OPERATING MANUAL REVERSE FLOW
List of contents

Article 1     General provisions      3
Article 2     Nomination procedure      5
Article 3     Interruptible reverse flow availability    7
Article 4     Matching and confirmation      8
Article 5     Measurement of Quantities    10
Article 6     Operational control      11
Article 7     Allocation      13
Article 8     Quality and pressure specifications    14
Article 9     BBL Company contact details      15
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:

"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*.

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

"Pair of Shipper Codes" shall mean the Shipper Code of Shipper together with the shipper code of an Upstream 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 the TTF.

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

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 deemed Quantity of Gas.

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 (deemed to be) delivered into the BBL-Facilities at the Entry Point Reverse Flow by an Upstream Party.
+ (Plus sign) qualifies a Quantity of Gas as (deemed to be) retrieved from TTF by a Downstream Party.

Alternately BBL-Shippers may, instead of the sign convention, use the following codes:
Z02 qualifies a Quantity of Gas as (deemed to be) delivered into the BBL-Facilities at the Entry Point Reverse Flow by an Upstream Party.
Z03 qualifies a Quantity of Gas as (deemed to be) retrieved from TTF 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.
2. NOMINATION PROCEDURE

2.1 Nomination procedure Reverse Flow

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

2.2 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, the Daily Quantities of Gas deemed to be offtaken 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.

2.3 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, the Quantities of Gas deemed to be offtaken by Shipper from each Upstream Party.

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 (deemed) Hourly Quantities of Gas shall be deemed to be equal to the (deemed) 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 physical Gas flow in the Forward Flow Direction is allowed to change. As a consequence of this, a limitation may also be applied with respect to the rate at which Shipper’s Gas flow in the Reverse Flow Direction 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 Entry Point Reverse Flow on behalf of the Shipper.

2.4 Nomination procedure TTF

2.4.1 Shipper shall send a TTF Trading Message for each Hour H of each Gas Day D for TTF. 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 1.8 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 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)nominated, 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.
3. **PRIORITY PRINCIPLES**

Interruptions of capacities according to Article 4 of the *Conditions* shall be performed using the pro rata principle.

The awarding of time stamps to capacity in the *Reverse Flow Direction* shall take place in accordance with the following rules:

- Quarterly capacity has an earlier time stamp (for the avoidance of doubt: this means that this capacity will have a lower priority of interruption) than Monthly capacity. Monthly capacity has an earlier time stamp than Daily capacity.

If, due to (re)nominations of one or more BBL-shippers, the available *Interruptible transmission capacity* in the *Reverse Flow Direction* changes, the *Interruptible Reverse Flow Direction confirmation* will be recalculated. If this recalculation leads to a changed *Interruptible Reverse Flow Direction 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 with those for the National Grid exit point. If they are not equal, 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 Reverse Flow.

4.1.1 Any TTF Trading Message sent by the BBL Shipper to the Trading Zone Manager for trading at TTF only 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 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, the (re)nominated deemed 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 deemed Quantity of Gas (by Shipper) with respect to a Pair of Shipper Codes is not equal to the (re)nominated deemed Quantity of Gas of the relevant Upstream, the deemed 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 (Prevail Rule).

Where none of (1) to (3) above applies there is a “match” and the deemed 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 Reverse Flow, 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, the Quantities of Entry Gas Reverse Flow deemed to be offtaken by Shipper from such Upstream Parties.

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 Reverse Flow.

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 and the TPBT to Shipper as soon as reasonably possible between 15:40 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 Reverse Flow.

If a reduction in Transmission Capacity occurs due to a quality deficiency or a Capacity Restriction (Article 8 of the Conditions), 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 deemed deliveries and deemed offtakes at the Entry Point Reverse Flow (for reasons like mismatches, non availability of Interruptible capacity) in such a way that a Nomination can not be met, BBL Company shall issue a Confirmation containing the remaining Quantities of Gas deemed to be offtaken by Shipper from Upstream Parties.
5. MEASUREMENT OF QUANTITIES

5.1 Introduction

The provisions in this Article 5 are primarily relevant for Gas flows in the Forward Flow Direction, but they indirectly influence the availability of transmission capacity in the Reverse Flow Direction. Therefore they form part of this Operating Manual Reverse Flow.

The flow of Gas in the Forward Flow Direction is measured at the Exit Point. The flow of Gas at the Exit Point to National Grid is measured by facilities owned and operated by BBL Company.

5.2 Incorrect operation of measuring equipment

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

In case no OBA exists at the Entry Point Reverse Flow 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 deemed to be 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 deemed to be 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.

5.3 Minimum flow rates

The minimum flow rate of the Exit Point technical facilities is 200,000 kWh/hr. 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 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 shippers.
6. OPERATIONAL CONTROL

6.1 General

After having completed the matching procedure at the Entry Point Reverse Flow the compressor(s) at the Connection Point and the flow control valve at the 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 the 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

6.2.1 If the aggregate of all Shippers' confirmed Hourly Quantities of Gas would require a physical flow below the minimum rate of the measurement facilities at the Connection Point and the Exit Point but above zero, 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 Exit Point, subject to Gas (deemed to) being made available or (deemed to) being offtaken by BBL-shippers at the same instantaneous rate.

6.2.2 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 BBL-shippers to submit revised nominations such that the aggregate of all BBL-shippers’ confirmed Hourly Quantities of Gas will require a physical flow at the Exit Point at, or above, the minimum rate of the measurement facilities at that Connection Point and that Exit Point.

If BBL-shippers are not willing and/or able to send the requested revised nominations, BBL Company is forced to maintain the flow rate at the minimum level or bring the flow rate down to zero (0). The corresponding procedures are laid down in articles 6.2.3 and 6.2.4.

6.2.3 If BBL Company is forced to maintain the flow rate at the minimum level, BBL Company will send one or more revised confirmations with recalculated Quantities of Gas based on the following priority schedule:

- First the Shippers with confirmations in the Reverse Flow Direction will be interrupted using the pro rata principle (see Article 3 of this Operating Manual Reverse Flow). The confirmations will be recalculated such that the sum of all confirmations will be equal to the minimum level;
- If, after all Shippers with confirmations in the Reverse Flow Direction have been interrupted, the aggregate of all BBL-shippers’ confirmed Hourly Quantities of Gas would still require a physical flow below the minimum rate, then all BBL-shippers with confirmations in the Forward Flow Direction will receive a revised higher confirmation which has been recalculated such that the sum of all confirmations will be equal to the minimum level. The necessary rise applicable to the sum of confirmations in the Forward Flow Direction will be divided proportionally over all BBL-shippers with confirmations in the Forward Flow Direction.

6.2.4 If BBL Company is forced to bring the flow rate down to zero (0), BBL Company will send one or more revised confirmations to Shippers with confirmations in the Forward Flow Direction with recalculated Quantities of Gas based on the following priority schedule:
First the Shippers with confirmations related to Interruptible capacity in the Forward Flow Direction will be interrupted using the pro rata principle. The revised confirmations will be recalculated such that the sum of all confirmations in the Forward Flow Direction will be equal to the sum of all confirmations in the Reverse Flow Direction;

Then the Shippers with confirmations related to firm capacity in the Forward Flow Direction will be interrupted proportionally. The revised confirmations will be recalculated such that the sum of all confirmations in the Forward Flow Direction will be equal to the sum of all confirmations in the Reverse Flow Direction.

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 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 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 at the Exit Point, TTF, the TPBT or at the Entry Point Reverse Flow.

Allocation in general consists of:

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

Where Shipper has confirmed Quantities of Gas in both flow directions at the same time, they are treated separately for allocation purposes.

7.2 Gas flows in the Reverse Flow Direction shall be deemed. Therefore they will be allocated as confirmed, which means that in any Hour the allocation is equal to the most recent Confirmation for that Hour.

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 Reallocation

Reallocations are only allowed in exceptional circumstances, for example in case of a Capacity Restriction or in case of incorrect operation of the measuring equipment (Article 5.2 of this Operating Manual).

7.4 Publication of allocations

The (provisional) allocations on both the Entry Point Reverse Flow and the TPBT 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. QUALITY AND PRESSURE SPECIFICATIONS

8.1 Quality specification at the Entry Point Reverse Flow and the Connection Point

The quality specifications for the Entry Point Reverse Flow shall be in line with the quality specifications for the Connection Point. The quality specifications for the Entry Point Reverse Flow and the Connection Point are laid down in the respective grid connection agreements.

8.2 Pressure specifications at the Entry Point Reverse Flow and the Connection 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 specification for the Entry Point Reverse Flow shall be agreed between BBL Company and National Grid in such a way that the obligations of Parties under the Agreement will be fulfilled.
9. CONTACT DETAILS

BBL Company

Telephone:  +31 50 521 15 00  (dispatching centre)
            +31 50 521 91 11  (switchboard, only during office hours)

Telefax:    +31 50 521 15 75  (dispatching centre)
            +31 50 521 19 99  (switchboard, only during office hours)

Address:    BBL Company V.O.F.
            Concourslaan 17
            9727 KC GRONINGEN
            or
            BBL Company V.O.F.
            P.O. Box 225
            9700 AE GRONINGEN