

OPERATING MANUAL REVERSE FLOW

List of contents		Page
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:

"*Connection Point*"

shall mean the point where the *BBL-Facilities* are connected to the facilities of the *NNO*.

"*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 the *Exit Point Reverse Flow*.

"*Lesser 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* or *Downstream Party*, that the *Properly (Re)Nominated Quantity of Gas* shall be deemed to be equal to the lowest quantity of such *(Re)Nominations* with respect to the relevant *Pair of Shipper Codes*.

"*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*.

"*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, which includes the sending of contact details to *BBL Company*, will be performed by *BBL Company* 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* 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 the *BBL-Facilities* at the *Exit Point Reverse Flow* 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 the *BBL-Facilities* at the *Exit Point Reverse Flow* 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 General

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* and *Downstream Parties*, the *Daily Quantities of Gas* deemed to be offtaken by *Shipper* from such *Upstream Parties* and *Daily Quantities of Gas* deemed 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.

2.3 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* as well as the *Exit 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 *Downstream Parties*, the *Quantities of Gas* deemed to be offtaken by *Shipper* from each *Upstream Party* and *Quantities of Gas* deemed to be made available by *Shipper* to each *Downstream Party*.

Shipper (or a third party acting on behalf of *Shipper*) may send a *Nomination* up to 122 *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 lowest of the *Transmission Capacity* on both Interconnection Points 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*).

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* confirmations 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 *GTS*.
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 *GTS* exit point. If they are not equal, the *(Re)Nomination* will either be deemed to be zero (0) *kWh* or the *Lesser Rule* will be applied, as described under Article 4.2 of this *Operating Manual Reverse Flow*.

The sum of *Shipper's (Re)Nominations* at the *Exit Point Reverse Flow* and the sum of shippers (re)nominations at the *National Grid* exit point (where shippers nominate *National Grid* exit into *BBL* will be verified against the sum of *Shipper's (Re)Nominations* at the *Entry Point*. If the respective sums are not equal, the *Entry Point (Re)Confirmations* will also be applied to the *Exit Point Reverse Flow*.

- 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 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* or *Downstream Party*, the deemed *Quantity of Gas* (re)nominated (by *Shipper*) shall be deemed to be equal for that *Hour* to the lower *Quantities of Gas* mentioned in such (re)nominations with respect to such *Pairs of Shipper Codes* (*Lesser Rule*).
 - 4) if there is no *Nomination* received at the *Exit Point* the relevant *Downstream Party* will be taken from the Delord message (Call-up) from *National Grid* and the confirmed *Quantities of Gas* for the *Shipper* at the *Entry Point* will be applied at the *Exit Point* (mismatch).
 - 5) if the Delord message (Call-up) is not received from *National Grid*, the relevant *Downstream Party*, will be taken from the *(Re)Nomination* at the *Exit Point* (mismatch).

Where none of (1) to (5) 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* and *Downstream Parties*, the *Quantities of Entry Gas Reverse Flow* deemed to be offtaken by *Shipper* from such *Upstream Parties* and *Quantities of Exit Gas Reverse Flow* deemed to be made available by *Shipper* to such *Downstream 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 *BBL Company* shall send a *Confirmation* for *Gas Day D* 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*.

- 4.5 In case *BBL Company* faces constraints with respect to the deemed deliveries and deemed offtakes at the *Entry Point Reverse Flow* or *Exit 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* and the *Quantities of Gas* deemed to be made available by *Shipper* to *Downstream 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 both the *Entry Point* and *Exit Point*. The flow of *Gas* at the *Entry Point* from *GTS* is measured by facilities owned and operated by *GTS*. 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 *Entry Point* or the *Exit Point*, *Shipper* shall not be required to accept any retroactive allocation with regard to an *Entry Point Reverse Flow* or *Exit Point Reverse Flow* where an *OBA* exists.

In case no *OBA* exists at the *Exit 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 both the *Entry Point* and *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 in both flow directions at both *Connection Points* the compressor(s) at the *Entry 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 *Entry 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 BBL-shippers for each *Hour*.

6.2 Minimum net flow control

- 6.2.1 If the aggregate of all BBL-shippers' confirmed *Hourly Quantities of Gas* would require a physical flow below the minimum rate of the measurement facilities at the *Entry 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 *Entry 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 *Entry Point* and the *Exit Point* at, or above, the minimum rate of the measurement facilities at that *Entry 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 *BBL-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 *BBL-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 BBL-shippers with confirmations in the *Forward Flow Direction* with recalculated *Quantities of Gas* based on the following priority schedule:

- First the BBL-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 BBL-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 *Entry 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 *Entry Point* and the *Exit Point*.

7. ALLOCATION

7.1 Introduction

Allocation is the process by which *Gas* is apportioned on an *Hourly* basis to BBL-shippers. Allocation calculations are performed separately for each flow direction at the *Entry Point* as well as the *Exit Point*, or at the *Entry Point Reverse Flow* as well as the *Exit 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
- Adding the confirmed *Quantities of Gas* in the *Reverse Flow Direction* to the physical flow, 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 (even if they are at the same *Connection Point*).

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*.

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 *Connection Points* will be calculated every *Hour* in accordance with the applicable *Allocation Rules* and made available by on-line electronic transmission to the BBL-shippers and *National Grid*.

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 *Exit Point Reverse Flow*

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

8.2 Pressure specifications at the *Entry Point Reverse Flow* and the *Exit Point Reverse Flow*

The pressure specification for the *Exit Point Reverse Flow* 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