *Exit Point* in such a way that the physical flow will equal as far as possible the sum of the confirmed *Quantities of Gas* of all *Shippers* for each *Hour*.

6.2 Minimum net flow control

If the aggregate of all *Shippers'* confirmed *Hourly Quantity of Gas* would require a physical flow below the minimum rate of the measurement facilities at the *Connection Point* and the *Entry Point reverse Flow* or *Exit Point*, then *BBL Company* will use reasonable endeavours to offtake or redeliver intermittently at an instantaneous rate at, or above, the minimum rate of the measurement facilities at that *Connection Point* and that *Entry Point Reverse Flow* or *Exit Point,* subject to *Gas* being made available or being offtaken by *Shippers* at the same instantaneous rate. If *BBL Company* is unable to arrange to offtake or redeliver *Gas* intermittently on or above the required minimum rate, then *BBL Company* will request *Shippers* to submit revised *Nominations* such that the aggregate of *Shippers'* confirmed *Hourly Quantity of Gas* will require a physical flow at the *Entry Point Reverse Flow* or *Exit Point* at, or above, the minimum rate of the measurement facilities at the *Connection Point* and the *Entry Point Reverse Flow* or *Exit Point*.

This procedure is applicable if an *OBA* is in place at a particular point. If there is no *OBA* in place, *BBL Company* will not drop the flow below the minimum flow rate unless agreed with the *BBL-Shippers*.

If *BBL Company* is forced to maintain the flow rate at the minimum level or to bring the flow rate down to zero (0), *BBL Company* will send a revised *Confirmation* with recalculated confirmed *Quantities of Gas* based on the following priority schedule:

- First the *Shippers* with confirmations regarding the *Interruptible Transmission Capacity* using the pro rata principle; then

- *Shippers* with confirmations regarding *Firm Transmission Capacity*.

6.3 Flow variation restrictions

Flow variations are restricted by:

a) The contractual arrangements with the *NNO's* at both the *Connection Point* and the *Entry Point Reverse Flow* or *Exit Point*, and
b) The operating philosophy of *BBL Company* with respect to pipeline pressure, and
c) The technical limitations of the facilities at both the *Connection Point* and the *Entry Point Reverse Flow* or *Exit Point*.

7. ALLOCATION

7.1 Introduction

Allocation is the process by which *Gas* is apportioned on an *Hourly* basis to *Shippers*. Allocation calculations are performed separately for each flow direction (*Forward Flow Direction* and *Reverse Flow Direction*) at the *Entry Point Reverse Flow*, *TTF*, the *TPBT* as well as the *Exit Point*.

Allocation in general consists of:

- Measuring physical deliveries of *Gas*, and
- Identifying confirmed *Quantities of Gas* in the *Forward* and *Reverse Flow Direction*, and
- Allocating this calculated flow pro rata to the confirmations.

Where *Shipper* has confirmed *Quantities of Gas* in both flow directions at the same time, they are treated separately for allocation purposes (even if they are at the same *Entry Point Reverse Flow* or *Exit Point*).

7.2 Allocation at *TTF*

For *TTF* the allocated *Quantities of Gas* at *TTF* are deemed to be equal to the *Quantities of Gas* according to the confirmations.

7.3 Allocation at the *TPBT*

For the *TPBT* the allocated *Quantities of Gas* at the *TPBT* are deemed to be equal to the *Quantities of Gas* according to the *Confirmations.*

7.4 Allocation at the *Entry Point Reverse Flow* or the *Exit Point*

For the *Entry Point Reverse Flow* or the *Exit Point,* the *Quantities of Gas* will be allocated as described in Article 7.1 of this *Operating Manual*. Any differences between the measured volume and the sum of the *Confirmations* of the *Shippers* will be allocated to *Shipper* in proportion to the *Confirmations* of *Shipper* and the C*onfirmations* of other *Shippers* where confirmed *Quantities of Gas* in the *other direction* are deemed to be met.

If an *OBA* for the *Entry Point Reverse Flow* or *Exit Point* is concluded, the allocated *Quantities of Gas* shall be deemed to be equal to the *Quantities of Gas* according to the *Confirmations,* unless this is not feasible under the *OBA*, in which case allocation shall then be made proportionally on the basis of the *BBL-Shippers'* confirmed *Quantities of Gas*.

7.5 Reallocation

Reallocations are only allowed in exceptional circumstances.

7.6 Publication of allocations

The (provisional) allocations on the *Entry Point Reverse Flow, the Exit Point* and the *TPBT Point* will be calculated every *Hour* in accordance with the applicable *Allocation Rules* and made available by on-line electronic transmission to the *Shippers* and *National Grid.*

The allocations on *TTF* will be calculated on a daily basis in accordance with the applicable *Allocation Rules* and made available by on-line electronic transmission to the *Shippers*.

If the allocations are based on provisional measured quantities, final allocations shall be made available at the beginning of the following *Month*.

8. GAS BALANCE

Forward Flow Direction

8.1a For any *Hour* during a *Gas Day* the difference between the allocated *Quantity of Transfer Gas Forward Flow* at *TTF* and the allocated *Quantity of Exit Gas* will be allocated to the *Gas Balance* for that *Gas Day*.
The *Gas Balance* is negative if the allocated *Quantity of Exit Gas* is higher than the allocated *Quantity of Transfer Gas Forward Flow*. The *Gas Balance* is positive if the allocated *Quantity of Exit Gas* is lower than the allocated *Quantity of Transfer Gas Forward Flow*.
For clarification:
The *Gas Balance* for each *Hour* (H) = the allocated *Quantity of Transfer Gas Forward Flow* for *Hour* (H) – the allocated *Quantity of Exit Gas* for *Hour* (H).
The *Cumulative Gas Balance* at the end of *Hour* (H) = the *Cumulative Gas Balance* at the end of *Hour* (H-1) + the *Gas Balance* of *Hour* (H).

Reverse Flow Direction

8.1b For any *Hour* during a *Gas Day* the difference between the allocated *Quantity of Entry Gas Reverse Flow* at the *Entry Point Reverse Flow* and the allocated *Quantity of Transfer Gas Reverse Flow* will be allocated to the *Gas Balance* for that *Gas Day*.
The *Gas Balance* is negative if the allocated *Quantity of Transfer Gas Reverse Flow* is higher than the allocated *Quantity of Entry Gas Reverse Flow*. The *Gas Balance* is positive if the allocated *Quantity of Transfer Gas Reverse Flow* is lower than the allocated *Quantity of Entry Gas Reverse Flow*.
For clarification:
The *Gas Balance* for each *Hour* (H) = the allocated *Quantity of Entry Gas* Reverse Flow for *Hour* (H) – the allocated *Quantity of Transfer Gas Reverse Flow* for *Hour* (H).
The *Cumulative Gas Balance* at the end of *Hour* (H) = the *Cumulative Gas Balance* at the end of *Hour* (H-1) + the *Gas Balance* of *Hour* (H).

8.2 The *Cumulative Gas Balance,* positive or negative, shall not exceed ten decimal zero percent (10.00%) of the total *Transmission Capacity* (for one (1) *Hour*) in accordance with the applicable *Agreement(s)*. *Shipper* as well as *BBL Company* shall monitor *Shipper's Gas Balance* and take appropriate and timely action to keep the *Gas Balance* as low as possible.

8.3 The *Gas Balance* will be settled in kind by means of the appropriate *Nominations* and *Confirmations* for the *Quantities of Gas* to be settled at the *Entry Point Reverse Flow* or the *Exit Point*. The settlement of the *Gas Balance* is intended to bring the *Gas Balance* to zero (and not within the limits as set out in Article 8.2).
The matching procedure and the checking against the contracted *Transmission Capacity* regarding the *Nominations* at the *Entry Point Reverse Flow* or the *Exit Point* will take into account any such settlement of the *Gas Balance* according to the following procedure, taking into account the maximum *Transmission Capacity*:

a) In case of a negative *Gas Balance* (the allocated amount of *Transfer Gas Reverse Flow* or *Exit Gas* is higher than the allocated amount of *Entry Gas Reverse Flow* or *Transfer Gas Forward Flow*) *Gas* has been taken out of the *BBL Company* pipeline inventory and has to be redelivered by *Shipper* to *BBL Company*.

b) In case of a positive *Gas Balance* (the allocated amount of *Entry Gas Reverse Flow* or *Transfer Gas Forward Flow* is higher than the allocated amount of *Transfer Gas Reverse*

Flow or *Exit Gas*) *Gas* has been put into the *BBL Company* pipeline inventory and has to be redelivered by *BBL Company* to *Shipper*.

8.4 Timing of a settlement in kind of *Quantities of Gas* in the *Gas Balance* will be at any convenient moment agreed upon between the *Parties*.
However, if the *Gas Balance* exceeds the limit as mentioned in Article 8.2 of this *Operating Manual*, *BBL Company* and *Shipper* will, to the extent possible, agree on a period of time during which *Shipper* will settle the *Gas Balance*, taking into account the provisions mentioned in Article 7.2.4 of the *Conditions.* In case of a settlement, *BBL Company* will take a notice period into account of forty eight (48) *Hours*.
In the event of a technical emergency *BBL Company* may decide upon the timing and settlement of the *Quantities of Gas* in the *Gas Balance.*

8.5 The *Gas Balance* settlement in kind can be made either within *Shipper's* contracted *Transmission Capacity* or outside this contracted *Transmission Capacity* at the discretion of *Shipper. BBL Company* will, without prejudice, make available, free of charge, the additional capacity required for the *Settlement* of the *Gas Balance* for the period of time agreed between the *Parties* in order to settle the *Gas Balance.*
It is understood that the capacity can be restricted due to technical and operational limits and will be subject to Article 2 and 6 of this *Operating Manual*.

8.6 The (provisional) *Gas Balance* account will be calculated every *Hour* and made available to *BBL-Shippers* by on-line electronic transmission.

8.7 If possible after consultation with *Shipper, BBL Company* has the right to make available the *Hourly Quantities of Transfer Gas Reverse Flow or Exit Gas* in such a way that the sum of the *Hourly Confirmations* during the relevant *Gas Day* is met, provided the *NNO* concerned agrees and *Shipper* meets its volume entry requirements with the *NNO* concerned.

9. QUALITY AND PRESSURE SPECIFICATIONS

9.1 Quality specification at the *Connection Point* and the *Entry Point Reverse Flow* or the *Exit Point*

The quality specifications for the *Connection Point* will be the same as the quality specifications for the *Entry Point Reverse Flow* and the *Exit Point*. *BBL Company* will ensure that the quality specifications required to exit the *BBL-Facilities* as specified by the relevant *NNO* will not be more restrictive than specifications of the *Connection Point, Entry Point Reverse Flow* or the *Exit Point.* The quality specifications for the *Connection Point* and the *Entry Point Reverse Flow* or the *Exit Point* are laid down in the respective *GCA's*. For purpose of convenience only, the following has been taken from the GCA. In case of deviance, the specifications in the *GCA* shall be leading

Quality specifications

The Gas at the (Re)delivery Point shall have the following quality specifications:

1. The total sulphur content shall not exceed 52.7 mg/m3 (n).
2. The sulphur content caused by Hydrogen Sulphide (H2S) shall not exceed 5 mg/m3(n).
3. The hydrogen content shall not exceed 0.1 mol %.
4. The carbon dioxide content shall not exceed 2.5% (mol/mol).
5. The water dew point shall be below 263.15 K (– 10 ºC) at 70 bar(e).
6. The hydrocarbon dew point shall be below 271.15 K (– 2 ºC) at any pressure up to 70 bar(e).
7. The oxygen content shall not exceed 10 ppm (mol/mol).
8. The Gas shall have a temperature between 311.15 K (38 ºC) and 272.15 K (1 ºC).
9. The Wobbe Index shall not exceed 56.9 MJ/m3 (n) nor be less than 49.79 MJ/m3 (n).
10. The Superior Calorific Value shall not exceed 47.6 MJ/m3 (n) nor be less than 38.93 MJ/m3 (n).
11. The incomplete combustion factor shall not exceed 2.10.
12. The soot index shall not exceed 0.70.

However, as long as the entry specifications in the *GCA* between National Grid and BBL Company (the Interconnection Agreement) have a different range with regard to certain specifications the Interconnection Agreement values will apply. These specifications and their values are at the date of this Agreement as follows:

- The Wobbe Index shall not exceed 54.23 MJ/m3 (n) nor be less than 49.79 MJ/m3 (n).
- The Superior Calorific Value shall not exceed 44.62 MJ/m3 (n) nor be less than 38.93 MJ/m3 (n).
- The soot index shall not exceed 0.60.
- The incomplete combustion factor shall not exceed 0.48.

9.2 Pressure specifications at the *Connection Point* and the *Entry Point Reverse Flow* or the *Exit Point.*

The pressure specification for the *Connection Point* shall be agreed between *BBL Company* and *GTS* in such a way that the obligations of *Parties* under the *Agreement* will be fulfilled. The pressure of the *Gas* at the *Entry Point Reverse Flow* or the *Exit Point* shall be sufficient to allow the *Gas* to enter *BBL- Facilities*, but with a minimum of 57 bar (e). The pressure specification for the *Entry Point Reverse Flow* and the *Exit Point* shall be agreed between *BBL Company* and *National Grid* in such a way that the obligations of *Parties* under the *Agreement* will be fulfilled.

10. BBL COMPANY CONTACT DETAILS

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