# LNG ACCESS CODE

# FOR THE ZEEBRUGGE LNG TERMINAL

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# 1 PURPOSE AND SCOPE

## 1.1 PURPOSE

This LNG Access Code consists of a standard set of rules and procedures governing regulated access to the LNG Services offered by Terminal Operator to any Terminal User using the LNG Terminal operated by the Terminal Operator in Zeebrugge.

## 1.2 SCOPE

This LNG Access Code shall apply to all Terminal Users subscribing to LNG Services from Terminal Operator. It is to be noted that LNG Truck Loading Services are not in the scope of this LNG Access Code unless specifically mentioned.

## 1.3 DEFINITIONS

Unless given any different meaning in this LNG Access Code, any capitalised term in this LNG Access Code shall have the meaning given to it in Chapter 5 of the LNG Access Code.

## 1.4 INTERPRETATION

In this LNG Access Code:

(i) the singular includes the plural and vice versa as appropriate, except where appropriate for the terms Shipper, Other Shipper, Transshipper, Other Transshipper, Other User, Terminal User, Party and Terminal Operator;

(ii) reference to any gender includes the other;

(iii) unless otherwise specifically stated, references to 'AC' shall be to a section or a clause in this LNG Access Code;

(iv) clause and section headings and the table of contents are inserted for convenience only and do not affect the construction or interpretation of this LNG Access Code;

(v) unless otherwise stated, reference to an agreement, instrument or procedures is to the same as amended, modified or replaced from time to time;

(vi) reference to a statute, by-law, regulation, rule, delegated legislation or order is to the same as amended, modified or replaced, from time to time, and to any by-law, regulation, rule, delegated legislation or order made there under; and

(vii) references to time are, unless otherwise stated, references to local Belgian time and shall be written as hh h mm, where hh is the hour number between 0 and 23 and mm is the minutes number between 0 and 59. No indication am or pm will be provided. References to Day, Month and Year

are, unless otherwise stated, references to a day, month and year of the Gregorian calendar respectively.

## 1.5 AMENDMENTS OR MODIFICATIONS TO THE LNG ACCESS CODE

Terminal Operator shall be entitled to make amendments or modifications to this LNG Access Code by consulting Terminal Users in accordance with the applicable legislation and regulation prior to such amendments or modifications, subject to the prior approval by the CREG, if and when required, before their entry into force.

# 2 LNG SERVICES

## 2.1 DESCRIPTION OF LNG SERVICES

### 2.1.1 Slots and Subscribed Slots

The main purpose of the LNG Terminal is to receive and unload LNG Ships, to temporarily store and to regasify the LNG and to send out the equivalent quantity of energy (less any Fuel Gas used in the process) as Natural Gas (the main service). Such main service can be acquired by Shippers either for a set number of LNG cargoes on a long term basis or for one or more spot LNG Ships through the subscription of (a number of) Slots. Since the East Jetty of the LNG Terminal is capable of receiving LNG Ships up to Q-max vessels and the West Jetty of the LNG Terminal is capable of receiving LNG Ships up to Q-flex vessels, the combination of multiple Slots or a Slot in combination with Additional Storage and/or Additional Send Out Capacity in accordance with the provisions set out in AC 3.1.4.5, can serve for the receiving of a fully loaded Q-flex or a Q-max vessel.

Slots may be subscribed to through the procedures set out in this LNG Access Code, and by means of an appropriate Services Confirmation Form, thus becoming Subscribed Slots, whereby each Subscribed Slot consists of a package of concurrent entitlements to a Berthing Right, Basic Storage and Basic Send Out Capacity.

### 2.1.2 Berthing Right

The holder of a Berthing Right shall have the right to have an LNG Ship accepted by Terminal Operator within the applicable Window, and to berth and to unload, or alternatively, to load within the framework of the provision of LNG Redelivery Services by Terminal Operator, this LNG Ship at the LNG Terminal in connection with a High Tide, as allowed under the nautical rules applicable at the Port, and in accordance with this LNG Access Code.

### 2.1.3 Additional Berthing Right

The holder of an Additional Berthing Right shall have the right to have an LNG Ship accepted by Terminal Operator within the applicable Window, and to berth this LNG Ship at the LNG Terminal for the purpose of the provision of LNG Redelivery Services by Terminal Operator for such LNG Ship in connection with a Tide, as allowed under the nautical rules applicable at the Port, and in accordance with this LNG Access Code.

### 2.1.4 Transshipment Berthing Right

The holder of a Transshipment Berthing Right shall have the right to have an LNG Ship accepted by Terminal Operator and to berth and to unload, or alternatively, to load an LNG Ship, and as the case may be, within the framework of the provision of LNG Transshipment Services by Terminal Operator have Gassing Up and/or Cool Down services performed, at the LNG Terminal in connection with a Low Tide, as allowed under the nautical rules applicable at the Port, and in accordance with this LNG Access Code.

### 2.1.5 Stand Alone Berthing Right

The holder of a Stand Alone Berthing Right shall have the right to have a LNG Ship accepted by Terminal Operator and to berth this LNG Ship at the LNG Terminal for the purpose of the provision of LNG Redelivery Services or LNG Delivery Services by Terminal Operator for such LNG Ship in connection with a Tide, as allowed under the nautical rules applicable at the Port, and in accordance with this LNG Access Code.

### 2.1.6 Basic Storage

To the holder of Basic Storage (when allocated to a Subscribed Slot), Terminal Operator shall make available a quantity of storage capacity at the LNG Terminal equal to 140,000 Cubic Metre of LNG, which shall be made available at the time of the start of the associated Scheduled Slot and which shall decrease linearly to naught over the Basic Storage Duration.

### 2.1.7 Transshipment Storage

To the holder of Transshipment Storage, Terminal Operator shall make available a quantity of dedicated storage capacity at the LNG Terminal equal to 180,000 Cubic Metre of LNG that can be used continuously for the unloading, storage or loading of LNG.

### 2.1.8 Basic Send Out Capacity

To the holder of Basic Send Out Capacity (when allocated to a Subscribed Slot), Terminal Operator shall make available a quantity of Send Out at the LNG Terminal equal to 4,200 MWh/hour. The Basic Send Out Capacity shall be made available at the time of the start of the associated Scheduled Slot and shall last over the Basic Storage Duration.

### 2.1.9 Additional Storage

Additional Storage means the right to store quantities of LNG in the LNG Terminal in addition to the Basic Storage, expressed in Cubic Meters ($m^3$) of LNG (but excluding the Daily Storage Capacity).

Terminal Operator shall provide to Shipper, Other Shippers and/or Other User the quantity of Additional Storage specified by Shipper in the relevant Services Confirmation Form.

### 2.1.10 Residual Storage

Residual Storage means the right to store LNG, expressed in Cubic Meters ($m^3$) of LNG, in the LNG Terminal for one or several Months (with a minimum of one (1) Month and a maximum of eighteen (18) Months) made available by the Terminal Operator on a daily granularity.

Not later than 5 Business Days before the end of each Month M minus two (M-2), Terminal Operator shall publish the available Residual Storage starting in Month M bookable from the start of Month M minus one (M-1) until two Business Days prior to the start of the Residual Storage in Month M.

Terminal Operator shall provide to Shipper and other Shipper(s) the quantity of Residual Storage specified in the relevant Services Confirmation Form.

### 2.1.11 Additional Send Out Capacity

Additional Send Out Capacity means the amount of Send Out above Shipper's Basic Send Out Capacity, expressed in GWh/hour (but excluding the Daily Send Out Capacity).

Terminal Operator shall provide to Shipper, Other Shippers and/or Other User the quantity of Additional Send Out Capacity specified by Shipper in the relevant Services Confirmation Form.

### 2.1.12 Stand Alone Send Out Capacity

Stand Alone Send Out Capacity means the amount of unbundled Send Out that can be used by Shipper, expressed in GWh/hour (but excluding any Daily Send Out Capacity that could be otherwise requested by Shipper).

Terminal Operator shall provide to Shipper, Other Shippers and/or Other User the quantity of Stand Alone Send Out Capacity specified by Shipper in the relevant Services Confirmation Form.

### 2.1.13 Daily Send Out Capacity

Daily Send Out Capacity means the amount of additional send out capacity purchased on a daily basis.

### 2.1.14 Daily Storage Capacity

Daily Storage Capacity means the amount of additional storage purchased on a daily basis.

### 2.1.15 Non-Nominated Services

Non-Nominated Services means the service offered by Terminal Operator, whereby Terminal Users may make Terminal Nominations against the Non-Nominated Send Out Rights, over and above their Send Out Capacity, in accordance with the provisions of this LNG Access Code.

### 2.1.16 LNG Redelivery Services

LNG Redelivery Services means the service consisting of the loading, gassing up and/or cooling down of an LNG Ship by Terminal Operator at the LNG Terminal in accordance with the provisions of this LNG Access Code.

Terminal Operator shall provide LNG Redelivery Services to Shipper, provided Shipper has an Additional Berthing Right or Stand Alone Berthing Right (or Berthing Right as the case may be).

### 2.1.17 LNG Delivery Services

LNG Delivery Services means the service consisting of the unloading of an LNG Ship by Terminal Operator at the LNG Terminal in accordance with the provisions of this LNG Access Code.

For the avoidance of doubt, the LNG Delivery Service does not comprise any Storage Capacity.

Terminal Operator shall provide LNG Delivery Services to Shipper, provided Shipper has a Stand Alone Berthing Right.

### 2.1.18 Quality Adjustment Services

Quality Adjustment Services means the Quality Adjustment Service offered by Terminal Operator to Shipper and Other Shippers in accordance with the provisions of this LNG Access Code.

### 2.1.19 Backhaul Liquefaction Service

Backhaul Liquefaction Service or Virtual Liquefaction Service means the conditional service offered by Terminal Operator, subject to the provisions of 3.5.7.2, whereby Shipper may make Terminal Nominations at the Redelivery Point to increase its Gas In Storage LNG in accordance with the provisions of this LNG Access Code.

For the avoidance of doubt, the Backhaul Liquefaction Service does not comprise any Storage Capacity.

### 2.1.20 Renewable M~~m~~ethane~~Biomethane~~ Liquefaction Services

Renewable Methane~~Biomethane~~ Liquefaction Services mean the services offered by Terminal Operator for the purpose of converting Certificates of Biomethane or RFNBO Methane into Certificates of Bio-LNG or RFNBO LNG. It comprises the Recondenser Liquefaction Service and the Equivalence Liquefaction Service.

Terminal Operator shall provide to Shipper the quantity of Renewable Methane~~Biomethane~~ Liquefaction Services specified by Shipper in the relevant Services Confirmation Form, so long as Shipper and Terminal Operator keep their certification under the Certification Scheme.

For the avoidance of doubt, the subscription or utilisation of Renewable Methane~~Biomethane~~ Liquefaction Services does not lead to any change to Shipper's Gas In Storage.

## 2.2 ALLOCATION OF LNG SERVICES (PRIMARY MARKET)

### 2.2.1 Service Allocation process

LNG Services are allocated individually or in lots[1] under one of the following Allocation processes, unless otherwise specified in this LNG Access Code:

1) An Allocation Window which can take the form of

   a) a Subscription Window in accordance with AC 2.2.1.1; or

   b) an Auction Window in accordance with AC 2.2.1.2; or

   c) a combination of both where an Auction Form is used as the last option if the allocation rules defined in AC 2.2.1.1.3 do not result in the full allocation of the offered capacity; or

2) an open season in accordance with the Code of Conduct for capacities for which an investment decision is still to be taken by Terminal Operator, (as the case may be).

In case LNG Services are still available at the end of the corresponding Allocation Window or open season, such LNG Services shall be allocated either through an Auction Window within 10 weeks after the Allocation Window concludes or on a "*first committed/first served*" basis from the moment such LNG Services are published on Terminal Operator's website. In this case, the allocation will be based on the date and time of receipt of the binding request until the next Allocation Window or open season (as the case may be).

Terminal Operator publishes on its website the Terms and Conditions for the respective Allocation Window(s) of the LNG Services. Such Terms and Conditions will specify the specific conditions for the offered LNG Services (including but not limited to the offered quantities) and the practical information applicable for a specific Allocation Window.

#### 2.2.1.1 Rules and organisation of a Subscription Window

2.2.1.1.1 Before the start of such Subscription Window, Terminal Operator establishes a detailed procedure providing the Terms and Conditions for the Subscription Window ("TCSW") for the respective window for subscribing and allocating such LNG Services and informs on its website about the applicable terms and conditions and the specific calendar of such window.

Such TCSW will specify the practical information applicable for a specific Subscription Window, in line with the provisions in this LNG Access Code, and shall include amongst others and not limited to the following provisions:

- the offered LNG Services of the Subscription Window;
- the possible duration and start date for the offered LNG Services;

[1] a.o. to facilitate operations scheduling

- if the quantity of offered LNG Services may evolve over time, the intermediate allocation dates during the Subscription Window (such as, but not limited to ~~Biomethane~~Renewable Methane Liquefaction Service);
- the opening date and closing date of the Subscription Window;
- the registration procedure for the participant; and
- the allocation rules of the Subscription Window.

The CREG shall be informed in advance of the Terms and Conditions for a Subscription Window.

2.2.1.1.2 Participants interested in booking capacity under the Subscription Window are required to submit their binding capacity request form for contracting, duly completed and executed before the end of the Subscription Window.

In accordance with the Terms and Conditions of the related Subscription Window, the participant shall indicate in its binding capacity request amongst others and not limited to:

1. For those LNG Services the participant is willing to subscribe:
   - a minimum capacity under which the participant is not interested in subscribing the LNG Services ("Minimum Request"); and
   - a maximum capacity, for which participant is requesting to subscribe the LNG Services ("Maximum Request"); and
2. The start date and the duration of the LNG Services.

The stated Maximum Request may not exceed the offer. The binding request is deemed to have been committed as from the start date onwards for the requested duration.

2.2.1.1.3 Available capacity of LNG Services under the Subscription Window shall be allocated as follows:

(i) If the total requested capacity is less than or equal to the available capacity offered in the Subscription Window, each participant will be allocated the capacity requested;

(ii) If the total requested capacity is more than the available capacity offered in the Subscription Window. Binding capacity requests will be allocated as follows:

(a) priority will be given to the binding capacity requests with longer duration;

(b) between binding capacity requests with the same duration:

i. Available capacity will be allocated pro rata the capacities requested;

ii. If the application of the proportional allocation rule results in a certain capacity being allocated to a participant which is less than the Minimum Request indicated by this participant, no capacity will be allocated to this participant; and

iii. Capacity, which has not been allocated to certain participants will be allocated pro rata the capacity requested to the other participants insofar the minimum requests of the other participants are met;

iv. If the pro rata allocation results in an incomplete allocation of the capacity of the offered LNG Servivces priority will be given to binding capacity requests with the earliest start date.

#### 2.2.1.2 Rules and organisation of an Auction Window

For each Auction Window that Terminal Operator organizes, Terminal Operator shall provide, amongst others and not limited to, by means of a practical Terms and Conditions for the Auction Window ("TCAW"):

- offered LNG Services of the Auction Window ("Offer") including the duration and first start date for the offered LNG Services;
- if the quantity of offered LNG Services may evolve over time, the intermediate Auction dates during the Auction Window (such as, but not limited to ~~Biomethane~~Renewable Methane Liquefaction Service) ;
- Registration Documents for the Terminal User to submit when applying to become a Participant to the Auction Window;
- Auction parameters that will be applied during the Auction process of this Auction Window;
- information exchange modalities, including the fall-back procedure.

The CREG shall be informed in advance of the Terms and Conditions for an Auction Window.

##### 2.2.1.2.1 Registration process

**Applying for registration**

In order to become a Participant to the Auction Window, Terminal User shall provide to Terminal Operator the required Registration Documents, as provided for in the TCAW.

These Registration Documents will be submitted for acceptance to Terminal Operator in accordance with the Registration Evaluation hereafter.
Only one (1) Affiliate may participate to the Auction for a certain LNG Service. If it appears that two or more Affiliates intend to take part in the Auction for the same LNG Service, Terminal Operator will exclude all concerned Affiliates from the Auction, except the first one to have sent the Registration Documents.

**Registration Evaluation**

Following review of the Registration Documents submitted by Terminal User in accordance with the TCAW,Terminal Operator may decide to:

(i) invite the Applicant to submit revised Registration Documents within a set time period, for review for admission as a Participant in the Auction;
(ii) admit the Applicant as a Participant in the Auction by sending the Registration Evaluation form in schedule 2 of the TCAW;
(iii) refuse the Applicant as a participant in the Auction. In such case, the grounds for such refusal are to be stated and the CREG will be informed.

Terminal Operator shall make its best efforts to notify the Applicant of such decision, within five (5) Business Days following receipt of the Registration Documents or the revised Registration Documents, as the case may be.

When and if the Applicant is successfully registered by Terminal Operator as Participant to the Auction, the individual(s) appointed by the Applicant in the Power of Attorney will be accepted as Bidder(s).

In case of successful registration, a letter in accordance with the TCAW will be provided to the Participant with (i) the Auction Website address and (ii) the personal username of each Bidder required for accessing the Auction Website.

Participant shall notify Terminal Operator in writing of any change in any information set forth in the Registration Documents promptly upon becoming aware of such change.

**Revocation:**

Terminal Operator may at any time revoke the admission of Bidder/Participant in the Auction in any of the following cases:

(i) Bidder/Participant breaches any of its obligations under the TCAW;
(ii) Bidder/Participant does not satisfy, or no longer satisfies, the requirements set forth in the Registration Documents.

The behavior of its Bidders will be attributable to the Participant.

The revocation of the right to participate in the Auction by Terminal Operator will be duly motivated within two (2) Business Days and the CREG will be promptly informed of such revocation.

2.2.1.2.2 Training and practical instructions

Without prejudice to the participation by the Bidder to the Auction, Bidders can be invited by Terminal Operator to a training session preceding the Auction Window.

Finally, in accordance with the TCAW, Terminal Operator shall provide the Bidder(s) with the necessary practical instructions for the Auction Window.

2.2.1.2.3 Auction process

The Auction shall be conducted by Terminal Operator or by an authorized external Auction Provider designated by Terminal Operator. In both cases, the confidentiality of the content of Bids submitted by each Bidder shall be protected.
The information pertaining to individual Bids submitted by each Bidder during the Auction shall be accessible only to Terminal Operator or the Auction Provider and the Bidder in question.

The Auction will take place over several Round(s). If there are several Bids for the same Participant in one Round, irrespective of the number of Bidders, only the last Valid Bid will be taken into account. The Auction is considered conclusive based on the relation between the Offer and the Demand for the LNG Service(s) of the Bidders in accordance with the Price Step rules. Once the Auction is conclusive, Participants will be allocated LNG Services.

The default Auction mechanism is 'Ascending Clock', where in consecutive Rounds, the price ("Round Price") at which the Bidders can submit a Bid is set by Terminal Operator in adjustable Price Steps. Subsequently a next Round is organized when Demand exceeds Offer.

Unless otherwise specified in the TCAW, the Auction will be conducted through multiple Rounds or in one step.

**Multiple Rounds**

Round events

The Round ranking number will be increased by one (1) for each new Round, with the first Round being Round 1. For each Round, Terminal Operator will publish the following information:

(i) Before the start of each Round: the Round Price is set for that Round at which the Bidder can submit a Bid;
(ii) The Opening Time and Closing Time of the current Round and the Opening Time of the coming Round;
(iii) At the latest 15 minutes after closing a Round, the Demand.

Each Round shall consist of the following events, in chronological order:

(i) Terminal Operator creates the Round;
(ii) Terminal Operator informs Bidders of the planned Round Opening Time, the Round Closing Time and the actual status of the Round (i.e. scheduled, open, closed, cancelled);
(iii) Terminal Operator sets the Round Price and informs Bidders hereof;
(iv) Terminal Operator changes the status of the Round to 'Open', and synchronizes the Round Opening Time and Round Closing Time taking into account a Round Duration as defined in the TCAW;
(v) While the Round is 'Open', Bidders can submit their Bid(s), the last submitted Valid Bid for each Participant overwriting previous submitted Bids and being binding;

(vi) Terminal Operator verifies the validity of each Bid and notifies Bidder whether his Bid has been accepted or rejected;
(vii) Terminal Operator changes the status of the Round to 'Closed' and synchronizes the Round Closing Time;
(viii) At the latest 15 minutes after closing a Round, Terminal Operator publishes the Demand of the Round in an aggregated manner;
(ix) Terminal Operator informs Bidders of the planned Round Opening Time and the Round Closing Time and the actual status of the Round (i.e. scheduled, open, closed, cancelled).

When the Auction is conclusive,

(i) Terminal Operator shall then inform Bidders that the Auction is 'Closed' and declare such last Round to be the "Final Round".
(ii) Terminal Operator shall perform the Allocation. Allocation results will be notified to the corresponding Participant individually and a SCFC, will be sent to each Participant. For the avoidance of doubt, the sending of the SCFC has a mere informational value and is without prejudice to the binding value of the Bids made by Participant through its Bidders.

Auction mechanism: Ascending Clock

The default Auction mechanism is "Ascending Clock", unless otherwise stated in the TCAW, where in consecutive Rounds the price ("Round Price"), at which Bidders can submit a Bid, is set by Terminal Operator in adjustable Price Steps. Subsequently a next Round is organized when Demand exceeds Offer. For this purpose two (2) cycles with each a different Price Step might apply. The increment of the Round Price is described in the following Price Step rules:

In the first cycle ("First Cycle"):

- Start price of the Auction (price set in the first Round of the First Cycle) is the Reserve Price which is also the lowest price at which the Bidders can submit a Bid.
- The price is increased with the Major Price Step as long as Demand is higher than Offer.
- When Demand becomes lower than Offer, the price of the previous Round is taken into account to initiate the Second Cycle with smaller price steps.
- When Demand equals Offer the Auction is conclusive and the price of the current Round is considered to be the Cleared Price.

In the second cycle ("Second Cycle"):

- The price is increased with the Minor Price Step as long as Demand is higher than Offer limited however to the highest set price of the First Cycle;
- When Demand equals Offer, the Auction is conclusive and the price of the current Round is considered to be the Cleared Price;
- When Demand becomes lower than Offer, Auction is conclusive and the price of the previous Round is considered to be the Cleared Price

Bid Requirements

Each Bidder, in accordance with the Bid Requirements in this article, may submit a Bid which will be considered as a binding and irrevocable offer subject to allocation during the last round. Each Bidder has the obligation of having placed at least one (1) Valid Bid in the previous Round in order to be able to participate in the next Round.

A Bid in a Round for which the Participant is requesting to subscribe the LNG Services shall consist of a Bid Quantity**,** which shall mean a binding request for a number of unit of LNG Services at the given Round Price per unit as set by Terminal Operator and, as the case may be, respecting the minimum lot size of the Offer.

A Bid Quantity:

- may not exceed the maximum Bid Quantity
- may not be increased between two Rounds, except for the first Round of the Second Cycle where the Bidder will be able to submit a Bid for a maximum quantity equal to the last Round where Demand was higher than Offer;
- may in the Second Cycle not be lower than the lowest Bid Quantity in the First Cycle.

At a given Round Price set by Terminal Operator which:

- may not be lower than the Reserve Price;
- shall be the sum of the Reserve Price and a multiple of the applicable Price Step;
- shall correspond with the Price Step rules in case the Terminal Operator adapts the price at which the Bidders can submit a Bid Quantity.

For the purpose of clarity,

- A Bid Quantity of zero (0) is considered to be a Valid Bid;
- In case there is no Bid Quantity submitted by a Bidder in a certain Round, a Bid Quantity of zero (0) will be applied as the Bid Quantity for the Bidder for that Round.

During a Round, as long as the Round status is "open", Bidder may change its Bid by submitting a new Bid that will overwrite and substitute the previous Bid, in accordance with the Bid Requirements. Once a Round is closed, no (new) Bids can be submitted and the last Bid of that Round accepted by Terminal Operator will be considered as the Valid Bid.

Bid Validation and Exclusion

In accordance with the Bid Requirements, Terminal Operator shall perform the Bid Validation. Terminal Operator verifies the validity of each Bid and notifies Bidder via the Auction Website whether his Bid has been accepted or rejected as Valid Bid, stating the reason(s) for such rejection (as the case may be). If Bidder can demonstrate to Terminal Operator that the invalidity of the Bid was attributable to communications issues, Terminal Operator may authorize such Bidder to re-submit its Bid by e-mail before the publication of the resulting Demand of that Round and insofar as this is possible within the time schedule of the Auction.

Publication and notification

For each Round, Terminal Operator will publish the necessary information for the good working of the Auction process as described in paragraph Round events.

When the Auction is conclusive and the Allocation has been performed, Allocation results for each Participant will be notified to the corresponding Participant and a SCFC will be sent.

Allocation Rules

After a Round has been closed, all Valid Bids of all Bidders in that Round are aggregated to determine Demand. The following default Allocation Rules are applicable for a Round, unless otherwise stated in the TCAW:

- In case Demand equals Offer for a Round,
  - The Cleared Price is the Round Price of that Round;
  - Each Participant is allocated its Bid Quantity of that Round;
- In case Demand is higher than Offer,
  - There is no Allocation;
  - The next Round is initiated;
- In case Demand is lower than Offer in the First Cycle,
  - the Second Cycle is initiated;
- In case Demand is lower than Offer in the Second Cycle,
  - The Cleared Price is the Round Price of the previous Round;
  - The Allocation of Participants is performed based on the linear interpolation algorithm defined hereunder:

    a. For each Bidder, the positive delta between its Bid Quantities of the current and the previous Round is divided by the sum of the aggregated deltas of the Bidders, in order to calculate a pro rata % (percentage) for each Bidder.
    b. Then, the pro rata% of each Bidder is applied to the difference between the Offer and the Demand of the current Round (being the last Round), resulting in a pro rata quantity for each Bidder.
    c. Finally, the pro rata quantity for each Bidder is then added to the corresponding Bid Quantity of each separate Bidder in the current Round (being the last Round), resulting in an Allocation of each Participant.

    In case that in the Second Cycle the price is reached of the last Round in the First Cycle and the Demand of that Round remains nevertheless higher than the Offer, the Allocation will be performed using the linear interpolation algorithm between the last Round of the first Cycle and the last Round of the second Cycle and the Cleared Price will be the Round Price of the last Round of the Second Cycle.

**One step**

In case Terminal Operator wants to offer LNG Services to the market for which a multiple Rounds Auction procedure is not appropriate, Terminal Operator can decide to offer LNG Services in one step using an Auction Form.

Auction Mechanism: Auction Form

Terminal Operator includes in the TCAW an Auction Form specifying the maximum Quantity of LNG Services offered and the possible Durations, as the case may be. Participant indicates on the Auction Form his requested quantity, Duration and the Bid Price he is ready to pay for the LNG Service.

Bid Requirements

Each Bidder, in accordance with the Bid Requirements in this article, may submit until the Auction End Date by e-mail a Bid which will be considered as a binding and irrevocable offer.

A Bid according to which Participant is requesting to subscribe LNG Services shall consist of (i) a Bid Price**,** (ii) a Bid Quantity, and (iii) a Duration which will be chosen amongst the Durations offered by Terminal Operator .

Bidder may change his Bid by submitting a new Bid that will overwrite and substitute the previous Bid, in accordance with the Bid Requirements. Once the Auction End Date is reached, no (new) Bids can be submitted and the last Bid accepted by Terminal Operator will be considered as the Valid Bid.

Bid Validation and Exclusion

In accordance with the Bid Requirements, Terminal Operator shall perform the Bid Validation. Terminal Operator verifies the validity of each Bid and notifies Bidder via e-mail whether his Bid has been accepted or rejected as Valid Bid, stating the reason(s) for such rejection (as the case may be).

Notification

When the Auction is conclusive and the Allocation has been performed, Allocation results for each Participant will be notified to the corresponding Participant and a SCFC will be sent.

Allocation Rules

The following default Allocation Rules are applicable, unless otherwise stated in the TCAW:

1. If the total requested capacity is less than or equal to the available capacity offered in the Auction Window, each Participant will be allocated the requested capacity ;
2. If the total requested capacity is higher than the available capacity offered in the Auction Window:

a) priority is given to Participants with the highest combination of requested Bid Quantity times Bid Price times Duration;

b) In case several Participants have the same combination of requested Bid Quantity times Bid Price times Duration, the offered LNG Services will be allocated pro rata.

The Cleared Price for a period offered in the Auction will be the lowest Bid Price offered by a Participant to whom LNG Services were allocated for this period and will be equal for all Terminal Users. For the avoidance of doubt, if the total requested capacity for a certain Duration is less than or equal to the available offered capacity, the Cleared Price will be equal to the Reserve Price.

#### 2.2.1.3 Rules and organisation of an open season

2.2.1.3.1 In the framework of capacities for which an investment decision is still to be taken, Terminal Operator shall organize an open season to assess whether there is sufficient market interest. The open season will be accompanied by an "open season - binding request / offer description" providing the conditions for the respective open season (including but not limited to the rules for subscription and the rules of allocation of the LNG Services concerned) in line with the provisions in this section of the LNG Access Code.

2.2.1.3.2 The participant interested in booking capacity under the open season are required to submit their binding capacity request, duly completed and executed before the end of the open season.

2.2.1.3.3 In case not all offered LNG Services can be allocated in accordance with AC 2.2.1.3~~2.2.1.3~~, then Terminal Operator reserves the right not to allocate any capacity offered during the open season.

### 2.2.2 Allocation of Long Term Capacities

The following LNG Services (the "***Long Term Capacities***") are allocated in the framework of an allocation of Long Term Capacities (the "***Long Term Capacities Procedure***"): Slots, Transshipment Berthing Rights, Berthing Rights, Additional Berthing Rights, Stand Alone Berthing Rights, Transshipment Storage, Additional Storage, Additional Send Out Capacity, Stand Alone Send Out Capacity,Quality Adjustment and Recondenser Liquefaction Service (subject to Certification of Terminal Operator being in force).

**2.2.2.1** The Long Term Capacities Procedure takes place by means of:

(i) an Allocation Window; or

(ii) an open season.

The organisation of an Allocation Window is performed by the Terminal Operator on a regular basis, normally every two years depending on whether sufficient capacities are available and in function of the market signals.

2.2.2.1.1 During the Subscription Window organised for Stand Alone Berthing Rights, Terminal Operator may offer to all Shippers which have previously subscribed Additional Berthing Right(s), and subject to the applicable allocation rules for allocating available capacity under a Subscription Window, a possibility to swap part or all of their remaining Additional Berthing Right(s) for Stand Alone Berthing Rights. The number of Stand Alone Berthing Rights that can be subscribed by swapping Additional Berthing Right(s) for Stand Alone Berthting Rights is equal to the ratio of the fix elements of the Regulated Tariff for Additional Berthing Right and Stand Alone Berthing Right, as applicable at the time of allocation, rounded up to the superior unit (as the case may be). No time shift to another Contract Year is possible when swapping Additional Berthing Right(s) for Stand Alone Berthing Rights.

### 2.2.3 Allocation of Short Term Capacities

**2.2.3.1** The following LNG Services (the "***Short Term Capacities***") are allocated in the framework of an allocation of Short Term Capacities (the "***Short Term Capacities Allocation***"): Slots, Transshipment Berthing Rights, Berthing Rights, Additional Berthing Rights, Stand Alone Berthing Rights, Residual Storage, Daily Storage Capacity, Daily Send Out Capacity, Quality Adjustment and Recondenser Liquefaction Service (subject to Certification of Terminal Operator being in force).

**2.2.3.2** The allocation of Short Term Capacities takes place after the completion of the following procedure, or any other procedure proposed by Terminal Operator and approved by the CREG:

(i) Slots becoming available after a revision of the IBS (as set out in 3.1.1.1.6) are allocated as follow:

a. First, Shippers having subscribed Slots during a term of at least one Contract Year including the ongoing Contract Year and that are involved in the definition of the IBS ("Long Term Shippers") have a pre-emption right to purchase half of the Slots (rounded up) at the Regulated Tariff. Long Term Shippers need to agree on how the Slots will be distributed between them. At the latest ten (10) Business Days after the Terminal Operator has communicated about the released Slots to the Long Term Shippers, each Long Term Shipper needs to specify in written form (including e-mail) the Slots it wants to subscribe for. For the avoidance of doubt, if Terminal Operator did not receive a written request for Slots from a Long Term Shipper, Terminal Operator will consider that this Long Term Shipper is not interested in Slots. Furthermore, if the total number of Slots requested by the Long Term Shippers is higher than half of the Slots (rounded up) or if more than one (1) Long Term Shipper is requesting a specific Slot, no Slot will be allocated to any Long Term Shipper.

b. The other half of the Slots and, as the case may be, remaining Slots after the allocation of Slots to Long Term Shippers, will be offered to any Shipper via an Auction Window or alternatively on a "first committed/first served" basis.

(ii) Slots which have not been allocated during a Long Term Capacities Procedure or which are identified as being available:

(1) upon drawing up the AMS pursuant to AC 3.1: additional Slots between March and October; or

(2) after setting up the RBS pursuant to AC 3.1: Unsubscribed Slots

(3) are allocated:

(aa) First, to any Shipper which has notified Terminal Operator that it cannot or might not be able to use a Shipper's Subscribed Slot(s) during the next Contract Year (Y+1) for reasons of maintenance of its Production Facilities and/or of its LNG Ships or due to justified and documented shipping logistical constraints.

(bb) Second, to Shipper with Make Up Capacities; and

(cc) Third, to any Shipper or potential Shipper via an Auction Window or alternatively on a "first committed/first served" basis as from moment on which the Slot was published on Terminal Operator's website.

As from ten (10) days before the start of a Scheduled Slot which is published but not subscribed, the Berthing Rights, Basic Storage and/or Basic Send Out Capacity can be individually subscribed for and will be allocated via an Auction Window or alternatively on a "*first committed/first served*" basis.

(iii) Additional Berthing Rights which have not been allocated during a Long Term Capacities Procedure, or which are identified as being available pursuant to AC 3.1 will be allocated via an Auction Window or alternatively on a "*first committed/first served"* basis as from the moment of their publication on the website of Terminal Operator.

(iv) Shippers owning Additional Berthing Rights may at all times swap part or all of their remaining Additional Berthing Right(s) for Stand Alone Berthing Rights. The number of Stand Alone Berthing Rights that can be subscribed by swapping one Additional Berthing Right is equal to the ratio of the fix elements of the Regulated Tariff for Additional Berthing Right and Stand Alone Berthing Right, as applicable at the time of the swap, rounded up to the superior unit (as the case may be). The total number of Stand Alone Berthing Rights resulting from such swap is however limited to the maximal number of remaining Additional Berthing Right(s) and Stand Alone Berthing Right(s) available for the relevant Contract Year. No time shift to another Contract Year is possible when swapping Additional Berthing Right(s) for Stand Alone Berthing Rights.

(v) Stand Alone Berthing Rights which have not been allocated during a Long Term Capacities procedure, or which are identified as being available pursuant to AC 3.1 will be allocated via an Auction Window or alternatively on a "*first committed/first served"* basis as from the moment of their publication on the website of Terminal Operator.

(vi) Berthing Rights, which are identified as being available pursuant to AC 3.1 will be allocated via an Auction Window or alternatively on a "*first committed/first served"* basis as from the moment of their publication on the website of Terminal Operator.

(vii) Transshipment Berthing Rights which have not been allocated during a Long Term Capacities Procedure, or which are identified as being available pursuant to AC 3.1 will be allocated via an Auction Window or alternatively on a "first committed/first served" basis as from the moment of their publication on the website of Terminal Operator.

(viii) Residual Storage, which are identified as being available pursuant to AC 2.1 will be allocated via an Auction Window or alternatively on a "*first committed/first served"* basis following their publication on the website of Terminal Operator as from the start of Month M minus one (M-1) until two Business Days prior to the start of the Residual Storage in Month M.

(ix) Daily Storage Capacities are allocated on a "*first committed/first served"* basis.

(x) Daily Send Out Capacities are allocated on a "*first committed/first served"* basis.

(xi) Recondenser Liquefaction Services which have not been allocated during a Long Term Capacities Procedure and which are identified as being available pursuant to AC 3.10 will be allocated via an Auction Window or alternatively on a "*first*

*committed/first served"* basis as from the moment of their publication on the website of Terminal Operator.

## 2.3 SECONDARY MARKET

### 2.3.1 Assignment of LNG Services

Without prejudice to AC 3.1.10 and subject to the provisions of AC 2.3, all LNG Services acquired on the Primary Market may be traded on the Secondary Market either:

- Directly between the Terminal Users via over the counter ("OTC", e.g. using the Secondary Market Platform) in which case the Terminal Operator will be notified by means of a Services Request Form For Assignment (SRFA) duly signed by both Terminal Users of the assignment; or

- Indirectly by requesting the Terminal Operator (including via e-mail) to post a notice on the Secondary Market Platform that the related LNG Service has become available for sale. LNG Services traded on the Secondary Market Platform are allocated according to the "first committed, first served" principle.

### 2.3.2 General conditions

The following conditions apply to the trading of LNG Services on the Secondary Market:

- Trading of LNG Services on the Secondary Market entails the transfer of rights and obligations in accordance with the corresponding LNG Agreement of the related LNG Services traded; and

- The nature of LNG Services traded is not impacted by trading on the Secondary Market (e.g. a firm LNG Service subscribed on the Primary Market remains a firm LNG service on the Secondary Market).

LNG Services shall be sold to the first person to submit a legally binding request (by means of either a Services Request Form For Assignment (SRFA) or Services Request Form For Assignment By Terminal Operator (SRFATO)) to subscribe for such LNG Service. The applicable tariff (including any charges or fees for resale of LNG Services) is performed in accordance with the approved Regulated Tariff.

### 2.3.3 Non-use of LNG Services

Terminal User shall offer on the Secondary Market any LNG Service subscribed that Terminal User temporarily or permanently does not intend to utilise. In such case, Terminal Operator shall be promptly informed enabling the latter to publish a notice on the Secondary Market Platform of the related LNG Service becoming available for sale.

In case the Terminal User does not give notice - by the 21st Day before the scheduled LNG service - confirming its intention to use the LNG Service, the relevant LNG Service shall be considered as not utilised and Terminal Operator may offer the LNG Service on the Secondary Market. In such case, Terminal User shall promptly be informed.

### 2.3.4 Assignment procedure

For the LNG Services offered on the Secondary Market, the Terminal Operator analyses the received Services Request Form For Assignment (SRFA) or Services Request Form For Assignment By Terminal Operator (SRFATO) for acceptance by checking the following non-exhaustive criteria:

- The creditworthiness;
- The nature of the LNG Service(s) offered; and
- Whether the request form has been received on time (i.e. at least 5 Business Days prior to the start of the assignment period) and had been duly signed by all relevant parties.

Upon acceptance, the Terminal Operator will forward, depending on whether the trade has been published on the Secondary Market Platform, either a Services Confirmation Form For Assignment (SCFA) or Services Confirmation Form For Assignment By Terminal Operator (SCFATO). This confirmation form indicates that the assignment is considered to be complete by the Terminal Operator and implies on the one hand for the assignor a reduction of the subscribed LNG Services and on the other hand for the assignee an increase of the subscribed LNG Services.

# 3 PROCEDURES

## 3.1 OPERATING RULES

For the purpose of this AC 3.1, the terms defined under the LNG Agreement as such relate to Shipper or Transshipper may also be used as if they were construed to apply to Another Shipper or Another Transshipper and/or Another User as well as to Shipper or Transshipper. In such case the words "Shipper('s)","(An)Other Shipper('s)", "Transshipper(s)", "(An)Other Transshipper" and/or "(An)Other User('s)", as the case may be, shall qualify such defined term.

### 3.1.1 Scheduling of Shipper's and the Other Shippers' Subscribed Slots, Subscribed Additional Berthing Rights, and Subscribed Stand Alone Berthing Rights

AC 3.1.1.1 to 3.1.1.5 establishes the procedure to schedule Shipper's and the Other Shippers' Subscribed Slots by way of determining the Available Monthly Slots ("AMS") and establishing an annual Indicative Berthing Schedule ("IBS") and a three Month Rolling Berthing Schedule ("RBS"). The aim is to have an even distribution of Shipper's and the Other Shippers' Subscribed Slots over each Month of each Contract Year, adjusted as required for Planned Maintenance. AC 3.1.1.6 establishes the procedure to schedule Shipper's and the Other Shippers' Subscribed Additional Berthing Rights. AC 3.1.1.7 establishes the procedure to schedule Shipper's and the Other Shippers' Subscribed Stand Alone Berthing Rights.

#### 3.1.1.1 Available Monthly Slots ("AMS"), Indicative Berthing Schedule ("IBS") and Rolling Berthing Schedule ("RBS")

Prior to 20 October of each Contract Year, or in relation to the first Contract Year by 20 October of the calendar Year preceding the first Contract Year, Terminal Operator, Shipper and the Other Shippers shall establish the AMS and the IBS for the first or next Contract Year, as the case may be, pursuant to the provisions set out below.

The number of Slots available in each Month of any Contract Year as determined in the AMS pursuant to AC 3.1.1.1.3 shall be binding for each Month in the Contract Year, but the number of Slots that Shipper and the Other Shippers shall schedule in each such Month based on the AMS figure shall be established when determining the RBS pursuant to AC 3.1.1.1.6.

The IBS shall set out indicative Slot and Additional Berthing Right dates for Shipper and the Other Shippers at the LNG Terminal for each Month in the applicable Contract Year. Binding and firm Shipper's and Other Shipper's Scheduled Slot dates shall be determined in the RBS.

**Establishing the AMS**

3.1.1.1.1 By 1 September prior to each Contract Year, Terminal Operator shall notify Shipper and the Other Shippers of the cumulative number of Shipper's and Other Shippers' Subscribed Slots for that Contract Year, together with the dates

indicatively scheduled for Planned Maintenance, if any, of the LNG Terminal and Segment 1, for each Month in that Contract Year and Terminal Operator shall also notify Shipper and the Other Shippers of their then indicative figures regarding formula (1) and (2) of AC 3.1.1.1.3. The cumulative number of Shipper's and the Other Shippers' Subscribed Slots shall not exceed the number of available Slots of the Unexpanded Terminal Capacity or the Expanded Terminal Capacity Phase 1, as the case may be.

3.1.1.1.2 As soon as reasonably possible following the notification from Terminal Operator pursuant to AC 3.1.1.1.1 above, but ultimately by 15 September before each Contract Year, Terminal Operator, Shipper and the Other Shippers shall meet, exchange information (including Shipper's and the Other Shippers' draft preliminary annual berthing schedule) and co-ordinate for the next Contract Year on the Planned Maintenance periods of the LNG Terminal and Segment 1, Shipper's and the Other Shippers' production facilities, and dry-docking of Shipper's and the Other Shippers' LNG Ships in order to minimize the impact on the scheduling of Slots at the LNG Terminal and the delivery of LNG at the LNG Terminal and redelivery of Natural Gas at the Redelivery Point.

3.1.1.1.3 As soon as practical but ultimately by 30 September before each Contract Year, Terminal Operator shall notify Shipper and the Other Shippers of the firm Planned Maintenance dates of the LNG Terminal, Segment 1 and the AMS for each Month in that next Contract Year.

The AMS for each Month in the next Contract Year shall be determined by Terminal Operator based on an equal distribution of the cumulative number of Shipper's and the Other Shippers' Subscribed Slots for such Contract Year, such distribution being based on the number of High Tides in each such Month excluding High Tides being unavailable for reason of Planned Maintenance at the LNG Terminal and Segment 1, during such Month, as determined pursuant to the following formula (1):

$$SS_{tot}/(T_y - Y_{cy}) * (D_m - X_m)$$ rounded to two decimal places.

Where:

$SS_{tot}$ is equal to the number of available Slots of the Unexpanded Terminal Capacity or of the Expanded Terminal Capacity, as the case may be;

$T_y$ is equal to the number of High Tides in the relevant Contract Year;

$Y_{cy}$ is equal to the number of High Tides in the relevant Contract Year on which the LNG Terminal and Segment 1 is planned not to be available due to Planned Maintenance;

$D_m$ is equal to the number of High Tides in the relevant Month; and

$X_m$ is equal to the number of High Tides in the relevant Month on which the LNG Terminal and Segment 1 will not be available due to Planned Maintenance.

As soon as practical but ultimately by 1 October before each Contract Year, Terminal Operator shall communicate to Shipper its Slot entitlement for each Month M in the next Contract Year, as determined according to the formula (2) below:

$$SS_{scy}/(T_y - Y_{cy}) * (D_m - X_m)$$ rounded to two decimal places.

Where:

$SS_{scy}$ is equal to the number of Shipper's Subscribed Slots for the Contract Year;

$T_y$ is equal to the number of High Tides in the Contract Year;

$Y_{cy}$ is equal to the number of High Tides in the relevant Contract Year on which the LNG Terminal, and Segment 1 is planned not to be available due to Planned Maintenance;

$D_m$ is equal to the number of High Tides in the relevant Month; and

$X_m$ is equal to the number of High Tides in the relevant Month on which the LNG Terminal and Segment 1 will not be available due to Planned Maintenance.

Shipper and the Other Shippers shall schedule in the RBS, in accordance with AC 3.1.1.1.6, or in case of application of the Default Allocation Procedure in accordance with AC 3.1.1.2, for each Month a total number of Slots equal to the Available Monthly Slots, such AMS shall be rounded up or down, at Shipper's and Other Shippers' choice, to the nearest whole number. The rounding difference, if any, shall be carried forward to the following Month and applied to the number of Slots available in such Month as determined in the AMS.

After the AMS has been established, Terminal Operator, Shipper and the Other Shippers shall evaluate the potential to make available one (1) additional Slot during each of the Months of March through October during the next Contract Year, taking into account all relevant factors, including experience gained and changed circumstances. If such evaluation confirms the possibility to make available such additional Slot, then, prioritisation to allocate such additional Slot identified during the above mentioned process shall be as follows:

(1) First, to any Shipper or Other Shipper which have notified Terminal Operator that it cannot or might not be able to use a Shipper's or Other Shippers' Subscribed Slot(s) during the next Contract Year (Y+1) due to reasons of maintenance of Shipper's or Other Shippers' production facilities and/or Shipper's or Other Shippers' LNG Ship or due to justified and documented shipping logistic constraints. Where Shipper and/or any Other Shipper schedule under the AMS such additional Slot(s) in any Month from March through October for the next Contract Year (Y+1), such Shipper and/or Other Shipper shall reduce its Slot entitlement by an equivalent number in any prior or subsequent Months in such

Contract Year (Y+1) such that such Shipper and/or Other Shipper does not exceed its annual number of Subscribed Slots. For the avoidance of doubt such additional Slot shall be considered to be a Subscribed Slot;

(2) Second, to Shipper or any of the Other Shippers with Make-Up Capacity arising pursuant to an LNG Agreement ("*Make-Up Slots*"), as the case may be. For the purposes of AC 3.1.1.3 through AC 3.1.10, such Make-Up Slot shall, once scheduled under the RBS be considered to be a Scheduled Slot.

Once such an additional Slot, including Make-Up Slots, is allocated to Shipper or Another Shipper, it shall be scheduled in the relevant RBS and such additional Slot shall have a lower priority compared to the other Shipper's and the Other Shippers' Subscribed Slots when scheduling Slots in the RBS.

**Establishing the IBS**

3.1.1.1.4 As soon as reasonably possible following the establishment of the AMS pursuant to AC 3.1.1.1.3 above, but ultimately by 10 October before each Contract Year, Shipper shall submit to Terminal Operator:

a) a draft annual berthing schedule in line with Shipper's entitlement pursuant to formula (2) in AC 3.1.1.1.3 and for planned Additional Berthing Rights as the case may be;

b) the name of the LNG Ships that Shipper at such time intends to use during the Contract Year;

c) the indicative ETA for each LNG Ship in relation to (a) and (b); and

d) the indicative fuel increment in tons of bunker fuel per Day for speed increases of each LNG Ship identified in (b) with supporting documentation, if available.

This information will be compiled in an IBS by Terminal Operator pursuant to AC 3.1.1.1.5 below.

3.1.1.1.5 As soon as reasonably possible and before 20 October before the next Contract Year, Terminal Operator shall communicate to Shipper and the Other Shippers the IBS which must comply with the condition that the number of Slots scheduled by each of Shipper and the Other Shippers over the Contract Year must equal each of Shipper's and Other Shippers' Subscribed Slots for the next Contract Year, increased by Shipper's or Other Shippers' Make Up Slots, if any; and shall, unless otherwise determined pursuant to AC 3.1.1.1.3, be evenly spread over the Contract Year as far as practicable.

In case Terminal Operator observes a market demand for Slots exceeding the amount of Slots scheduled in the IBS (including but not limited to when Terminal Operator sees a high utilization rate of Slots or when an Auction for a Slot ends with a Cleared Price of the order of or higher than twice the Regulated Tariff), Terminal Operator may– with the consent of the Long Term Shippers – decide to revise the IBS. Terminal Operator and Shippers active in the IBS shall then jointly establish a new IBS, with the objective of creating additional Slots. A maximum of three (3) revisions of the IBS shall be organized by Contract Year.

3.1.1.1.6 The additional Slots that become available as a consequence of the revision of the IBS will be commercialised according to AC 2.2.3.2.

**Establishing the RBS**

3.1.1.1.7 Every Month M (commencing three Months prior to the Service Start Date), Terminal Operator, Shipper and the Other Shippers shall discuss in good faith, with the aim to agree, before the 19th Day of such Month M, the RBS for Months M+1, M+2 and M+3. Where a Shipper or Another Shipper does not participate in such good faith discussions or does not provide appropriate information to enable such discussions without participation of such Shipper or Other Shipper, Terminal Operator shall act as such Shipper or Other Shipper for the purposes of setting up the RBS and in this respect Terminal Operator shall not assume any liability for such Shipper or Other Shipper.

The RBS process shall determine the number of Shipper's and Other Shippers' Scheduled Slots and the date and time of each such Slot, based on a selected High Tide, the anticipated Jetty to be used for berthing, and the anticipated ETA of Shipper's and Other Shippers' LNG Ship to be used with each such Shipper's and Other Shippers' Scheduled Slot. Each Month's RBS shall include the following:

a) The schedule for Month M+3 of the RBS which shall be binding for the Parties in regards of establishing the number of Slots to be scheduled by Shipper and the Other Shippers in Month M+3. The date of the Slots so scheduled for Month M+3 shall be indicative;

b) The schedule for Month M+2 shall provide and be binding, subject to AC 3.1.1.3, for the Parties in regard of the firm date of each of Shipper's and Other Shippers' Scheduled Slots for Month M+2;

c) The schedule for Month M+1 shall provide and be binding, subject to rescheduling pursuant to AC 3.1.1.3, for the Parties in regard of the firm date

of each of Shipper's and Other Shippers' Scheduled Slots for Month M+1 and would be the same as the schedule for Month M+2 in the previous RBS, unless rescheduling has occurred pursuant to AC 3.1.1.3; and

d) Shipper and the Other Shippers shall advise the anticipated ETA and the corresponding High Tide for each of Shipper's and Other Shippers' LNG Ship intended to berth at the LNG Terminal for Months M+1, M+2 and M+3.

In scheduling the RBS, Shipper shall schedule its Slots to align, as far as reasonably possible, to its LNG Ship utilisation round trip requirements, as documented, and shall not schedule Slots with the aim only to hinder the scheduling of Other Shippers. In scheduling the RBS, Shipper and Other Shippers will also take into account the Slots sold following the revision of the IBS pursuant to AC 3.1.1.1.5. Shipper and Other Shippers shall work in good faith to avoid scheduling Slots that would hinder the scheduling of Slots of Shipper or Other Shippers.

If in any Month of a Contract Year, the aggregate of Shipper's and Other Shippers' Slots scheduled is less than the AMS rounded down, Shipper and the Other Shippers shall schedule their Slots in each RBS for M+1, M+2 and M+3 in a manner which allows Terminal Operator to schedule unsubscribed Slots up to the AMS rounded down. In such case, Terminal Operator shall act as if it were Another Shipper in establishing the RBS in respect of such unsubscribed Slots. It is understood that Terminal Operator shall have the lowest priority for scheduling such unsubscribed Slots in Months M+1, M+2 and M+3 in the RBS pursuant to the procedure set forth in this section or in the Default Allocation Procedure under AC 3.1.1.2. Pursuant to AC 3.1.1.3, Terminal Operator shall allow rescheduling whilst maintaining its entitlement to such unsubscribed Slots.

Ten (10) Days before each of such unsubscribed Scheduled Slot, Terminal Operator shall offer to Shipper and Other Shippers, free of charge, in aggregate fifty (50) per cent of the Basic Storage and hundred (100) per cent of the Basic Send Out associated to such unsubscribed Scheduled Slot on an interruptible basis. Where Shippers and Other Shippers in aggregate request more than fifty (50) per cent of the Basic Storage and hundred (100) per cent of the Basic Send Out associated to such unsubscribed Scheduled Slot, Terminal Operator shall allocate such Basic Storage and such Basic Send Out associated to such unsubscribed Scheduled Slot pro rata Shipper's and Other Shippers requested amount.

Terminal Operator may sell the unsubscribed Scheduled Slot after such date and prior to the unsubscribed Scheduled Slot date. In such case Terminal Operator may interrupt the service provided in the previous paragraph to the extent required to avoid delaying subsequent Shipper's or Other Shippers' LNG Ships. If at the time of such interruption, and to the extent of such interruption, Shipper's or Other Shippers' Gas In Storage exceeds Shipper's or Other Shippers' Storage Capacity, Terminal Operator may take action pursuant to AC 3.1.5.4.1 and AC 3.1.5.4.2 to the extent such excess results in other Shipper's or Other Shippers' LNG Ships being delayed, for which the interrupted Shipper or Other Shipper shall be liable for demurrage caused to such Shipper's or Other Shippers' LNG Ships. However

Terminal Operator shall only take action pursuant to AC 3.1.5.4.1 in case of application of the previous sentence.

Terminal Operator shall not unreasonably withhold its approval of the RBS proposed by Shipper and the Other Shippers, if the following conditions are met, in which case the Slots so scheduled for the Months M+1 and M+2 become Shipper's and Other Shippers' Scheduled Slots:

1) For each of the Months M+1, M+2 and M+3, the cumulative number of Slots scheduled by Shipper and the Other Shippers is consistent with the AMS for such Month as determined pursuant to AC 3.1.1.1.3 including, for the avoidance of doubt, the rounding up or down and the additional Slot, if applicable, during the Months March through October;

2) Shipper, and each of the Other Shippers under their respective Capacity Subscription Agreement, having an entitlement, for each Month to a number of Scheduled Slots being for each of them calculated as set out below, save for the entitlement to an additional Slot pursuant to AC 3.1.1.1.3, if any:

$$\mathbf{SS_{scy}/(T_y - Y_{cy}) * (D_m - X_m) + OE_{sm-1}}$$ rounded to two decimal places.

Where:

$\mathbf{SS_{scy}}$ is equal to the number of Shipper Subscribed Slots for the Contract Year;

$\mathbf{T_y}$ is equal to the number of High Tides in the Contract Year;

$\mathbf{Y_{cy}}$ is equal to the number of High Tides in the relevant Contract Year on which the LNG Terminal and Segment 1 is planned not to be available due to Planned Maintenance;

$\mathbf{D_m}$ is equal to the number of High Tides in the relevant Month;

$\mathbf{X_m}$ is equal to the number of High Tides in the relevant Month on which the LNG Terminal and Segment 1 will not be available due to Planned Maintenance; and

$\mathbf{OE_{sm-1}}$ is equal to the outstanding entitlement for Shipper at the end of the previous Month, provided that the outstanding entitlement for the first Month of each Contract Year shall be zero (0). For the avoidance of doubt, the outstanding entitlement may be a negative or a positive number.

$\mathbf{OE_{sm-1}}$ is equal to $OE_{sm-2} + (SS_{scy}/(T_y - Y_{cy}) * (D_{m-1} - X_{m-1}))$-(Scheduled Slot(s) of Month M-1 for the relevant Shipper).

Shipper shall schedule a number of Slots in any Month (which shall be a whole number) in such a way that the outstanding entitlement for any Month is not

greater than or equal to one (1) overlift and not greater than or equal to one (1) underlift, ie ($1 > OE_{sm} > -1$);

3) Slots scheduled are not interfering with Planned Maintenance periods;

4) Slots scheduled being, to the extent practicable, evenly and fairly spread over the Months and within each Month; and

5) For each of the Months M+1 and M+2, the first High Tide of any Slot scheduled not being less than five (5) High Tides after the first High Tide of the previous Slot scheduled.

Terminal Operator, Shipper and the Other Shippers will use their reasonable endeavours to solve any scheduling conflicts which arise in establishing the RBS.

In case the proposed RBS does not meet the requirements mentioned above in this AC 3.1.1.1.7by the 19th Day of Month M, and Terminal Operator does not approve such proposed RBS by the 20th Day of Month M, Terminal Operator shall apply the Default Allocation Procedure, set out in AC 3.1.1.2 for determining the schedule of the Slots for the Months M+2 and/or the number of Slots each Shipper is entitled to in Month M+3. The schedule for Month M+1 shall remain as established in the prior Month's RBS, then as a Month M+2, taking into account any agreed amendments to such RBS subject to AC 3.1.1.3.

3.1.1.1.8 Ramp up

In case the number of Shipper's or Another Shippers' Subscribed Slots changes from one Month to the next Month due to contractual arrangements, commissioning of an extension or otherwise, then the AMS according to formula (1) of AC 3.1.1.1.3 and the monthly Slot entitlements according to formula (2) of AC 3.1.1.1.3 for Shipper or Another Shipper shall be determined by annualizing the relevant number of Shipper's and Other Shippers' Subscribed Slots.

### 3.1.1.2 Default Allocation procedures

3.1.1.2.1 In case the proposed RBS does not meet the requirements mentioned in AC 3.1.1.1.7 by the 19th Day of Month M, and Terminal Operator does not approve such proposed RBS by the 20th Day of Month M, this AC 3.1.1.2 shall be applied. The Default Allocation Procedure shall not apply to Month M+1 of the proposed RBS.

3.1.1.2.2 In case Shipper and the Other Shippers do not agree on the number of Slots they are entitled to utilise in Month M+3, the following procedure shall be applied:

a) Each Shipper indicates the number of Slots it requests to schedule in Month M+3 but within the limits of AC 3.1.1.1.7(2).

b) If the total number of Slots indicated by Shipper and the Other Shippers under (a) exceeds the AMS including its rounding up plus the additional Slot, if applicable, for such Month, Terminal Operator shall reduce the number of Slots of either Shipper and/or Other Shippers having the lowest outstanding entitlement at the end of the Month M+3 as calculated under AC 3.1.1.1.7(2) until the number of Slots to be scheduled equals the AMS including its rounding up plus the additional Slot, if applicable, for such Month. Each time a Shipper or Another Shipper have their number of Slots reduced, their outstanding entitlement shall be increased accordingly.

c) If the total number of Slots indicated by Shipper and the Other Shippers under (a) is less than the AMS including its rounding down plus the additional Slot, if applicable, for such Month, Terminal Operator shall increase the number of Slots of either Shipper and/or Other Shippers having the highest outstanding entitlement at the end of the Month M+3 as calculated under AC 3.1.1.1.7(2) until the number of Slots to be scheduled equals the AMS including its rounding down plus the additional Slot, if applicable, for such Month. Each time a Shipper or Other Shippers have their number of Slots increased, their outstanding entitlement shall be reduced accordingly.

d) Shipper and/or Other Shipper, who requested but was not allocated any Slot in Month M+3 of the previous RBS, and if in such Month M+3 the Default Allocation Procedure was used, shall in the Month M+3 of the current RBS rank higher than Shipper and/or any Other Shipper for being allocated a Default Available Slot, subject to such Shipper or Other Shipper having an outstanding entitlement of Subscribed Slots greater than or equal to zero decimal five (0.5) at the end of Month M+3 of the previous RBS.

3.1.1.2.3 In case Shipper and the Other Shippers do not agree on the dates for scheduling the Slots for Month M+2 conforming to conditions (3) and/or (5) of AC 3.1.1.1.7, the following procedure shall apply:

a) Terminal Operator shall propose the dates for the High Tide of each Slot which is available to be scheduled by Shipper and the Other Shippers under the Default Allocation Procedures (the Default Available Slots) for the applicable Month M+2, whereby the High Tide of Default Available Slot shall not be less than five (5) High Tides after the first High Tide of the previous Slot scheduled, taking into account any Tide during which Planned Maintenance at the LNG Terminal and Segment 1 is scheduled to occur. The number of Slots to be scheduled by Shipper and the Other Shippers is based on the number of Slots scheduled by the respective Shipper and Other Shippers in the previous RBS for the Month M+3, irrespective of the number of dates for Slots proposed by Terminal Operator.

b) Terminal Operator shall establish a system of ranking for Shipper and the Other Shippers for such Month of the Contract Year for which it has not received an RBS which conforms with AC 3.1.1.1.7. The system of ranking shall be determined in accordance with the formula set out below and shall permit Shipper and each of the Other Shippers to select a Default Available

Slot date advised in (a) above according to its ranking for that Month. The ranking for Shipper and each of the Other Shippers for each Month shall be determined as follows:

$$R_{sm} = (SS_{scy}/(T_y - Y_{cy})) * (D_m - X_m) + OE_{sm-1}$$

Where:

$R_{sm}$ is the ranking for Shipper or Other Shipper for a Month, calculated up to two decimals; and

$OE_{sm-1}$, $SS_{scy}$, $T_y$, $Y_{cy}$, $D_m$ and $X_m$ are as defined above in AC 3.1.1.1.7.

c) Shipper or Other Shipper, as the case may be, having the highest ranking, shall be entitled to select a Default Available Slot in that Month in priority to Shipper or the Other Shippers. Once a Shipper or Other Shipper has selected a Default Available Slot, Shipper's or Other Shipper's ranking for that Month shall be reduced by one.

d) Shipper shall schedule its Default Allocated Slots to align, as far as reasonably possible, to its LNG Ship utilisation round trip requirements, as documented, and shall not schedule Slots with the aim only to hinder the scheduling of Other Shippers. Shipper and Other Shippers shall work in good faith to avoid scheduling Slots that would hinder the scheduling of Slots of Shipper or Other Shippers.

e) Subject to AC 3.1.1.2.3 (f), if two or more of any of Shipper or Other Shippers have the same ranking, then Shipper or the Other Shipper to whom a Default Available Slot has been allocated least recently, shall rank highest. If these rules do not permit the identification of the highest ranking Shipper or Other Shipper, then such ranking shall be determined by random selection by Terminal Operator from the applicable Shipper and/or Other Shippers.

f) The Default Allocation Procedure shall be repeated until all the requested Slots for that Month have been allocated and scheduled by Shipper and/or Other Shippers. Next, the additional Slot, if any, shall be scheduled and finally, the Slots to be scheduled by Terminal Operator pursuant to AC 3.1.1.1.7.

### 3.1.1.3 Rescheduling of Scheduled Slots

Shipper may request rescheduling of any of Shipper's Scheduled Slots. Any such request shall be made in writing to Terminal Operator and shall be made as soon as possible but no later than four (4) Days before the date of the Scheduled Slot.

Terminal Operator shall reschedule the Scheduled Slot as requested, subject to such reasonable conditions or restrictions as Terminal Operator may determine and document in writing to Shipper, and such conditions or restrictions (which could include reimbursement of extra documented costs incurred by Terminal

Operator) being accepted by Shipper in writing, and subject to such change not having any impact on any of the unloading operations scheduled by any Other Shipper or any Other User. Terminal Operator shall notify Shipper and all Other Shippers and/or Other Users in writing of any such change in the RBS pursuant to this section. In case Terminal Operator is unable to reschedule a Scheduled Slot Terminal Operator shall notify Shipper advising the reason for which the request could not be accepted.

Subject to Terminal Operator's approval, such approval not to be unreasonably withheld, nothing shall prevent Shipper and any Other Shipper from swapping their Scheduled Slots or taking any other mutually acceptable action between themselves subject to such arrangement not having any impact on any of the services scheduled by any of Shipper, Other Shippers or Other Users, who are not involved in such referenced action. In such event Shipper and Other Shipper(s) involved in such arrangement shall notify Terminal Operator of such arrangement as soon as possible but no later than four (4) Days before the date of the earliest Scheduled Slot involved. Terminal Operator shall notify Shipper and all Other Shippers of the associated changes in the RBS.

Shipper, the Other Shippers and Terminal Operator shall use their reasonable endeavours to implement a request for rescheduling of a Scheduled Slot received from any Other Shipper which may be subject to receiving payment from the requesting Other Shipper to adapt the speed of Shipper's or Other Shipper's LNG Ship based upon the costs provided by Shipper or Other Shippers pursuant to AC 3.1.1.1.4(d).

**3.1.1.4** After setting up the RBS for the Month M, Terminal Operator shall for the Months M+1 and M+2:

a) Publish any Shipper's and/or Other Shippers' Subscribed Slots not scheduled or unsubscribed Slots scheduled by Terminal Operator pursuant to AC 3.1.1.1.7; and

b) Under the Unexpanded Terminal Capacity circumstances, or the Expanded Terminal Capacity Phase 1 circumstances, determine any other groupings of five (5) or more High Tides where there is no Shipper's and/or Other Shippers' Scheduled Slot under the RBS.

Slots referenced under (a) hereinabove may be offered by Terminal Operator to be allocated in accordance with the priorities (1), (2) and (3) hereunder.

Groupings of High Tides referenced under (b) hereinabove may be offered by Terminal Operator to be allocated in accordance with the priorities (1), (2) and (3) hereunder, subject to Shipper's and the Other Shippers' approval, such approval not to be unreasonably withheld. For the purpose of this section of this Chapter 3.1 it shall be considered reasonable to withhold consent based on the potential for delay based on statistical weather data.

Without prejudice to AC 3.1.10.1 and in reference to the paragraph above, Terminal Operator may offer Slots or groupings referenced under (a) or (b):

(1) First, to Shipper or any Other Shipper which has notified Terminal Operator that it has not or might not be able to use Shipper's or Other Shippers' Subscribed Slot during the Contract Year due to reason of maintenance of Shipper's or Other Shippers' Production Facilities and/or Shipper's or Other Shippers' LNG Ship or due to justified and documented shipping logistic constraints. Where Shipper and/or Other Shipper are allocated such Slots or groupings referenced under (a) or (b) above, Shipper and/or Other Shippers shall, if the referenced Subscribed Slot that cannot be used is in the future Months of the Contract Year, reduce its Slot entitlement by an equivalent number in any subsequent Months in the same Contract Year such that the applicable Shipper and/or Other Shippers does not exceed its annual number of Subscribed Slots.

(2) Second, as a Make Up Slot, to Shipper or any of the Other Shippers with a Make Up Capacity.

(3) Third, to any other third party who wishes to be allocated such Slot, or groupings referenced under (a) or (b) above, which for the avoidance of doubt may be Shipper or any Other Shipper. It is understood that it is not unreasonable for Shipper and/or Other Shipper to make their approval, as mentioned under this AC 3.1.1.4, conditional upon obtaining sufficient security from such third party for the risks associated with the Lending Service offered pursuant to AC 3.1.7.5.2.

Shipper or any Other Shipper may withdraw its approval to use such Slots referenced under (b) at any time prior to Terminal Operator's notification to Shipper and Other Shippers of its entering into a binding agreement to sell such Slot.

For the purposes of AC 3.1.1.3 and 3.1.1.5, Slots or groupings referenced under (a) or (b) above, shall, once allocated be considered to be a Scheduled Slot.

**3.1.1.5** Upon scheduling of Slots pursuant to the RBS, without prejudice to the application of the Ship Approval Procedure as set out in Chapter 3.2, Shipper shall provide the following information to Terminal Operator, showing for each Scheduled Slot of Month M+1 and M+2 in such:

a) the name of the LNG Ship;

b) the size of the LNG Ship;

c) the date and time of the High Tide;

d) the estimated quality and quantity of LNG to be unloaded at the Delivery Point or as the case may be, the estimated quantity of LNG to be delivered at the Redelivery Point for Loading; and

the ETA of the LNG Ship.

#### 3.1.1.6 Additional Berthing Rights

Upon scheduling Slots pursuant to the RBS for Month M+2, Terminal Operator shall make available a number of Additional Berthing Rights to the RBS. Terminal Operator shall propose the dates for the Tide of each Additional Berthing Right to be scheduled for the applicable Month M+2.

Terminal Operator and Shipper and Other Shippers shall discuss in good faith, with the aim of agreeing, before the last Day of Month M, the scheduling of Subscribed Additional Berthing Rights for Month M+2. It is hereby understood that the maximum number of Subscribed Additional Berthing Rights, Shipper may request for scheduling in such Month M+2 is equal to the number of Subscribed Additional Berthing Rights Shipper is entitled to in the Contract Year minus the number of Subscribed Additional Berthing Rights that Shipper has already scheduled in such a Contract Year.

In case Shipper and Other Shippers do not agree on the scheduling of the Subscribed Additional Berthing Rights, Terminal Operator shall use a system of ranking which shall be based on the number of Subscribed Additional Berthing Rights Shipper or Other Shippers have requested to schedule in such Month M+2. Shipper or Other Shipper having requested the highest number of Subscribed Additional Berthing Rights in such Month M+2 shall have the highest initial ranking and Shipper or Other Shipper having requested the lowest number of Subscribed Additional Berthing Rights in such Month M+2 shall have the lowest initial ranking, such initial ranking being equal to the relevant number of subscribed Additional Berthing Rights requested to be scheduled in such Month M+2. Shipper and Other Shippers shall be entitled to take turns to schedule a Subscribed Additional Berthing Right in that Month M+2 in the order of their ranking whereby the Shipper or Other Shipper with the highest ranking in each turn shall be entitled to schedule in priority to Shipper or the Other Shippers. Once such Shipper or Another Shipper has scheduled such Subscribed Additional Berthing Right, such Shipper's or Other Shipper's ranking for that Month M+2 shall be reduced by one for the purpose of the next turn. In case two or more Shippers have the same ranking in the same turn, Shipper or Another Shipper, having the highest number of Subscribed Additional Berthing Rights contracted for minus the Subscribed Additional Berthing Rights already scheduled, shall rank higher in such turn.

In case any Additional Berthing Right for Month M+2 remains available, Terminal Operator shall publish such Additional Berthing Right and allocate it on a first committed, first served basis.

#### 3.1.1.7 Subscribed Stand Alone Berthing Rights

Shipper shall notify Terminal Operator in writing as soon as possible when Shipper intends to load or to unload a LNG Ship in association to a Subscribed Stand Alone Berthing Right, indicating the LNG Ship, the ETA and the Nominated Volume of

LNG (for loading operations) or the Nominated Cargo of LNG (for unloading operations). Terminal Operator shall confirm within five Days that the indicated LNG Ship is approved or not to load the indicated Nominated Volume of LNG or to unload the Nominated Cargo of LNG at the indicated ETA. If Shipper has not sufficient Storage Capacity to accommodate the Nominated Cargo of LNG then Shipper acknowledges that such approval for the unloading of a Nominated Cargo of LNG is based on a forecast of available storage capacity and available send out capacity by the Terminal Operator following the scheduled unloading. In this case, such approval may be revoked until 24h before the indicated ETA and the Stand Alone Berthing Right postponed or cancelled.

It is hereby understood that the maximum number of Subscribed Stand Alone Berthing Rights Shipper may use to load or unload a LNG Ship in a Contract Year, is equal to the number of Subscribed Stand Alone Berthing Rights of the Shipper in the Contract Year.

For the avoidance of doubt, the priority of berthing will be determined in accordance with the provisions of AC 3.1.4.3.

### 3.1.2 Scheduling of Transshipper's and the Other Transshippers' Subscribed Transshipment Berthing Rights

AC 3.1.2.1 to 3.1.2.6 establishes the procedure to schedule Transshipper's and the Other Transshippers' Subscribed Transshipment Berthing Rights by way of determining the Available Monthly Transshipment Berthing Rights ("AMTBR") and establishing an annual Indicative Transshipment Berthing Schedule ("ITBS") and a three Month Rolling Transshipment Berthing Schedule ("RTBS").

#### 3.1.2.1 Available Monthly Transshipment Berthing Rights ("AMTBR"), Indicative Transshipment Berthing Schedule ("ITBS") and Rolling Transshipment Berthing Schedule ("RTBS")

Prior to 20 October of each Contract Year, or in relation to the first Contract Year by 20 October of the calendar Year preceding the first Contract Year, Terminal Operator, Transshipper and the Other Transshippers shall establish the AMTBR and the ITBS for the first or next Contract Year, as the case may be, pursuant to the provisions set out below.

The number of Transshipment Berthing Rights available in each Month of any Contract Year as determined in the AMTBR pursuant to AC 3.1.2.1.3 shall be binding for each Month in the Contract Year, but the number of Transshipment Berthing Rights that Transshipper and the Other Transshippers shall schedule in each such Month based on the AMTBR figure shall be established when determining the RTBS pursuant to AC 3.1.2.1.6.

The ITBS shall set out indicative Transshipment Berthing Right dates for Transshipper and the Other Transshippers at the LNG Terminal for each Month in

the applicable Contract Year. Binding and firm Transshipper's and Other Transshipper's Scheduled Transshipment Berthing Right dates shall be determined in the RTBS.

**Establishing the AMTBR**

3.1.2.1.1 By 1 September prior to each Contract Year, Terminal Operator shall notify Transshipper and Other Transshippers of the cumulative number of Transshipper's and Other Transshippers' Subscribed Transshipment Berthing Rights for that Contract Year, together with the dates indicatively scheduled for Planned Maintenance, if any, of the LNG Terminal and Segment 1, for each Month in that Contract Year. The cumulative number of Transshipper's and the Other Transshippers' Subscribed Transshipment Berthing Rights shall not exceed the number of available Transshipment Berthing Rights of the Expanded Terminal Capacity Phase 2.

3.1.2.1.2 As soon as reasonably possible following the notification from Terminal Operator pursuant to AC 3.1.2.1.1 above, but ultimately by 15 September before each Contract Year, Terminal Operator, Transshipper and the Other Transshippers shall meet, exchange information (including Transshipper's and the Other Transshippers' draft preliminary annual berthing schedule) and co-ordinate for the next Contract Year on the Planned Maintenance periods of the LNG Terminal and Segment 1 in order to minimize the impact on the scheduling of Transshipment Berthing Rights at the LNG Terminal.

3.1.2.1.3 As soon as practical but ultimately by 30 September before each Contract Year, Terminal Operator shall notify Transshipper and the Other Transshippers of the firm Planned Maintenance dates of the LNG Terminal, Segment 1 and the AMTBR for each Month in that next Contract Year.

For each Month in the next Contract Year, Terminal Operator shall make the maximum number of Transshipment Berthing Rights available, taking into account Planned Maintenance.

As soon as practical but ultimately by 1 October before each Contract Year, Terminal Operator shall communicate to Transshipper its Transshipment Berthing Right entitlement for each Month M in the next Contract Year. Transshipper shall be entitled to a number of Transshipment Berthing Rights as determined in formula (1) below:

$$TBR_{im} \leq AMTBR_m$$

$$\sum_{m=1}^{12} TBR_{im} = TBR_{iy}$$

where:

$TBR_{im}$ is equal to the number of Transshipper's entitlement of Transshipment Berthing Rights for the relevant Month;

$TBR_{iy}$ is equal to the number of Transshipper's Subscribed Transshipment Berthing Rights for the relevant Contract Year;

$AMTBR_m$ is equal to the number of groupings of 3 consecutive Low Tides in the relevant Month, with the understanding that such grouping can be formed by 1 or 2 Low Tides at the end of the previous Month not being part of a grouping in that previous Month; and

$AMTBR_m$ shall take into account the number of Low Tides in the relevant Month on which the LNG Terminal and Segment 1 will not be available due to Planned Maintenance.

**Establishing the ITBS**

3.1.2.1.4 As soon as reasonably possible following the establishment of the AMTBR pursuant to AC 3.1.2.1.3 above, but ultimately by 10 October before each Contract Year, Transshipper shall submit to Terminal Operator:

a) a draft annual berthing schedule in line with Transshipper's entitlement pursuant to formula (1) in AC 3.1.2.1.3 and its entitlement equal to the number of Subscribed Transshipment Berthing Rights in the relevant Service Confirmation Form;

b) the name of the LNG Ships that Transshipper at such time intends to use during the Contract Year;

c) the indicative ETA for each LNG Ship in relation to (a) and (b); and

This information will be compiled in an ITBS by Terminal Operator pursuant to AC 3.1.2.2.6 below.

3.1.2.1.5 As soon as reasonably possible and before 20 October before the next Contract Year, Terminal Operator shall communicate to Transshipper and the Other Transshippers the ITBS which must comply with the condition that the number of Transshipment Berthing Rights scheduled by each of Transshipper and the Other Transshippers over the Contract Year must be less than or equal to respectively Transshipper's and Other Transshippers' Subscribed Transshipment Berthing Rights for the next Contract Year.

**Establishing the RTBS**

3.1.2.1.6 Every Month M (commencing three Months prior to the Service Start Date), Terminal Operator, Transshipper and the Other Transshippers shall discuss in good faith, with the aim to agree, before the 19th Day of such Month M, the RTBS for Months M+1, M+2 and M+3. Where a Transshipper or Another Transshipper does not participate in such good faith discussions or does not provide appropriate information to enable such discussions without participation of such Transshipper or Other Transshipper, Terminal Operator shall act as such Transshipper or Other

Transshipper for the purposes of setting up the RTBS and in this respect Terminal Operator shall not assume any liability for such Transshipper or Other Transshipper.

The RTBS process shall determine the number of Transshipper's and Other Transshippers' Scheduled Transshipment Berthing Rights and the date and time of each such Transshipment Berthing Right, based on a selected Low Tide, the anticipated Jetty to be used for berthing, and the anticipated ETA of Transshipper's and Other Transshippers' LNG Ship to be used with each such Transshipper's and Other Transshippers' Scheduled Transshipment Berthing Right. Each Month's RTBS shall include the following:

a) The schedule for Month M+3 of the RTBS which shall be binding for the Parties in regards of establishing the number of Transshipment Berthing Rights to be scheduled by Transshipper and the Other Transshippers in Month M+3. The date of the Transshipment Berthing Rights so scheduled for Month M+3 shall be indicative;

b) The schedule for Month M+2 shall provide and be binding, subject to rescheduling pursuant to AC 3.1.2.3, for the Parties in regard of the firm date of each of Transshipper's and Other Transshippers' Scheduled Transshipment Berthing Rights for Month M+2;

c) The schedule for Month M+1 shall provide and be binding, subject to rescheduling pursuant to AC 3.1.2.3, for the Parties in regard of the firm date of each of Transshipper's and Other Transshippers' Scheduled Transshipment Berthing Rights for Month M+1 and would be the same as the schedule for Month M+2 in the previous RTBS, unless rescheduling has occurred pursuant to AC 3.1.2.3; and

d) Transshipper and the Other Transshippers shall advise the anticipated ETA and the corresponding Low Tide for each of Transshipper's and Other Transshippers' LNG Ship intended to berth at the LNG Terminal for Months M+1, M+2 and M+3.

Transshipper and Other Transshippers shall work in good faith to avoid scheduling Transshipment Berthing Rights that would hinder the scheduling of Transshipment Berthing Rights of Transshipper or Other Transshippers.

Terminal Operator shall not unreasonably withhold its approval of the RTBS proposed by Transshipper and the Other Transshippers, if the following conditions are met, in which case the Transshipment Berthing Rights so scheduled for the Months M+1 and M+2 become Transshipper's and Other Transshippers' Scheduled Transshipment Berthing Rights:

1) For each of the Months M+1, M+2 and M+3, the cumulative number of Transshipment Berthing Rights scheduled by Transshipper and the Other Transshippers is less than or equal to the available Transshipment Berthing Rights as established in the AMTBR for such Month as determined pursuant to AC 3.1.2.1.3.

2) Transshipper, and each of the Other Transshippers under their respective LTSA, having an entitlement to schedule a number of Transshipment Berthing Rights that is equal, at the beginning of the Contract Year, to the number of Subscribed Transshipment Berthing Rights as in the relevant Services Confirmation Form and shall be reduced every Month by the number of Scheduled Transshipment Berthing Rights scheduled in the previous Month. Transshipper is to make sure that the outstanding entitlement at the end of any given Contract Year shall be larger than or equal to zero (0).

3) Transshipment Berthing Rights scheduled are not interfering with Planned Maintenance periods;

4) For each of the Months M+1 and M+2, the Low Tide of any Transshipment Berthing Right scheduled not being less than three (3) Low Tides after the previous Transshipment Berthing Right scheduled; and

5) Transshipment Berthing Rights scheduled such that subsequent pairs are created (also across Months) per Transshipper, respectively Other Transshipper.

Terminal Operator, Transshipper and the Other Transshippers will use their reasonable endeavours to solve any scheduling conflicts which arise in establishing the RTBS.

In case the proposed RTBS does not meet the requirements mentioned above in this AC 3.1.2.1.6 by the 19th Day of Month M, and Terminal Operator does not approve such proposed RTBS by the 20th Day of Month M, Terminal Operator shall apply the Default Allocation Procedure for Transshipment Berthing Rights , set out in AC 3.1.2.2 for determining the schedule of the Transshipment Berthing Rights for the Months M+2 and/or the number of Transshipment Berthing Rights each Transshipper is entitled to in Month M+3. The schedule for Month M+1 shall remain as established in the prior Month's RTBS, then as a Month M+2 taking into account any agreed amendments to such RTBS subject to AC 3.1.2.3.

Every Month M, together with the RTBS, Transshipper shall submit an updated draft berthing schedule cfr. AC 3.1.2.1.4 for the remainder of the Contract Year to Terminal Operator.

3.1.2.1.7 Ramp up for Transshippers

In case the number of Transshipper's or Another Transshippers' Subscribed Transshipment Berthing Rights changes from one Month to the next Month due to contractual arrangements, commissioning of an extension or otherwise, then, such change shall be reflected in the AMTBR, ITBS and RTBS.

### 3.1.2.2 Default Allocation procedure for Transshipment Berthing Rights

3.1.2.2.1 In case the proposed RTBS does not meet the requirements mentioned in AC 3.1.2.1.6 by the 19th Day of Month M, and Terminal Operator does not approve such proposed RTBS by the 20th Day of Month M, this AC 3.1.2.2 shall be applied. The Default Allocation Procedure shall not apply to Month M+1 of the proposed RTBS.

3.1.2.2.2 In case Transshipper and the Other Transshippers (i) each wish to schedule a number of Transshipment Berthing Rights in Month M+3 such that condition (1) of AC 3.1.2.1.6 is not met for that Month, or (ii) do not agree on the dates for scheduling the Transshipment Berthing Rights for Month M+2 conforming to conditions (3), (4) and/or (5) of AC 3.1.2.1.6, the following procedure shall be applied:

Terminal Operator shall use a system of ranking, whereby the initial ranking shall be equal to the relevant number of Subscribed Transshipment Berthing Rights Transshipper or Other Transshippers have requested to schedule in such Month M+3, respectively M+2, such number being compliant with condition (2) of AC 3.1.2.1.6.

Transshipper and Other Transshippers shall be entitled to take turns to schedule a Subscribed Transshipment Berthing Right in that Month M+3, respectively M+2 in the order of their ranking whereby the Transshipper or Other Transshipper with the highest ranking in each turn shall be entitled to schedule in priority to Transshipper or the Other Transshippers and such scheduling shall be done in compliance with conditions (3), (4) and (5) of AC 3.1.2.1.6.

Once such Transshipper or Another Transshipper has scheduled such Subscribed Transshipment Berthing Right, such Transshipper's or Other Transshipper's ranking for that Month M+3, respectively M+2 shall be reduced by one for the purpose of the next turn.

In case two or more Transshippers have the same ranking in the same turn, Transshipper or Another Transshipper, having the highest number of Subscribed Transshipment Berthing Rights contracted for that Contract Year minus the Subscribed Transshipment Berthing Rights already scheduled, shall rank higher in such turn.

### 3.1.2.3 Rescheduling of Scheduled Transshipment Berthing Rights

Transshipper may request rescheduling of any of Transshipper's Scheduled Transshipment Berthing Rights on any other Low Tide, whether or not for the creation of Ship-to-Ship Transshipments or overlapping Scheduled Transshipment Berthing Rights. Any such request shall be made in writing to Terminal Operator and shall be made as soon as possible, not earlier than in Month M+1 and no later than four (4) Days before the date of the Scheduled Transshipment Berthing Right.

Terminal Operator shall not withhold its consent to reschedule the Scheduled Transshipment Berthing Right as requested for reasons other than operational reasons and subject to such rescheduling not having any material impact on any Other Transshipper or any Shipper.

Terminal Operator shall notify Transshipper and all Other Transshippers and/or Shippers in writing of any such change in the RTBS pursuant to this section. In case Terminal Operator is unable to reschedule a Scheduled Transshipment Berthing Right Terminal Operator shall notify Transshipper advising the reason for which the request could not be accepted.

Without prejudice to the above, Transshipper may reschedule its Scheduled Transshipment Berthing Rights in order to create Ship-to-Ship Transshipments or overlapping Scheduled Transshipment Berthing Rights, such that the Scheduled Transshipment Berthing Rights are not necessarily scheduled conform conditions (4) and (5) of AC 3.1.2.1.6. As such operations require the simultaneous availability of both Jetties, such rescheduling may not impact any Shipper's Scheduled Slots and/or Scheduled Berthing Rights. Transshipper shall therefore obtain the necessary information on the availability of both Jetties via the Electronic Data Platform.

**3.1.2.4** In line with the fully interruptible character of Ship-to-Ship Transshipments or overlapping Scheduled Transshipment Berthing Rights, Terminal Operator can oblige Transshipper to reschedule, if through the rescheduling of a Scheduled Slot or a Scheduled Berthing Right by any Shipper, the Ship-to-Ship Transshipment or overlapping Scheduled Transshipment Berthing Rights have become impossible. Transshipper, the Other Transshippers and Terminal Operator shall use their reasonable endeavours to implement a request for such rescheduling of a Scheduled Transshipment Berthing Right received from any Other Transshipper.

**3.1.2.5** After setting up the RTBS for the Month M, Terminal Operator shall for the Months M+1 and M+2 - under the Expanded Terminal Capacity Phase 2 circumstances- determine any grouping(s) of three (3) or more Low Tides where there is no Transshipper's and/or Other Transshippers' Scheduled Transshipment Berthing Right under the RTBS.

These groupings of Low Tides may be offered by Terminal Operator in order to create Transshipment Berthing Right(s) and which shall be allocated in accordance with the priorities (1) and (2) hereunder, subject to Transshipper's and the Other Transshippers' approval, such approval not to be unreasonably withheld. For the purpose of this section of this Chapter 3.1 it shall be considered reasonable to withhold consent based on the potential for delay based on statistical weather data.

(1) First, to Transshipper or any Other Transshipper which has notified Terminal Operator that it has not or might not be able to use Transshipper's or Other Transshippers' Subscribed Transshipment Berthing Right during the Contract Year due to reason of maintenance of Transshipper's or Other Transshippers' Production Facilities and/or Transshipper's or Other

Transshippers' LNG Ship or due to justified and documented shipping logistic constraints.

(2) Second, to any other third party who wishes to be allocated such groupings, which for the avoidance of doubt may be Transshipper or any Other Transshipper.

These groupings of Low Tides, shall, once allocated, be considered as Scheduled Transshipment Berthing Right(s).

Transshipper or any Other Transshipper may withdraw its approval to use such groupings of Low Tides at any time prior to Terminal Operator's notification to Transshipper and Other Transshippers of its entering into a binding agreement to sell such Transshipment Berthing Right.

**3.1.2.6** Upon scheduling of Transshipment Berthing Rights pursuant to the RTBS, without prejudice to the application of the Ship Approval Procedure as set out in AC 3.2, Transshipper shall provide the following information to Terminal Operator, showing for each Scheduled Transshipment Berthing Right of Month M+1 and M+2 in such:

a) the name of the LNG Ship;

b) the size of the LNG Ship;

c) the date and time of the Low Tide;

d) the estimated quality and quantity of LNG to be unloaded at the Delivery Point for Transshipment or as the case may be, the estimated quantity of LNG to be delivered at the Redelivery Point for Transshipment; and

e) the ETA of the LNG Ship.

### 3.1.3 Port Requirements

#### 3.1.3.1 Port facilities

3.1.3.1.1 The LNG Ship shall not exceed the following indicative maximum dimensions and other relevant restricting parameters referenced to in the LNG Ship Approval Procedure pursuant to AC 3.2, and shall be compliant at all times with the general nautical rules applicable at the Port including the specific nautical rules for LNG carriers applicable at the Port as published in its version issued 16th October 2001 which came into effect as of 1st February 2002, as revised and enforced by the competent authorities from time to time:

Length: 350m

Breadth: 55m

Draft: 13m

3.1.3.1.2 The LNG Terminal shall be capable of receiving, berthing, unloading and loading LNG Ships and shall include, amongst others, the following:

a) **Berthing facilities** that comply with SIGTTO and OCIMF guidelines, in force. To the extent such guidelines are subsequently amended, Terminal Operator will, acting as a Reasonable and Prudent Operator, use reasonable endeavours to implement such amended guidelines;

b) **Mooring equipment** compatible with any LNG Ship approved pursuant to the LNG Ship Approval Procedure;

c) **Lighting** sufficient to permit docking manoeuvres by day or by night in safety, to the extent permitted by the Port Authority;

d) **Facilities** allowing access to the LNG Ships (but not warehousing facilities) adequate for handling and delivery to the LNG Ship of ship's shores, provisions, and regular spare parts and a shore gangway for personnel access;

e) **Gaseous nitrogen injection** at the apex of the unloading arms for purging;

f) **Appropriate systems** for telefax, telephone, e-mail and radio communications with LNG Ships.

g) **Emergency shutdown system** in accordance with the existing SIGTTO recommendations and guidelines for linked ship/shore emergency shutdown.

h) Specific to the East Jetty:

(i) Berthing facilities for LNG Ships up to Q-Max vessels;

(ii) 16 inch (un)loading arms, pipes and other appropriate facilities permitting

(x) the unloading of LNG at a nominal rate of about 12000 $m^3$ LNG/hour (the "Nominal Unloading Rate") with a maximum rate of 14000 $m^3$ LNG/hour;

(xi) the loading of LNG at the Loading Rate for Shippers or at the Fast Loading Rate or at the Ship-to-Ship Transfer Rate for Transshippers;

(iii) A 16 inch vapour return line and associated system from shore facilities to the LNG Ship which vapour return line and associated system shall be fit and ready to maintain an appropriate operating

pressure in the tanks of the LNG Ship at the Nominal Unloading Rate or in the shore tanks at the Loading Rate or Fast Loading Rate;

(iv) Shore crane: to handle stores under port regulations; and

(v) Bunkering and other facilities including:

(x) bunkering with a barge alongside the LNG Ship according to the applicable rules at the LNG Terminal; and

(xi) access and facilities permitting gasoil delivery by road trucks or waste oil redelivery from the LNG Ship onto road trucks;

For the avoidance of doubt, Shipper or Transshipper shall procure the above commodities to be delivered to the LNG Ship.

i) Specific to the West Jetty:

(i) Berthing facilities for LNG Ships up to Q-Flex vessels;

(ii) 20 inch (un)loading arms, pipes and other appropriate facilities permitting

(x) the unloading of LNG at a nominal rate of about 12000 $m^3$ LNG/hour (the "Nominal Unloading Rate") with a maximum rate of 14000 $m^3$ LNG/hour;

(xi) the loading of LNG at the Loading Rate for Shippers or at the Fast Loading Rate or at the Ship-to-Ship Transfer Rate for Transshippers;

(iii) A 20 inch vapour return line and associated system from shore facilities to the LNG Ship which vapour return line and associated system shall be fit and ready to maintain an appropriate operating pressure in the tanks of the LNG Ship at the Nominal Unloading Rate or in the shore tanks at the Loading Rate or the Fast Loading Rate;

(iv) An 8 inch loading arm with a 6 inch vapour return line piggy-back mounted on the 8 inch loading arm and associated facilities permitting the loading of LNG on small LNG Ships at the Loading Rate;

(v) Shore crane: to handle stores up to max 1 ton under port regulations;

(vi) Access and facilities permitting gasoil delivery by road trucks or waste oil redelivery from the LNG Ship onto road trucks; and

(vii) Bunkering with a barge alongside the LNG Ship according to the applicable Operational Rules for Bunkering.

For the avoidance of doubt, the Shipper or Transshipper shall procure the above commodities to be delivered to the LNG Ship.

The Terminal Operator shall use its reasonable endeavours to offer the highest possible rate available of the Loading Rate within normal and safe operating limits.

Terminal Operator shall operate the Terminal as a Reasonable and Prudent Operator and handle the boil-off-gas such that flaring will be prevented and shall not occur, except for in case of emergency as per AC 3.12.

#### 3.1.3.2 Shipper's or Transshipper's Obligations at the Port

3.1.3.2.1 Shipper or Transshipper shall be responsible, at no cost to Terminal Operator, for obtaining all customary port approvals, marine permits, and other technical and operational authorisations necessary for the use of the Port by its LNG Ship.

3.1.3.2.2 Shipper or Transshipper shall provide or cause to provide that any of its LNG Ships shall comply with all relevant port regulations at the Port. Any tugs, pilots, escort or other support vessels required for the berthing of its LNG Ship shall be employed at the sole risk and expense of Shipper or Transshipper.

### 3.1.4 Arrival and departure of LNG Ships

#### 3.1.4.1 Notification of ETA

3.1.4.1.1 Immediately or as soon as practical after the departure of its LNG Ship on its voyage to the LNG Terminal, Shipper or Transshipper shall notify or shall procure that the master of the LNG Ship shall notify Terminal Operator of the date and hour of such departure, and the LNG Ship's estimated date and time of arrival at the LNG Terminal (the "***ETA***"). This notice shall include the following information:

a) the LNG Ship's estimated date and time of arrival at the Pilot Boarding Station;

b) for an LNG Ship,

(i) which shall be unloaded:

(x) The Nominated Cargo of LNG;

(xi) A certificate confirming the loaded quality (cargo composition) and quantity both in energy terms and in m³ LNG;

(xii) In case the unloading is to be performed related to LNG Delivery Services, the request for LNG Delivery Services which must have been received by Terminal Operator from Shipper at least 5 Days and no more than 3 months prior to the expected arrival of Shipper's LNG Ship.

(ii) which shall be receiving LNG Redelivery Services or Transshipment Services (apart from an unloading operation):

(x) the request for LNG Redelivery Services or LNG Transshipment Services which must have been received by Terminal Operator from Shipper at least 5 Days and no more than 3 months prior to the expected arrival of Shipper's LNG Ship.

(xi) If the LNG Ship's cargo tanks are under natural gas atmosphere:

1. The Nominated Volume of LNG to be loaded;

2. A certificate confirming the latest loaded cargo composition;

3. A notification confirming the estimated quantity and quality of LNG on board of the LNG Ship, if any, both in energy terms and in $m^3$ of LNG at the time of such notification; and

4. The need for Cool Down Services.

(xii) If the LNG Ship's cargo tanks are under inert gas atmosphere:

1. The Nominated Volume of LNG to be loaded; and

2. A "natural gas free certificate" confirming the composition of the inert gases in each of the LNG Ship's cargo tanks;

c) any operational deficiencies in the LNG Ship that may affect its port and berth performance;

d) required bunkering quantities, if any, e.g. Bunker C (heavy fuel oil), potable water, liquid nitrogen, diesel fuel oil (gasoil);

e) estimate of required time for taking stores on board and putting waste on the jetty platform;

f) LNG Ship's waste disposal: quantity (weight, volume, packing) and proper identification in conformity with all applicable maritime and port regulations;

g) list of expected visitors, suppliers, contractors (updated list to be sent twenty-four (24) hours before arrival, e.g. through Shipper's shipping agent); and

h) ISPS code security level.

3.1.4.1.2 As soon as possible after receiving notice under AC 3.1.4.1.1, Terminal Operator shall give notice to Shipper's, Transshipper's, Other Shipper's or Other Transshipper's LNG Ship of the Jetty to be used for berthing. Terminal Operator shall use its reasonable endeavours to accommodate the LNG Ship at the anticipated Jetty indicated in the RBS, respectively RTBS.

3.1.4.1.3 After giving notice under AC 3.1.4.1.1, Shipper, Transshipper, Other Shipper or, Other Transshipper shall give notice, or shall procure that the master of the LNG Ship shall give notice to Terminal Operator of the ETA of the LNG Ship at the following intervals:

a) Promptly if there is a change of the ETA of more than six (6) hours for (b) and (c) below and promptly if there is a change of the ETA of more than two (2) hours for (d) ,(e) and (f) below;

b) Every day after the day of departure from the loading port, such notice to be given at approximately 12h00 noon (Belgian time);

c) Forty-eight (48) hours before the LNG Ship's arrival at the Port;

d) Twenty-four (24) hours before the LNG Ship's arrival at the Port;

e) Six (6) hours before the LNG Ship's arrival at the Port; and

f) One (1) hour before the LNG Ship's arrival at the Port.

3.1.4.1.4 Notices under AC 3.1.4.1.1, 3.1.4.1.2 and 3.1.4.1.3 may be given by facsimile, telex or other mutually agreed form of communication.

### 3.1.4.2 Notice of Readiness ("NOR")

When the LNG Ship arrives at the Pilot Boarding Station (PBS), and has received all necessary port clearances, and is fit for Transfer at the LNG Terminal, Shipper or Transshipper shall cause the master of the LNG Ship or its agent to give Notice Of Readiness to Terminal Operator that the LNG Ship is fit in every way for Transfer, berth or no berth. The NOR shall be:

(i) in written form (including e-mail)

(ii) stating the date and time when it was given; and

(iii) addressed to Terminal Operator's designated person, notified by Terminal Operator to Shipper or Transshipper in due time,

and may be tendered by Shipper or Transshipper and shall be accepted by Terminal Operator on any Day of the week and any hour of the Day.

### 3.1.4.3 Berthing Sequence

3.1.4.3.1 Once the NOR has been notified to Terminal Operator pursuant to AC 3.1.4.2, the berthing sequence shall be determined pursuant to AC 3.1.4.3.2, AC 3.1.4.3.3, and AC 3.1.5 and Terminal Operator shall inform Shipper, Transshipper, Other Shippers, and the Other Transshippers of the sequence for berthing of Shipper's, Transshipper's, Other Shippers' and Other Transshippers' LNG Ships and all other vessels using the Jetties of the LNG Terminal in order to ensure compliance with the overall schedule agreed under the RBS and the RTBS. Terminal Operator shall notify Shipper and Transshipper and the master of the LNG Ship of the berthing priority as soon as reasonably possible.

The LNG Ship shall, in accordance with the port regulations, attempt to berth approximately two (2) hours before the Tide advised by Terminal Operator and used by the LNG Ship to enter the Port.

3.1.4.3.2 The berthing sequence for Shipper's, Transshipper's, Other Shippers', Other Transshippers' LNG Ships shall be as follows:

For the application of this section, a NOR being given more than six (6) hours before its Scheduled Slot, its Scheduled Berthing Right , its Scheduled Additional Berthing Right, or its Scheduled Transshipment Berthing Right, shall be deemed to have been given six (6) hours before such Scheduled Slot, Scheduled Berthing Right, Scheduled Additional Berthing Right, or Scheduled Transshipment Berthing Right.

a) First priority to berth shall be given to Shipper's, Transshipper's, Other Shippers', or Other Transshippers' LNG Ship that has either:

(i) given a NOR within a timeframe starting six (6) hours before the relevant Shipper's and Other Shippers' Scheduled Slot or Scheduled Berthing Right and at the latest six (6) hours prior to the end of the relevant Shipper's and Other Shippers' Window;

(ii) given a NOR pursuant to AC 3.1.4.3.3. However if Shipper or Other Shipper is not willing to pay the amounts provided in AC 3.1.4.3.3 for demurrage then the relevant Shipper's and Other Shippers' LNG Ship shall be given second priority to the berth; or

(iii) given a NOR six (6) hours before the relevant Transshipper's Scheduled Transshipment Berthing Right.

Should more than one of Shipper's, Transshipper's, Other Shippers' and Other Transshipper's LNG Ships have the same priority under this section, the berthing sequence shall be determined by the order of the dates of the

respective Shipper's, Other Shippers', Scheduled Slots and Scheduled Berthing Rights in the RBS, respectively Transshipper's and Other Transshippers' Transshipment Berthing Rights in the RTBS.

b) Second priority, subject to AC 3.1.5.2, shall be given to a Shipper's, Other Shipper's, Transshipper's or Other Transshippers' LNG Ship (ship A) which has given a NOR later than six (6) hours prior to the end of the relevant Shipper's or Other Shippers' Window, respectively later than six (6) hours prior to the Low Tide of the Scheduled Transshipment Berthing Right. Such second priority berthing shall be delayed as necessary to avoid any delays to the subsequent berthing of any other Shipper's or Other Shippers', respectively Transshipper's or Other Transshipper's LNG Ship (ship B) where such ship B is anticipated to have first priority to berth should ship B arrive in line with its ETA, as advised at the decision point for such second priority berthing for ship A.

   Should more than one of Shipper's, Transshipper's, Other Shipper's and Other Transshippers' LNG Ship have the same priority under this second priority rule, the sequence will be determined by the time of the NOR.

c) Third priority shall be given to a Shipper's and Other Shippers' LNG Ship which shall be used for receiving LNG Redelivery Services or LNG Delivery Services related to a Scheduled Additional Berthing Right or a Scheduled Stand Alone Berthing Right.

   Should more than one LNG Ship have the same priority under this third priority rule, the sequence will be determined by the time of the NOR.

3.1.4.3.3 Push back

In the event a Shipper's or Other Shippers' (shipper C's) LNG Ship (ship C) gives a NOR later than six (6) hours before the last High Tide of Shipper C's Window but not later than six (6) hours before the High Tide following the end of ship C's Window, Terminal Operator, subject to AC 3.1.5.2, shall allow berthing of ship C at the next High Tide after such NOR has been given. Shipper or Other Shipper (shipper D) whose LNG Ship (ship D) is scheduled for the following Slot shall not refuse such a berthing sequence insofar that the berthing of ship D shall not be delayed by more than one High Tide from the High Tide of the Subscribed Slot. Shipper C commits to payment of demurrage to shipper D at the Demurrage Rate for the actual incurred delay of ship D to the extent such demurrage is caused by the implementation of this section. Terminal Operator will provide appropriate notices to Shipper and all Other Shippers.

3.1.4.3.4 Shipper's, Transshipper's, Other Shippers' and Other Transshippers' LNG Ship shall be deemed as being on time ("***On Time***") for respectively a Shipper's or Other Shippers' Scheduled Slot, Scheduled Additional Berthing Right, or Scheduled Stand Alone Berthing Right or a Transshipper's or Other Transshippers' Scheduled Transshipment Berthing Right or a Transshipper's or Other Transshippers' Scheduled Transshipment Berthing Right as the case may be, if Shipper's, Transshipper's, Other Shipper's or Other Transshipper's LNG Ship has arrived at the PBS and issued a NOR at least six (6) hours prior to respectively the last High Tide of the relevant Shipper's or Other Shippers' Window or Tide of the Scheduled Stand Alone Berthing Right or Low Tide of the relevant Transshipper's or Other Transshipper's Scheduled Transshipment Berthing Right.

3.1.4.3.5 Terminal Operator shall not unreasonably withhold the berthing of a Shipper's or Transshipper's LNG Ship on another Tide than the foreseen High Tide, respectively Low Tide for the Scheduled Slot, Scheduled Berthing Right, respectively Scheduled Transshipment Berthing Right, as long as there is no material impact on the provision of LNG Services to any Other Shipper or Other Transshipper and on the operational integrity of Terminal Operator.

### 3.1.4.4 LNG operations

3.1.4.4.1 When the LNG Ship is berthed alongside the Jetty, and ready for unloading of the Nominated Cargo of LNG, Shipper or Transshipper shall cause the master of the LNG Ship to give NORTU. When the LNG Ship is berthed alongside the Jetty and ready for receiving LNG Redelivery Services or for loading in the framework of a Transshipment Service, the Shipper or Transshipper shall cause the master of the LNG Ship to give NORTL.

3.1.4.4.2 Transfer shall not start until Terminal Operator has authorized the start, such authorisation not to be unreasonably withheld.

3.1.4.4.3 If a NORTU or NORTL has been given before the Scheduled Slot, Scheduled Berthing Right, Scheduled Transshipment Berthing Right, Scheduled Additional Berthing Right, or Scheduled Stand Alone Berthing Right as the case may be, Terminal Operator may, if reasonable, delay the start of the Transfer if necessary for operational reasons at the LNG Terminal until the Scheduled Slot, Scheduled Berthing Right, Scheduled Transshipment Berthing Right, Scheduled Additional Berthing Right, or Scheduled Stand Alone Berthing Right as the case may be. Terminal Operator shall use its reasonable endeavours to avoid or limit the duration of such delay.

3.1.4.4.4 Terminal Operator shall be entitled to have one or more representative(s) on board the LNG Ship to co-ordinate with the master of the LNG Ship the Transfer. Such representative shall follow all the safety requirements applicable on board of the LNG Ship as communicated to Terminal Operator during the LNG Ship nomination procedure and shall not in any way interfere with the operations of the LNG Ship. Shipper or Transshipper shall be entitled to have one (1) representative in Terminal Operator's control room to co-ordinate with Terminal Operator the Transfer. Such representative shall follow all the safety requirements applicable at the LNG Terminal as communicated by Terminal Operator to Shipper

or Transshipper prior to the Transfer and without in any way interfering with the operations of the LNG Terminal.

3.1.4.4.5 Transfer shall be carried out in accordance with all applicable safety, Port and other applicable regulations including the Terminal Operator's Ship/Shore Safety and Security Procedure.

### 3.1.4.5 Laytime

3.1.4.5.1 The Allowed Laytime at the Port shall be:

a) For the unloading of LNG Ships associated with a Berthing Right: twenty four (24) hours, except for the unloading of a fully loaded Q-Flex LNG Ship, where it shall be thirty (30) hours, and for the unloading of a fully loaded Q-Max LNG Ship, where it shall be thirty-four (34) hours;

b) For the LNG Ships performing an unloading or loading operation associated to a Transshipment Berthing Right and for a quantity of maximum 180.000 Cubic Metre of LNG:

   a. For the unloading operation: a period of twenty-six (26) hours;

   b. For the loading operation: a period of thirty-two (32) hours; and

c) For the transfer operation associated to a Ship-to-Ship Transshipment, and for a quantity of maximum 180.000 Cubic Metre of LNG: the Allowed Laytime (defined as from the moment where both LNG ships are all fast in berth) of one of the LNG Ships shall be twenty-six (26) hours, whereas for the other it shall be thirty-two (32) hours.

d) For the receiving of LNG Redelivery Services by an LNG Ship, the period of the Allowed Laytime shall be the lesser of:

   (i) ten (10) hours plus the required number of hours for Gassing Up Services, if applicable, plus the required number of hours for Cool Down Services, if applicable, plus the period of time obtained by dividing the Nominated Volume of LNG by the then applicable Loading Rate, if applicable; and

   (ii) the period of time to complete the Redelivery Services, reasonably determined by Terminal Operator and communicated to Shipper before the start of such operation taking into account any constraint resulting from the RBS.

e) For the receiving of LNG Delivery Services of a LNG Ship, the period of the Allowed Laytime shall be the lesser of:

   (i) Ten (10) hours plus the period of time obtained by dividing the Nominated Cargo of LNG by the applicable Nominal Unloading Rate; and

(ii) The period of time to complete the LNG Delivery Services, reasonably determined by Terminal Operator and communicated to Shipper before the start of such operation taking into account any constraint resulting from the RBS.

The Allowed Laytime shall be extended by any period of delay caused by:

(i) reasons attributable to the Port Authority, towage, pilotage or mooring services at the Port except, as applicable, if the cause of such delay is under Terminal Operator's or Shipper's reasonable control, as applicable;

(ii) any period during which Transfer is delayed or prevented by reason of Force Majeure;

(iii) Adverse Weather Conditions at the Port.

The Actual Laytime for Transfer shall start at the earlier of:

(i) the LNG Ship being all fast in berth except if the LNG Ship is delayed in Transfer pursuant to AC 3.1.4.4.3 in which case Actual Laytime shall start at the commencement of the Transfer (which for the avoidance of doubt shall not be later than the High Tide of the Scheduled Slot or the Scheduled Berthing Right, the Tide of the Scheduled Additional Berthing Right, or respectively the Low Tide of the Scheduled Transshipment Berthing Right); or

(ii) in addition for the unloading of LNG Ships, the next Tide if the LNG Ship arrived On Time according to AC 3.1.4.3.4, except if the LNG Ship arrived before its Window, then the Actual Laytime shall begin on the first Tide of the Window.

The Actual Laytime shall continue to run until the (un)loading arms and return lines are disconnected and the LNG Ship is cleared for departure and able to depart.

3.1.4.5.2 Terminal Operator is entitled to require Shipper or Transshipper to clear the LNG Dock before the Allowed Laytime has expired:

a) forthwith in case of an Emergency; or

b) if necessary for operational reasons at the LNG Terminal immediately upon completion of the Transfer and, if applicable, after completion of any the bunkering operations always assuming it is safe for the master of the LNG Ship to depart.

3.1.4.5.3 The master of the LNG Ship is entitled to leave the berth immediately in case of an Emergency at any point of the Transfer or bunkering operation and to this effect Terminal Operator shall, upon request of the master of the LNG Ship, take all necessary measures within its control, to permit safe depart from the berth.

3.1.4.5.4 Terminal Operator shall co-operate with the master of the LNG Ship to ensure continuous and efficient Transfer. Terminal Operator shall provide a safe berth, according to Chapter 3.7, for the prompt berthing of the LNG Ship at the LNG Terminal and shall operate the LNG Terminal so as to permit the Transfer as quickly as reasonably possible.

Shipper or Transshipper shall berth the LNG Ship or cause it to be berthed safely and as expeditiously as possible in co-operation with Terminal Operator. Shipper or Transshipper and Terminal Operator shall co-operate to commence Transfer or cause it to be commenced upon completion of berthing and complete Transfer or cause it to be completed safely and as expeditiously as reasonably possible.

Shipper or Transshipper shall cause the LNG Ship to depart safely and as expeditiously as reasonably possible from the berth after completion of Transfer in co-operation with Terminal Operator.

3.1.4.5.5 If any delay occurs or is foreseen to occur to the berthing sequence of an LNG Ship at the Port in proceeding to berth, berthing, Transfer or departing the berth, then Shipper or Transshipper and Terminal Operator shall discuss the matter in good faith and use their respective reasonable endeavours to minimize or avoid such delay, and shall co-operate with each other to find counter measures (consistent with their respective obligations hereunder) to minimize or avoid the occurrence of any similar delay in the future.

### 3.1.5 Queuing, delays to arrival and operational rescheduling

#### 3.1.5.1 Queuing

A queuing event occurs if one or more of Shipper's, Transshipper's, Other Shippers' or Other Transshippers' LNG Ships have given a NOR but access to the LNG Terminal is not possible for whatsoever reason and such situation would result in a number of Shipper's, Transshipper's, Other Shippers' or Other Transshippers' LNG Ships waiting when access to the LNG Terminal is again possible.

As from the commencement of the queuing event, which is to be established and notified to Shipper, Transshipper, Other Shippers and Other Transshippers by Terminal Operator, through to the clearance of the queue, which is to be established and notified to Shipper, Transshipper, Other Shippers and Other Transshippers by Terminal Operator, the berthing sequence shall be established as provided in AC 3.1.4.3 except that in case a Shipper's, Transshipper's, Other Shipper's or Other Transshipper's LNG Ship falls under priority 2 or priority 3 and its arrival after its Window or Scheduled Transshipment Berthing Right has not impacted the queuing event, then such Shipper's, Transshipper's, Other Shippers' or Other Transshipper's LNG Ship shall have priority 1.

Should Terminal Operator request to delay the arrival of Shipper's, Transshipper's, Other Shippers' or Other Transshippers' LNG Ship, such Shipper's, Transshipper's, Other Shippers' or Other Transshippers' LNG Ship shall be deemed to have tendered its NOR in line with its ETA, as advised at the time of such request. Such deemed time of tendering the NOR shall be used in setting the berthing sequence in the queue.

If Shipper's or Other Shippers' LNG Ship was On Time according to AC 3.1.4.3.4 and is delayed to berth by queuing, Shipper or Other Shipper shall have the same Shipper's or Other Shippers' Basic Storage and Basic Send Out rights as if such Shipper or Other Shipper had unloaded Shipper's or Other Shippers' LNG Ship within its Window following its NOR. Such Shipper's or Other Shippers' Basic Storage and Basic Send Out rights shall commence from the High Tide on which Shipper's or Other Shippers' LNG Ship is actually berthing. This process shall continue until each of Shipper's or Other Shippers' LNG Ship in the queue is cleared.

Should Shipper or Other Shipper receive Shipper's or Other Shippers' Lending Services due to queuing, Shipper's or Other Shippers' Basic Storage rights shall be decreased by Shipper's or Other Shippers' Loan Quantity and its associated Shipper's or Other Shippers' Basic Send Out rights shall be correspondingly adjusted.

Shipper and the Other Shipper shall use reasonable endeavours to adjust Shipper's or Other Shipper's Terminal Nominations to shorten the queuing period (taking into account reasonable assumptions amongst others on LNG Ship arrivals, storage levels, send out availability and weather elements).

### 3.1.5.2 Late arrivals

3.1.5.2.1 If Shipper's, Transshipper's, Other Shipper's or Other Transshipper's LNG Ship does not arrive, or is not likely to arrive, on time for its Window, respectively the Low Tide of its Scheduled Transshipment Berthing Right or Tide of its Scheduled Stand Alone Berthing Right, then Terminal Operator shall, if requested by Shipper, Transshipper, Other Shipper or Other Transshipper, use its reasonable endeavours to offer Shipper, Transshipper, Other Shipper or Other Transshipper a berthing possibility for the Transfer, subject to such reasonable conditions as Terminal Operator may propose for approval to Shipper, Transshipper, Other Shipper or Other Transshipper, taking into account both timing and increased cost to the applicable Shipper, Transshipper, Other Shipper or Other Transshipper. Such rescheduled berthing possibility, if accepted by Shipper, Transshipper, Other Shipper or Other Transshipper, shall for the purposes of this LNG Access Code be deemed to be Shipper's or Other Shippers' Scheduled Slot, Scheduled Berthing Right, Scheduled Additional Berthing Right, Scheduled Stand Alone Berthing Right, or Transshipper's or Other Transshipper's Scheduled Transshipment Berthing Right.

If Terminal Operator offers Shipper or Other Shipper the possibility to berth outside Shipper's or Other Shippers' Window pursuant to the above, and if such possibility requires modification of Shipper's or Other Shippers' Basic Send Out Capacity and Basic Storage then Terminal Operator shall advise Shipper or Other Shipper of any required:

a) modifications of Shipper's or Other Shippers' Basic Send Out Capacity and Basic Storage associated with such a berthing possibility; and

b) any additional services related to such modifications which are necessary to obtain such berthing possibility.

If Shipper or Other Shipper agrees to use such berthing possibility it shall obtain such additional services and make such modifications as were advised by Terminal Operator and Terminal Operator shall perform its obligations accordingly.

3.1.5.2.2 It shall be considered as reasonable for Terminal Operator to refuse to offer Shipper, Transshipper, Other Shipper or Other Transshipper such berthing possibility if doing so would delay Shipper, Transshipper, Other Shippers or Other Transshippers, as the case may be, from berthing at Shipper's or Other Shippers' Scheduled Slots, Scheduled Berthing Right or Transshipper's or Other Transshippers' Scheduled Transshipment Berthing Rights, would impact any other LNG Services in relation to a Slot or a Berthing Right owned by Shipper or any Other Shipper or a Transshipment Berthing Right owned by Transshipper or any Other Transshipper or would compromise the safety and/or operations of the LNG Terminal. It is hereby understood as reasonable for Terminal Operator to delay LNG Ships for berthing at a Scheduled Additional Berthing Right or Scheduled Stand Alone Berthing Right and to give priority to the LNG Ships which use the Berthing Right of a Scheduled Slot or the Transshipment Berthing Right. If so,

Terminal Operator shall propose an alternative berthing possibility for such delayed LNG Ship.

3.1.5.2.3 Shipper, Transshipper, Other Shipper or Other Transshipper shall use its reasonable endeavours to have the LNG Ship arrive on the said rescheduled Slot, Berthing Right, Transshipment Berthing Right or Additional Berthing Right, failing which Shipper, Transshipper, Other Shipper or Other Transshipper shall pay to Terminal Operator an amount as specified in the Regulated Tariff.

### 3.1.5.3 Disturbances to the transshipment sequence

3.1.5.3.1 During a queuing event, Ship-to-Ship Transshipments or overlapping Scheduled Transshipment Berthing Rights shall not be allowed to take place.

3.1.5.3.2 If for that reason, or due to a Transshipper's or Other Transshipper's not arriving, or not expected to arrive, on time for the Low Tide of its Scheduled Transshipment Berthing Right, the execution of the berthing sequence determined in AC 3.1.4.3 were to disturb the envisaged transshipment sequence by Transshipper or Other Transshipper as determined in the RTBS and its possible rescheduling, Transshipper and each Other Transshipper shall discuss in good faith between themselves to waive their priorities and have the berthing sequence adapted by Terminal Operator in order to restore the transshipment sequence.

3.1.5.3.3 For the case where the execution of berthing sequence determined in AC 3.1.4.3. were to disturb the envisaged Ship-to-Ship Transshipments or overlapping Scheduled Transshipment Berthing Rights, Terminal Operator reserves the right to modify Transshipper's and Other Transshippers' berthing sequence and/or cancel these Scheduled Transshipment Berthing Rights in order to keep Terminal Operator's obligations towards Shipper and Other Shippers.

3.1.5.3.4 For both of the above cases, and after discussions in good faith with Transshipper and Other Transshipper(s) (insofar involved), Terminal Operator shall define a new and appropriate berthing sequence for Transshipper and Other Transshipper(s) where it is explicitly agreed that Terminal Operator shall not be liable for any delays, costs, consequences of storages mismatch associated or caused by this berthing sequence modification.

3.1.5.3.5 For both of 3.1.5.3.2 and 3.1.5.3.3. as well as for AC. 3.1.2.4, Transshipper shall be entitled to add the number of Scheduled Transshipment Berthing Right(s) that it had to forego or was not able to reschedule during a given Contract Year to its outstanding entitlement of Transshipment Berthing Rights during that Contract Year. For the avoidance of doubt, Terminal Operator shall not be liable for such foregone Scheduled Transshipment Berthing Right(s), nor shall it be counted as a Service unavailability.

### 3.1.5.4 Operational rescheduling

3.1.5.4.1 If as a result of an event at the Port or the LNG Terminal, such event not being the fault of Shipper or Other Shippers, three (3) or more subsequent Shipper's or Other Shippers' LNG Ships leave the Port with a delay of more than forty-eight (48) hours each, compared to the initial estimated time of departure from the LNG Terminal and the Port based upon the ETA of such LNG Ships prior to such an event, then Terminal Operator, Shipper and the Other Shippers shall discuss in good faith the possibility to revise the RBS.

3.1.5.4.2 If as a result of an event at the Port or the LNG Terminal, such event not being the fault of Shipper or Other Shippers, a Shipper's or Other Shippers' LNG Ship leaves the Port with a delay of more than thirty-six (36) hours, compared to the initial estimated time of departure from the LNG Terminal and Port based upon its ETA prior to such an event, and such delay prevents such Shipper's or Other Shippers' LNG Ship from arriving On Time for Shipper's or Other Shippers' next Scheduled Slot incorporating practical speed up of such Shipper's or Other Shippers' LNG Ship for the next voyage, then, notwithstanding any other provisions of these Operating Rules, Shipper or Other Shippers shall be entitled to reschedule, in line with its documented round trip time, Shipper's or Other Shippers' Scheduled Slot for such Shipper's or Other Shippers' LNG Ship's next arrival even if such Slot, as rescheduled (slot A), overlaps with another existing Shipper's or Other Shippers' Scheduled Slot (slot B). Terminal Operator shall inform Shipper and Other Shippers of such a rescheduling. Upon arriving at the Port for such slot A, the rescheduled Shipper's or Other Shippers' LNG Ship will be accepted to berth by Terminal Operator on the basis of the principle of 'first come, first served' in competition with Shipper's or Other Shippers' LNG Ship for slot B, provided Shipper's or Other Shippers' LNG Ship for slot A arrives On Time.

If implementation of the above results in high LNG inventory at the LNG Terminal, Terminal Operator may delay berthing and/or unloading of the second served Shipper's or Other Shippers' LNG Ship until there is sufficient ullage in the storage tanks of the LNG Terminal.

3.1.5.4.3 Terminal Operator, acting as Reasonable and Prudent Operator, may in order to ensure the proper execution of the RBS, ask Shipper or any Other Shipper to accelerate or slow down the arrival of Shipper's or Other Shippers' LNG Ship subject to Shipper's or Other Shipper's, as applicable, approval which approval shall not be unreasonably withheld and subject to Shipper or Other Shipper being compensated for any incurred extra costs or expenses.

3.1.5.4.4 Terminal Operator, in applying either AC 3.1.5.3.1 or AC 3.1.5.3.2, shall at all times treat Shipper and the Other Shippers on a non-discriminatory and equal basis.

### 3.1.6 Gas In Storage, Fuel Gas and Send Out

#### 3.1.6.1 Gas In Storage of Shipper

The Gas In Storage, expressed in kWh, at the end of any hour on any Day, is calculated as:

The aggregate of:

a) the Gas In Storage as from the Service Start Date;

b) the total Quantity of LNG delivered by or to Shipper at the Delivery Point as from the Service Start Date, including corrections resulting from the energy balance pursuant to AC 3.1.6.3;

c) total quantities of Natural Gas delivered into the LNG Terminal at the Redelivery Point through Reverse Nominations (increased with FGm) or Backhaul Liquefaction ; and

d) total quantities of Other Shippers' and/or of Other Users' Gas In Storage transferred to Shipper.

Less the sum of:

(i) the quantities of Natural Gas delivered by Terminal Operator at the Redelivery Point, or any other point as may be agreed between Terminal Operator and Shipper, on all Days, as from the Service Start Date, for the Contract Term, up to and including such hour on such Day;

(ii) the Quantities of Natural Gas corresponding to *FGm* applied to the Quantities of Natural Gas referred to under (i) above;

(iii) the Quantities of Natural Gas exceeding the Storage Capacity for which Terminal Operator has implemented overrule rights provided for in AC 3.1.6.3;

(iv) the Quantities, if any, of Natural Gas lost after delivery to Terminal Operator which loss was due to the fault, duly documented and proven by Terminal Operator, of Shipper;

(v) total Quantities of Gas In Storage transferred to Other Shippers and/or Other Users;

(vi) the Quantities of LNG delivered by Terminal Operator at the Redelivery Point for Loading on board the LNG Ships; and

(vii) the Quantities of LNG delivered by Terminal Operator at the Redelivery Point for Truck Loading.

Provisional figures shall be used pending receipt of validated figures.

Shipper's Gas In Storage shall be converted into m³ LNG using the Shipper's delivered LNG energy content (GHV per m³ LNG) based on the "first in, first out" principle.

In the case where Shipper's Gas In Storage exceeds Shipper's Storage Capacity, Terminal Operator shall immediately advise Shipper and the Shipper shall either purchase Daily Storage Capacity for the Gas In Storage exceeding its Storage Capacity and/or increase the Send Out and/or purchase Daily Send Out Capacity and increase the Send Out for the duration of the period Shipper's Gas In Storage exceeds Shipper's Storage Capacity.

### 3.1.6.2 Gas In Storage of Transshipper

3.1.6.2.1 The Gas In Storage of Transshipper, expressed in kWh, at the end of any hour on any Day, is calculated as:

The aggregate of:

a) the Gas In Storage of Transshipper as from the Service Start Date;

b) the total Quantity of LNG delivered by Transshipper at the Delivery Point for Transshipment as from the Service Start Date, including corrections resulting from the energy balance pursuant to AC 3.1.6.3;

c) total quantities of Shippers', and/or Other Transshippers' and/or of Other Users' Gas In Storage transferred to Transshipper.

Less the sum of:

(i) the Quantities of TBOG delivered at the Redelivery Point by Terminal Operator, pursuant to AC 3.1.6.2.2;

(ii) the quantities of Natural Gas delivered above the Quantities of TBOG by Terminal Operator at the Redelivery Point, or any other point as may be agreed between Terminal Operator and Transshipper (if Transshipper is also Shipper), on all Days, as from the Service Start Date, for the Contract Term, up to and including such hour on such Day;

(iii) the Quantities of Natural Gas, if any, corresponding to *FGm* applied to the Quantities of Natural Gas referred to under (ii) above;

(iv) the Quantities of LNG delivered by Terminal Operator at the Redelivery Point for Transshipment on board the LNG Ships;

(v) the Quantities, if any, of Natural Gas lost after delivery to Terminal Operator which loss was due to the fault of Transshipper, duly documented and proven by Terminal Operator;

(vi) total Quantities of Gas In Storage transferred to Shippers, Other Transshippers and/or Other Users;

(vii) the Quantities of LNG delivered by Terminal Operator at the Redelivery Point for Truck Loading; and

(viii) the Quantities of LNG delivered by Terminal Operator at the Redelivery Point for Loading on board the LNG Ships.

Provisional figures shall be used pending receipt of validated figures.

Transshipper's Gas In Storage shall be converted into m³ LNG using the Transshipper's delivered LNG energy content (GHV per m³ LNG) based on the "first in, first out" principle.

3.1.6.2.2 Transshipment Boil-Off-Gas

For each Transshipper, the Transshipment Boil-Off-Gas (TBOG) shall be expressed in kWh and determined by Terminal Operator as follows:

(i) stand-by operations (i.e. only storage activity): for each hour a fixed amount of boil-off-gas generated per hour equal to 55 MWh/h that shall be divided and allocated pro rata Transshipper's and the Other Transshipper's Gas In Storage, increased by any amount of boil-off-gas generated per hour due to an LNG transfer by Transshipper from or to another Terminal User;

(ii) for each unloading operation: for each hour the measured amount of boil-off-gas originating from the Transshipment Storage multiplied by the DES Factor reduced by the measured amount of boil-off-gas returning towards the LNG Ship at the Delivery Point for Transshipment;

(iii) for each loading operation: for each hour the measured amount of boil-off-gas originating from the LNG Ship at the Redelivery Point for Transshipment reduced by the measured amount of boil-off-gas returning into the Transshipment Storage and after this reduction multiplied by the DES Factor; and

(iv) for each Ship-to-Ship Transshipment: for each hour the amount as set out under AC 3.1.6.2.2 (i) increased by the measured amount of boil-off-gas originating from the LNG Ship at the Redelivery Point for Transshipment multiplied by DES Factor reduced by the amount of boil-off-gas measured returning towards the LNG Ship at the Delivery Point for Transshipment.

Provided that, and without prejudice to the other specifications in the AC, the heat input in the unloading LNG Ship shall not exceed 0.15vol% per Day, respectively the heat input in the loading LNG Ship shall not exceed 0.20vol% per Day and the overall pump efficiency of the LNG Ship's pump(s) shall be minimum 67.5%, the amounts of TBOG shall be lower than or equal to 750MWh/h.

3.1.6.2.3 Transshipment Boil-Off-Gas handling

TBOG shall be delivered at the Redelivery Point by Terminal Operator to TBOGFO. Transshipper shall appoint TBOGFO which shall offtake any TBOG through corresponding hourly Terminal Nominations.

3.1.6.2.4 Transshipment Electricity

The Transshipment Electricity is the amount, expressed in kWh, of electricity consumed by Terminal Operator in order to provide the LNG Transshipment Services to Transshipper and shall be determined by Terminal Operator as follows and as the case may be:

(i) An amount of electricity corresponding to TBOG multiplied by the Transshipment Electricity Factor HP;

(ii) increased by the amount of electricity corresponding to the measured quantity of boil-off-gas expressed in kWh returning towards the LNG Ship at the Delivery Point for Transshipment multiplied by the Transshipment Electricity Factor LP; and

(iii) increased by the amount of electricity corresponding to the measured Quantity of LNG redelivered by Terminal Operator at the Redelivery Point for Transshipment on board the LNG Ship multiplied by the Transshipment Electricity Factor P.

3.1.6.2.5 Determination and use of standard values

In case a single boil-off-gas flow or quality measurement fails for whatsoever reason, such that TBOG cannot be determined for a given operation as set out under AC 3.1.6.2.2 (ii) to (iv), an average value shall be assumed for that measurement, the average being calculated using the five (5) immediately preceding Transshipper's operations of this type and under similar conditions.

In case multiple boil-off-gas flow and/or quality measurements fail for whatsoever reason, such that TBOG cannot be determined for a given operation as set out under AC 3.1.6.2.2 (ii) to (iv) , a standard hourly value of TBOG shall be used for that operation.

The standard hourly values of TBOG for each type of operation under AC 3.1.6.2.2 shall be determined on the basis of the measured amounts of boil-off-gas at the Redelivery Point during five (5) representative single unloading operations, five (5) single loading operations, five (5) Ship-to-Ship Transshipments and five (5) LNG tank transfer operations. Similarly, the electricity conversion factors (Transshipment Electricity Factor HP, the Transshipment Electricity Factor LP

and the Transshipment Electricity Factor P)) shall be determined on the basis of the above boil-off-gas measurements and the measured amounts of electricity consumed during such operations.

Terminal Operator shall obtain the standard value per type of operation as a function of on the one hand the transfer rate and on the other hand the increase in saturated vapour pressure during the operation, by interpolating the measured amounts on the basis of a matrix with the results of static boil-off-gas simulations.

These measurements shall take place as soon as possible after the Service Start Date of the LNG Transshipment Services. Transshipper or Terminal Operator may request to re-measure the boil-off-gas every five years or earlier, when reasonably required. When the standard hourly values of TBOG are determined, the measurements required for each type of operation as set out under AC 3.1.6.2.2 (ii) to (iv) shall be cross-checked.

In order for an operation to be qualified as a representative operation, and without prejudice to the other provisions of this AC, the following conditions need to be complied with:

1. The LNG Ship to be unloaded shall have an LNG cargo with a saturated vapour pressure of maximum 1130mbara;
2. The LNG Ship to be loaded shall be in cold condition with minimum 500 m³ of heel (heavy LNG), a maximum cargo tank pressure upon arrival which is lower than or equal to 1160 mbara and a maximum average temperature of minus 130 °C for Membrane type vessels or a maximum average temperature of minus 110 °C at the equator for MOSS type vessels;
3. The unloading operation from LNG Ship into Transshipment Storage and the Ship-to-Ship Transshipment shall occur at a unloading, respectively transfer rate of maximum 14,000m³ LNG/h, excluding ramp up and ramp down; and
4. The loading operation from Transshipment Storage into the LNG Ship shall occur at a loading rate of maximum 10,000 m³/h, excluding ramp up and ramp down.

### 3.1.6.3 Monthly energy balance

In the course of the Month M+1, Terminal Operator shall establish an energy and mass balance for the LNG Terminal for the Month M.

The energy difference (A) minus (B) for that Month M shall be calculated as follows:

The value of (A) shall be:

- the total Quantity of Natural Gas physically delivered at the Redelivery Point or at any other point as may be agreed over the Month M;

- the total Quantity of LNG physically delivered at the Redelivery Point for Loading, Redelivery Point for Truck Loading, the Redelivery Point for Transshipment or at any other point as may be agreed over the Month M;

- the Fuel Gas Consumption in Month M;

- any Quantities of Natural Gas lost, firmly established such as flare losses in Month M; and

- the change in the physical stock in the LNG Terminal over the Month M;

and the value of (B) shall be:

- the total Quantity of LNG physically delivered at the Delivery Point and the Delivery Point for Transshipment over the Month M.

Any gains ((A) – (B) > 0) shall be credited and any losses ((B) – (A) > 0) shall be debited to Shipper, Transshipper, Other Shippers and Other Transshippers, after having unloaded its first LNG Ship in Month M+2 or in any later Month, pro rata such Shipper's, Transshipper's, Other Shipper's and Other Shippers' LNG delivered at the Delivery Point, Delivery Point for Transshipment, Redelivery Point, Redelivery Point for Transshipment, Redelivery Point for Loading, and Redelivery Point for Truck Loading over that Month M.

However if such loss ((B) – (A)) exceeds zero decimal five zero percent (0.50%) of the LNG delivered at the Delivery Point, Delivery Point for Transshipment, Redelivery Point, Redelivery Point for Transshipment, Redelivery Point for Loading, and Redelivery Point for Truck Loading over the Month M, the amount debited to Shipper, Transshipper, Other Shippers and the Other Transshippers shall in total be limited to zero decimal five zero percent (0.50%) of Shipper's, Transshipper's, Other Shippers' and Other Transshippers' LNG delivered at the Delivery Point, Delivery Point for Transshipment, Redelivery Point, Redelivery Point for Transshipment, Redelivery Point for Loading, and Redelivery Point for Truck Loading over the Month M. The remaining part of such loss over zero decimal five zero percent (0.50%) shall be at the expense of Terminal Operator.

However if such loss ((B) – (A)) exceeds zero decimal five zero percent (0.50%) of the LNG delivered at the Delivery Point, Delivery Point for Transshipment, Redelivery Point, Redelivery Point for Transshipment, Redelivery Point for Loading, and Redelivery Point for Truck Loading over the Month M, and based on, amongst others, historical data, it appears that such loss is attributable to the performance of the loading services performed at the Redelivery Point for Transshipment, Redelivery Point for Loading, and Redelivery Point for Truck Loading and/or to Cool Down Services by Terminal Operator to Shipper or Transshipper, Shipper's or Transshipper's Gas In Storage account shall be debited for any such loss above such zero decimal five zero per cent (0.50%).

If the gain or loss in any Month exceeds zero decimal three percent (0.3%) of the LNG delivered at the Delivery Point, Delivery Point for Transshipment,

Redelivery Point, Redelivery Point for Transshipment, Redelivery Point for Loading and Redelivery Point for Truck Loading over the Month M, Terminal Operator, Shipper, Transshipper, Other Shippers and Other Transshippers shall as appropriate check any and all equipment used for measuring the energy balance and take the appropriate corrective actions.

#### 3.1.6.4 Send Out of Gas In Storage

Shipper's Terminal Nominations are intended to match Shipper's Client Nominations. If Shipper's Terminal Nominations and Shipper's Client Nominations do not match, the matching shall be ensured by the rules of the Operating Balancing Agreement ("OBA") which shall be executed between Terminal Operator and the Transporter and which shall provide that in the event of a mismatch of nominations, the relevant operator shall notify the relevant shippers and provide the shippers an opportunity to amend their nominations. If amended matching nominations are not provided, Terminal Operator shall cause the relevant operators to amend the nominations to reflect the lower of the two conflicting nominations. Such OBA shall stipulate that Shipper's, Other Shippers' and Other Users' Send Out allocations shall be deemed to be equal to Shipper's, Other Shippers' and Other Users' Terminal Nominations unless the accumulated imbalance between the actual send out flows and the aggregate of Shipper's, Other Shippers' and Other Users' Terminal Nominations exceeds the threshold of 5.56 GWh, such threshold to be provided except to the extent that such threshold cannot be provided due to a very recent emergency in the Grid still impacting the availability of line pack in the Grid.

3.1.6.4.1 For any hour when Shipper's Gas In Storage is or will be greater than zero (0), Shipper shall submit Terminal Nominations, for the Send Out of its Gas In Storage in accordance with this AC 3.1.6.6 and AC 3.6, which for the avoidance of doubt may be zero (0).

Shipper shall be entitled to make Backhaul Liquefaction or Reverse Nominations (injection) at the Redelivery Point provided that such Shipper complies with all obligations of its Agreement and subject to total net nominations exceeding the Minimum Send Out requirements. For the purpose of calculations in this Agreement, a Backhaul Liquefaction or a Reverse Nomination shall be treated as a negative Send Out quantity and Shipper's Gas In Storage shall be increased by:

- The Quantity of such Backhaul Liquefaction or;
- the Quantity of such Reverse Nomination times (1+ FGm/100).

3.1.6.4.2 For any hour, Shipper's Terminal Nominations for Send Out of its Gas In Storage shall:

a) Not be greater than its Send Out Capacity, without prejudice to the provisions set out in AC 3.6; and

b) Not result or be projected to result in a situation whereby the Gas In Storage exceeds the Storage Capacity.

3.1.6.4.3 Pooling of the unused portion of the Total Basic Send Out Capacity

Pursuant to the following procedure Terminal Operator shall pool the unutilized portion of the Total Basic Send Out Capacity for utilisation by Shipper and/or the Other Shippers without prejudice to Shipper's, Other Shippers' and Other Users' Additional Storage and/or Additional Send Out Capacity.

During any hour Shipper or any Other Shipper may, without prejudice to Total Basic Send Out Capacity, book an additional entitlement for Shipper's and Other Shippers' Basic Send Out Capacity. Such additional Shipper's and/or Other Shippers' Basic Send Out Capacity may be either:

a) on a firm basis, if the amount of Total Basic Send Out Capacity is greater than the sum of Shipper's and Other Shippers' Basic Send Out Capacity that Shipper and the Other Shippers are entitled to make Terminal Nominations against. Each of Shipper and Other Shippers can book such firm entitlements to the extent that the total of such Shipper's or Other Shippers' individual Basic Send Out Capacity and such Shipper's or Other Shippers' individual firm entitlements, excluding Additional Send Out Capacity, do not exceed one hundred and five (105) percent of such Shipper's or Other Shippers' individual average net Terminal Nominations for the current Month or for the next Month as the case may be. These firm entitlements may be revoked by Terminal Operator solely in case of queuing; and /or

b) on an interruptible basis, if the total of a Shipper's and all Other Shipper's Terminal Nominations are less than the Total Basic Send Out Capacity. These interruptible entitlements may be revoked at any time by Terminal Operator.

Shipper's or Other Shippers' individual average net Terminal Nominations shall be determined for each of Shipper and the Other Shippers on the basis of such Shipper's or Other Shippers' Basic Send Out Capacity.

Each Day Terminal Operator shall notify before 10h00 on an indicative basis Shipper and the Other Shippers the part of the Total Basic Send Out Capacity which is available for additional entitlements as determined pursuant to (a) and (b) hereinabove and which part is firm and which part is interruptible for the next thirty (30) Days.

On any Day, Shipper or the Other Shipper may book such additional Send Out entitlements on a firm basis or an interruptible basis for the next 30 Days. If more than one of Shipper and/or Other Shippers notifies Terminal Operator of a request to book such additional entitlements for the same time period, then:

a) First priority shall go to Shipper or Another Shipper having a Basic Send Out Capacity, which for the avoidance of doubt can be zero, at such hour being lower then such Shipper's or Other Shippers' individual average net Terminal Nominations for the current Month. The amount of additional Send Out entitlements booked by Shipper or Other Shipper shall be limited to the extent that the total of such Shipper's or Other Shippers' individual Basic Send Out

Capacity and such Shipper's or Other Shippers' individual entitlements, excluding Additional Send Out Capacity, do not exceed one hundred and five (105) % of such Shipper's or Other Shippers' individual average net Terminal Nominations for the current Month or for the next Month as the case may be.

b) If more than one Shipper or Other Shippers have first priority, their additional Send Out entitlements will, if necessary, be allocated pro rata to each of their shortfalls to average Basic Send Out Capacity compared to the total shortfall of the applicable Shipper or Other Shippers.

c) In the case any additional entitlement to Send Out remains available after application of the rule set out in (i) above, Shipper and Another Shipper shall be entitled to nominate for such remaining additional Send Out entitlements.

d) If total requests for such remaining additional Send Out entitlements exceed the remaining additional Send Out entitlement, such additional Send Out entitlements shall be allocated pro rata to Shipper's and Other Shipper's requests.

To the extent Shipper and Another Shipper do not use its/their respective Send Out rights or its/their additional Send Out entitlements under AC 3.1.6.4.4, Terminal Operator shall have the right to resell such Send Out rights and additional Send Out entitlements on an interruptible basis to any other third party.

3.1.6.4.4 Terminal Operator shall procure that Shipper and Other Shippers are provided with data at a frequency as stipulated hereunder, of Shipper's or Other Shipper's actual Send Out and Gas In Storage as well as the Total Send Out and total Gas In Storage of Shipper, the Other Shippers and the Other Users on an aggregate non attributable basis.

This data will be provided on an hourly basis, not later than thirty (30) minutes after the hour for such hour, and shall include Shipper's Send Out and injection allocation as well as gas quality parameters and pressure at Redelivery Point.

3.1.6.4.5 Terminal Operator shall notify Shipper as soon as Terminal Operator expects that any Terminal Nomination of Shipper cannot be met.

### 3.1.6.5 Overrule rights for Send Out

3.1.6.5.1 Unless caused by Terminal Operator or the Grid or Force Majeure at the LNG Terminal or in Segment 1, if, for any hour, Shipper's Terminal Nominations would result in a situation whereby Shipper's Gas In Storage exceeds Shipper's Storage Capacity, then Terminal Operator shall, subject to AC 3.1.6.5.2, have no obligation to unload or store LNG to the extent that such Shipper's Gas In Storage exceeds the Shipper's Storage Capacity.

To the extent Shipper's Gas In Storage exceeds Shipper's Storage Capacity, Shipper shall pay the Daily Storage Capacity Price times the Daily Storage Capacity used to cover for the excess.

To the extent Shipper's Gas In Storage exceeds Shipper's Storage Capacity, Terminal Operator shall have the right to take action pursuant to AC 3.1.6.5.2 if such excess has a material impact on Terminal Operator's obligations to Shipper or Other Shippers.

3.1.6.5.2 Prior to exercising its rights under AC 3.1.6.5.1, Terminal Operator shall provide reasonable advanced notice to Shipper to allow Shipper a reasonable time to rectify such overrule rights for Send Out situation. Should Shipper not take action to rectify such overrule rights for Send Out situation, Terminal Operator may reduce Shipper's Gas In Storage by a quantity equal to the quantity of Natural Gas exceeding the Shipper's Storage Capacity through selling such Natural Gas on the open market (the "***Overrule Quantity***"). Terminal Operator shall be relieved of any delivery obligations of such Overrule Quantity. Terminal Operator shall reimburse to Shipper all revenue generated and paid through the sale of such Overrule Quantity, after deducting Terminal Operator's reasonable costs associated with such sale. Terminal Operator shall use reasonable endeavours to obtain security from the buyer of such Natural Gas. If the purchaser of such Natural Gas fails to pay Terminal Operator, Terminal Operator shall consult with Shipper and take all reasonable actions to collect such outstanding amounts. Terminal Operator shall supply all necessary documentation supporting the sale of the Overrule Quantity and the revenue received from such sale. Except as otherwise provided herein, Terminal Operator shall take all commercial risks and responsibilities associated to such sale. It is understood that any taxes, duties, levies, or other similar obligations associated with the sales of such Natural Gas shall remain the full responsibility of Shipper.

Upon any action by Terminal Operator under AC 3.1.6.5.1, Terminal Operator shall immediately notify Shipper thereof.

### 3.1.6.6 Daily Storage Capacity

Shipper shall have the right, subject to availability as determined by Terminal Operator, to purchase Daily Storage Capacity at the Daily Storage Capacity Price times the actual Daily Storage Capacity used. Each Day before 10h00 Terminal Operator shall inform on an indicative basis Shipper as to the availability of Daily Storage Capacity for a period running until the end of Month M+1 (i.e. up to sixty (60) days).

Daily Storage Capacity shall be granted on a "*first committed/first served*" basis.

**3.1.6.7** Should Shipper or Another Shipper need to reduce the unloading rate of Shipper's or Other Shippers' LNG Ship during the Allowed Laytime (including extensions pursuant to AC 3.1.4.5.1) in order to avoid Shipper's or Other Shippers' Gas In Storage to exceeding Shipper's or Other Shippers' Storage Capacity, Terminal Operator shall, subject to availability, offer during the Allowed Laytime, Daily Storage Capacity, free of charge, to allow Shipper or Other Shippers to unload their LNG Ship at higher unloading rates.

**3.1.6.8 Daily Send Out Capacity**

Terminal Operator shall make available Daily Send Out Capacity at the Daily Send Out Capacity Price. Each Day before 10h00 Terminal Operator shall inform Shipper as to the availability of Daily Send Out Capacity for a period running until the end of Month M+1 (i.e. up to sixty (60) days).

Daily Send Out Capacity shall be allocated on a "*first committed/first served*" basis

### 3.1.7 Lending Service

#### 3.1.7.1 General

Terminal Operator and Shipper and Other Shippers recognise that the Shipper and Other Shippers may agree amongst themselves to lend gas to each other outside the terms of this section 3.1.7.

In the cases set forth in AC 3.1.7.2, Terminal Operator may provide a Lending Service to Shipper or any Other Shipper, and likewise Shipper or any Other Shipper may request Terminal Operator to make available a Lending Service and such Lending Service shall not be unreasonably withheld. Terminal Operator shall have no obligation to make the Lending Service available to Shipper or any Other Shipper and will not discriminate in the offering of the Lending Service.

Under the Lending Service, Terminal Operator may lend Shipper or any Other Shipper a quantity of LNG from the LNG Terminal, for Send Out, subject to the subsequent redelivery of such Loaned Quantities by Shipper or Other Shipper from its Nominated Cargo of LNG, in accordance with AC 3.1.7.2 through 3.1.7.6.

Subject to the provisions of this paragraph, Shipper agrees and Terminal Operator shall procure Other Shippers to agree, to loan their Gas In Storage to allow Terminal Operator to implement the Lending Service within the limits of AC 3.1.7.2 through 3.1.7.6. Shipper's or Other Shipper's consent to loan their Gas In Storage is subject to Shipper or Other Shipper wishing to receive a loaned quantity providing beforehand adequate security to cover potential damages or losses pursuant to the application of AC 3.1.7.4 in favour of Shipper providing the loaned quantity.

Terminal Operator shall not implement the Lending Service and Shipper and Another Shipper shall have a right to refuse to loan its LNG if, by utilising reasonable and prudent assumptions when determining the Loaned Quantities, providing such Lending Service would lead to a stock out to Shipper or any Other Shipper taking into account maximum Send Out rights of Shipper and any Other Shipper.

#### 3.1.7.2 Lending events

The Lending Service may be made available, at Terminal Operator's discretion, in the following circumstances:

a) if the master of the LNG Ship has given notice that the ETA of the LNG Ship will be after its Scheduled Slot but within the first priority of AC 3.1.4.3.2; or

b) if a queuing event occurs as described in AC 3.1.5.1; or

c) if Terminal Operator reasonably expects that a queuing event will occur.

If a Shipper or Another Shipper makes a request for the Lending Service under AC 3.1.7.2 (a), the maximum loaned quantity shall be equal to the number of hours

since the start of such Shipper's or Other Shipper's Scheduled Slot (with a maximum of thirty-six (36) hours) multiplied by the Basic Send Out Capacity of such Shipper or Other Shipper. The loaned quantity shall be borrowed pro rata the Gas In Storage of Shipper and/or Other Shippers. The Lend Term will end at the earlier of: (i) twenty-four (24) hours after the end of the relevant Window of the applicable Scheduled Slot; or (ii) twelve (12) hours after the applicable Shipper's or Other Shipper's LNG Ship has commenced unloading of LNG.

Unless a Shipper or Another Shipper have notified Terminal Operator of a separate lending agreement between them, Shipper or Another Shipper may be required by Terminal Operator to accept the Lending Service under AC 3.1.7.2(b) to minimise the effects of queuing as provided in AC 3.1.5.1. In this situation the maximum loaned quantity shall be equal to the number of hours the Lending Service is provided with a maximum of seventy-two (72) hours multiplied by such Shipper's or Other Shipper's average Send Out for the Month as scheduled by the RBS for that Month. Terminal Operator shall endeavour to minimise the Loaned Quantities to each Shipper or Other Shipper for each individual queuing event under AC 3.1.7.2 (b). The loaned quantity will be borrowed pro rata the Gas In Storage of Shipper or Other Shippers. The Lend Term will end the earlier of: (i) twelve (12) hours after the applicable Shipper's or Other Shipper's LNG Ship has commenced unloading of LNG; or (ii) by the maximum duration established for the queuing event not to exceed seventy-two (72) hours from the start of the queuing event as established by Terminal Operator pursuant to AC 3.1.5.1.

If the Lending Service is not necessary as provided in the preceding paragraph but there still is a queuing event as provided in AC 3.1.5.1, Shipper and/or Another Shipper that is queuing can make a request for Lending Service under AC 3.1.7.2 (b). In this situation, the maximum loaned quantity shall be equal to the number of hours the Lending Service is provided with a maximum of forty-eight (48) hours multiplied by such Shipper's or Other Shipper's average Send Out for the Month as scheduled by the RBS for that Month. The loaned quantity will be borrowed pro rata the Gas In Storage of Shipper or Other Shippers. The Lend Term will end the earlier of: (i) twelve (12) hours after the applicable Shipper's or Other Shipper's LNG Ship has commenced unloading of LNG; or (ii) by the maximum duration established for the queuing event not to exceed forty-eight (48) hours.

In the case set forth in AC 3.1.7.2 (c) Terminal Operator may provide a Lending Service to Shipper or Another Shipper, and likewise Shipper or Another Shipper may request Terminal Operator to make available a Lending Service and such Lending Service shall not be unreasonably withheld. The maximum loaned quantity shall be equal to the numbers of hours the Lending Service is provided with a maximum of forty-eight (48) hours multiplied by such Shipper's or Other Shipper's average Send Out for the Month as scheduled by the RBS for that Month. The loaned quantity will be borrowed pro rata the Gas In Storage of Shipper or Other Shippers. The Lend Term will end the earlier of: (i) twelve (12) hours after the applicable Shipper's or Other Shipper's LNG Ship has commenced unloading of LNG; or (ii) by the maximum duration established for the forecasted queuing event, not to exceed forty-eight (48) hours.

#### 3.1.7.3 Lending conditions

Shipper shall use reasonable endeavours to ensure that the Loaned Quantities are delivered at the end of the Lend Term and it is determined to be reasonable to reverse nominate to Terminal as mechanism to repay the Loaned Quantities.

#### 3.1.7.4 Failure to deliver Loaned Quantities within the Lend Term

If, by the end of the Lend Term, the borrowing Shipper or Other Shipper has not delivered the entire Loaned Quantities, via physical LNG Ship redelivery, Reverse Nominations or otherwise, then, such Shipper or Other Shipper shall pay the lending Shipper or Other Shipper the actual losses or damages (including price differentials) but excluding Consequential Losses suffered by Shipper or Other Shipper from whom the loaned quantity was borrowed. The Lending Service shall not be made available in the future to any Shipper or Other Shipper who has failed to deliver the entire Loaned Quantities or pay the actual losses or damages incurred by Shipper or Other Shippers who provided the Loaned Quantities.

#### 3.1.7.5 Other shippers

3.1.7.5.1 Shipper acknowledges that Terminal Operator's agreements (including other Capacity Subscription Agreements) with Other Shippers and/or Other Users shall also contain provisions for a Lending Service per AC 3.1.7.2 (a), (b) or (c). Shipper agrees that Terminal Operator may provide Lending Services to Other Shippers to the extent allowed pursuant to AC 3.1.7.2 (a), (b) or (c) and waives in full any right to object to Terminal Operator making such Lending Services available to Other Shippers.

3.1.7.5.2 If Shipper suffers a loss due to Another Shipper failing to deliver the Loaned Quantities by the end of the Lend Term, then the Shipper who received the loaned quantity shall reimburse to the Shipper who supplied the loaned quantity the amounts determined pursuant to AC 3.1.7.4 or through exercise of any security provided by the Shipper who received the loaned quantity pursuant to AC 3.1.7.1.1.

3.1.7.5.3 Without prejudice to any other rights or remedies between Shipper and any Other Shipper in respect of such loss or damage, Terminal Operator shall not be liable for any loss or damage suffered by Shipper or Another Shipper to the extent such loss or damage is a result of Terminal Operator making Lending Services available to Shipper or Another Shipper.

**3.1.7.6** The borrowing shipper shall not be relieved of its obligations to settle the loaned quantity under this section 3.1.7 by reason of Force Majeure.

### 3.1.8 Threat to heel

Terminal Operator may exercise its rights under Chapter 3.7 if the amount of LNG held in storage at the LNG Terminal will or is likely to fall below the heel for the LNG Terminal. Terminal Operator shall advise and duly justify the heel level, consistent with good industry practice.

If Terminal Operator identifies a risk that the amount of LNG held in storage at the LNG Terminal will or is likely to fall below the heel for the LNG Terminal, Terminal Operator shall provide Non-Nominated Services free of charge[2] to Shipper or Other Shipper that commits to bring a LNG cargo at the LNG Terminal and to keep a sufficient amount of LNG in the tanks to ensure the required Minimum Send Out until the following LNG cargo arrives at the LNG Terminal. Moreover, if the Gas in Storage of such Shipper or Other Shipper exceeds his Storage Capacity before the arrival of the following LNG cargo, no Daily Storage Capacity Price will be invoiced to this Shipper or Other Shipper to cover the corresponding excess until the arrival of the following LNG cargo.

Besides the provisions of Chapter 3.7, Terminal Operator will apply the emergency procedure for activation of compressors for reduction of Minimum Send Out as per AC 3.12.5 to monitor the level of Gas in Storage and preserve the integrity of the LNG Terminal.

[2] For the sake of clarity, FGm will well be applied according to (ii)3.1.6.1

### 3.1.9 Minimum Send Out rate

**3.1.9.1** If the total Terminal Nominations of Shipper and the Other Shippers are less than zero decimal nine two (0.92) GWh/hour, then, at Terminal Operator's request, Shipper and Other Shippers shall increase their Terminal Nominations to an aggregate total of zero decimal nine two (0.92) GWh/hour pro rata Shipper's and the Other Shipper's Gas In Storage. However, Terminal Operator shall curtail reverse injection nominations before requesting such an increase in Send Out.

**3.1.9.2** To the extent that Terminal Operator is allowed to Send Out in batches, Terminal Operator shall not apply AC 3.1.9.1 if it can be avoided.

**3.1.9.3** If during the Transfer of an Shipper's or Other Shippers' LNG Ship, the total Terminal Nominations of Shipper and the Other Shippers are less than four decimal six (4.6) GWh/hour, Terminal Operator may oblige Shipper or Other Shipper whose LNG Ship is being unloaded or is receiving LNG Redelivery Services to increase, in addition to such Shipper's or Other Shipper's obligations under AC 3.1.9.1, its Terminal Nominations by up to three decimal six eight (3.68) GWh/hour but such request will be limited so that total Terminal Nominations are equal to four decimal six (4.6) GWh/hour. However Terminal Operator shall curtail reverse injection nominations before requesting such an increase in Send Out.

**3.1.9.4** If during two simultaneous operations (Transfer at the Jetties), the total Terminal Nominations of the Shipper and the Other Shippers are less than eight decimal two eight (8.28) GWh/hour, Terminal Operator may oblige each of the Shipper or Other Shippers whose LNG Ships are being unloaded or are receiving LNG Redelivery Services to increase, in addition to such Shipper's or Other Shipper's obligations under AC 3.1.9.1, their Terminal Nominations by up to three decimal six eight (3.68) GWh/hour but such request will be limited so that total Terminal Nominations are equal to eight decimal two eight (8.28) GWh/hour. However Terminal Operator shall curtail reverse injection nominations before requesting such an increase in Send Out.

**3.1.9.5** If up to thirty-six (36) hours after the completion of the Transfer of an Shipper's or Other Shippers' LNG Ship the total Terminal Nominations of Shipper and the Other Shippers are less than one decimal six (1.6) GWh/hour, Terminal Operator may oblige Shipper or Other Shipper, whose LNG Ship was the last to be unloaded or to have received LNG Redelivery Services, to increase, in addition to such Shipper's or Other Shipper's obligations under AC 3.1.9.1, its Terminal Nominations by up to zero decimal six eight (0.68) GWh/hour but such request will be limited so that total Terminal Nominations are equal to one decimal six (1.6) GWh/hour. However Terminal Operator shall curtail reverse injection nominations before requesting such an increase in Send Out.

**3.1.9.6** If during a LNG Redelivery Services operation, there is no vapour flowing back to the LNG Terminal, AC 3.1.9.3 to 3.1.9.5 shall not apply for Shipper in relation to the LNG Ship, which is receiving LNG Redelivery Services.

**3.1.9.7** If during a LNG Redelivery Services operation, there is vapour flowing back to the LNG Terminal, Terminal Operator shall use reasonable endeavours, at no additional cost to Shipper, to reduce as much as possible the boil-off gas related to small scale LNG Redelivery Services sent out into the grid in order to avoid requesting an increase in Send Out to Shipper according to AC 3.1.9.3 to 3.1.9.5, to the extent Shipper equally endeavours to accept an as high as reasonably feasible saturated vapour pressure in the LNG Ship taking into account the supply chain to and requirements of the final destination of the loaded LNG and subject to a maximum loading rate of 1 500 m³ LNG/h when loading a LNG cargo of maximum 30.000 m³ LNG.

**3.1.9.8** Similarly, Terminal Operator shall use reasonable endeavours, at no additional cost to Shipper, to reduce as much as possible the boil-off gas related to small scale LNG Delivery Services sent out into the grid in order to avoid requesting an increase in Send Out to Shipper according to AC 3.1.9.3 to 3.1.9.5, subject to a maximum unloading rate of 1 500 m³ LNG/h and provided the saturated vapour pressure of the LNG ship is on or below 1 160 mbar(a) as required in AC 3.3.1.3 when unloading a LNG cargo of maximum 30.000 m³ LNG.

## 3.1.10 Release of Capacity

### 3.1.10.1 Notice of non-use of Subscribed Slot

Terminal User shall as soon as practicable but no later than the first day of the Month M notify Terminal Operator of the Subscribed Slots of Month M+2 that it does not intend to utilise. Subject to AC 3.1.10.2.2 Terminal User may at any time withdraw or revoke a notice given under this paragraph.

Terminal User shall offer on the Secondary Market any Capacity Service subscribed that Terminal User temporarily or permanently does not need.

### 3.1.10.2 Procedure for resale of Subscribed Slot

3.1.10.2.1 If Terminal Operator receives a notice from Shipper or Another Shipper that such Shipper or Other Shipper does not intend to use Shipper's or Other Shippers' Subscribed Slot, Terminal Operator shall post a notice on its Secondary Market Platform that such Slot, has become available for sale. Terminal Operator shall have no obligation to post a notice on its website if it receives a notice from Shipper or Another Shipper under AC 3.1.10.1 less than five (5) Business Days before the date of such Shipper's or Other Shippers' Subscribed Slot.

3.1.10.2.2 Terminal Operator shall sell Shipper's or Other Shippers' Subscribed Slot on behalf of Shipper or Other Shipper to the first person to submit a legally binding commitment to subscribe for such Slot at the price required by Shipper or Other Shipper. Should such Shipper's or Other Shippers' Subscribed Slot not be sold prior to the first Day of the Month M for Shipper's or Other Shippers' Subscribed Slot in Month M+2, then the price posted on the Secondary Market Platform shall be the Regulated Tariff. Once sold, Terminal Operator shall promptly notify Shipper or Other Shipper and withdraw the posting of the availability of such

Shipper's or Other Shippers' Subscribed Slot from its Secondary Market Platform. If a price is offered which is below the posted tariff, Terminal Operator shall inform Shipper or Other Shippers of such offer, which shall only be accepted on consent of such Shipper or Other Shipper.

3.1.10.2.3 Without prejudice to AC 3.1.10.2.1 through 3.1.10.2.2 Shipper may sell or assign any of its Subscribed Slots directly to a third party, without using Terminal Operator's assistance. Shipper shall notify Terminal Operator immediately of such sale or assignment in order to allow Terminal Operator to withdraw the sale offer from its Secondary Market Platform.

#### 3.1.10.3 Payment for resale of Subscribed Slot

3.1.10.3.1 Terminal Operator shall charge a fee of three (3) per cent of the proceeds of sale of the Subscribed Slot pursuant to AC 3.1.10.2.2 insofar Shipper has received payment.

Subject to AC 3.1.10.3.3, Terminal Operator shall credit Shipper with the receipts from the sale of the Subscribed Slot upon payment, less an amount equal to the fee payable to Terminal Operator and may offset such amounts against other obligations due by Shipper or Another Shipper.

3.1.10.3.2 Shipper shall remain liable for the full Monthly Capacity Charge for the Month in which the Scheduled Slot falls whether or not such Subscribed Slot is resold, less any credits or offsets taken by Terminal Operator pursuant to AC 3.1.10.3.1.

3.1.10.3.3 Terminal Operator will credit Shipper or Another Shipper for the sale of a Subscribed Slot pursuant to AC 3.1.10.2.2, and may offset such amounts against other obligations due by Shipper or Another Shipper.

3.1.10.3.4 If a Subscribed Slot is sold via a contract entered into by Terminal Operator and Another Shipper, the releasing Shipper shall be released from any further obligations associated with such Subscribed Slot, except for the obligation set forth in AC 3.1.10.3.2, and in particular shall not be responsible for any liabilities associated with such released Subscribed Slot, including if Another Shipper's LNG Ship Another Shipper causes damage to LNG Terminal or supplies Off-Specification LNG or for any other reason.

### 3.1.11 Review of this Chapter 3.1

Without prejudice to AC 1.5, Terminal Operator, Shipper, Transshipper and the Other Shippers and Other Transshippers shall meet regularly and at least every two (2) Years or at the motivated request of Terminal Operator, Shipper, Transshipper, Other Shipper, or any Other Transshipper, to discuss in good faith the need, if any, to propose adjustments to the Operating Rules and to documents explicitly referenced to in this Chapter 3.1.

## 3.2 LNG SHIP APPROVAL PROCEDURE

This Ship Approval Procedure outlines the procedure required for the approval of LNG Ships to unload or load at the LNG Terminal.

The main objective of the Ship Approval Procedure is to determine whether the LNG Ship may berth at the LNG Terminal.

### 3.2.1 Request for ship approval and preparatory information exchange

When a (potential) Shipper or Transshipper intends to use an LNG Ship, not yet approved in accordance with this AC 3.2, and therefore not listed on the list of approved ships for the Zeebrugge LNG Terminal, Shipper or Transshipper has to complete the 'request for ship approval' form as published on the website. The request for ship approval will only be accepted if and when duly completed.

Upon receiving a duly completed request for ship approval, Terminal Operator shall inform Shipper or Transshipper when the Ship Approval Procedure can be started, after which the necessary information exchange, as set out in this AC 3.2, between Terminal Operator and Shipper, respectively Transshipper can proceed.

#### 3.2.1.1 Information made available by Terminal Operator to Shipper or Transshipper

Terminal Operator shall send an e-mail to Shipper or Transshipper with:

a. The ship-shore interface checklist mentioning all required LNG Ship data; and

b. The necessary LNG Terminal data to perform a mooring calculation note.

#### 3.2.1.2 Information to be submitted by Shipper or Transshipper to the Terminal Operator

Shipper or Transshipper shall submit to Terminal Operator all data mentioned on the ship-shore interface checklist as soon as possible, and at the latest fourteen (14) Days prior to the Ship-Shore Safety and Security Meeting (cf. AC 3.2.2.2).

### 3.2.2 Ship-shore Interface Study and Ship-Shore Safety and Security Interface Meeting

#### 3.2.2.1 Document analysis

As soon as all required and relevant information (as per AC 3.2.1.1 and AC 3.2.1.2 above) has been received by Terminal Operator, a study (the "*Ship/Shore Interface Study*") shall be carried out by Terminal Operator.

#### 3.2.2.2 Ship/Shore Safety and Security Interface Meeting

Following the completion of the study phase, a meeting (the *"Ship/Shore Safety and Security Interface Meeting")* shall be held at the LNG Terminal, where the following representatives shall be present:

- Shipper or Transshipper;
- Shipper's or Transshipper's agent (optional);
- LNG Ship owner/manager;
- harbour master;
- pilot services;
- tugboat services;
- linesmen; and,
- Terminal Operator.

The minimum agenda is as follows:

1. Overview of the "general measures of nautical management";
2. Discussion about the mooring arrangement and "*Optimoor® calculation note*", including a check of the certificates of the ropes and tails;
3. Discussion and determination of the towing arrangement for the tugboats (towing procedure);
4. Overview of the Ship/Shore Safety and Security Procedure; and,
5. Overview of the ship-shore safety interface plan of the LNG Ship: discussion about the technical interfaces such as the instrumentation link, the gangway, and the manifold.

In the case the outcome of this Ship/Shore Safety and Security Interface Meeting is positive, i.e. there are no hold-points or missing data, the LNG Ship shall be approved for an (un)loading test. To this effect, the harbour master and Terminal Operator shall approve the mooring arrangement of the LNG Ship, which shall be considered an official approval by Terminal Operator and the Port that the LNG Ship may berth and perform an unloading (or loading) test at the LNG Terminal within a period of three (3) Years.

### 3.2.3 Ship safety inspection

Terminal Operator, at its own discretion, may require an LNG Ship inspection (vetting) prior to the first berthing of the LNG Ship at the LNG Terminal. This inspection is performed by an inspector endorsed by Terminal Operator, and performed according to the "*safety inspection guidelines*" accepted by the Terminal Operator.

A list of remarks and/or deficiencies, arising from such inspection, if any, shall be handed over to the master of the LNG Ship at an exit meeting held onboard the LNG Ship. This list shall also be sent to Shipper, who shall forward them to the LNG Ship owner and/or the charterer and other necessary parties. Upon receipt of the implementation schedule of the corrective actions, Terminal Operator shall decide whether the LNG Ship shall be accepted for berthing at the LNG Terminal.

Shipper or Transshipper shall promptly (cause to) notify Terminal Operator if any of the LNG Ships used by Shipper or Transshipper, has been rejected or has failed a ship safety inspection at any other LNG terminal, and shall provide Terminal Operator with all relevant technical details and information in this respect.

### 3.2.4 (Un)loading test and ship approval

Depending on the outcome of the previous steps, an LNG Ship shall either be rejected or approved for an (un)loading test within a period of three (3) Years after signing the mooring arrangement. If an LNG Ship, approved in accordance with this AC 3.2, has not called the LNG Terminal in this period, the Ship Approval Procedure shall be re-applied when the LNG Ship is scheduled to berth at the LNG Terminal.

In the latter case, an unloading (or loading) test at the LNG Terminal will be permitted and conducted to verify the ship-shore compatibility. Before starting the cargo operations, a pre-operations meeting shall be held on-board. During this meeting:

a) a review and validation of the Ship/Shore Safety and Security Procedure shall be completed;

b) the latest version of the Ship/Shore Safety and Security Procedure shall be signed by the LNG Ship's master and Terminal Operator;

c) a printed version of the ship-shore leaflet will be handed over to the LNG Ship's master; and,

d) the LNG Ship's master and Terminal Operator shall check and sign the "*ISGOTT Ship/Shore Safety Checklist and Guidelines*".

Upon duly completion of these actions the cargo operations can take place.

During the (un)loading test, Terminal Operator may request to review reports in "*data room*" format, such as the latest inspection and/or vetting reports, the OCIMF/SIRE report and logbooks related to LNG cargo and LNG cargo system.

Depending on the findings of the (un)loading test, Terminal Operator shall determine whether:

a) the LNG Ship will not be accepted at the LNG Terminal in the future;

b) the LNG Ship will be accepted in the future for another (un)loading test pending on the implementation of corrective action to the LNG Ship provided by Terminal Operator; or,

c) the LNG Ship is approved to berth and (un)load at the LNG Terminal for a period of thirty-six (36) Months**,** without being subjected to further tests.

### 3.2.5 Ship approval follow-up

If an LNG Ship has undergone a satisfactory (un)loading test at the LNG Terminal, the LNG Ship's name will be added to the list of approved ships for the Zeebrugge LNG Terminal.

The approval period of thirty-six (36) Months shall automatically be extended by a period of thirty-six (36) Months, as soon as the LNG Ship berths at the LNG Terminal within the approval period, meaning the approval period expires thirty-six (36) Months after the last call.

During the approval period, Terminal Operator shall be kept informed of any modifications to the LNG Ship related to technical, safety and/or managerial issues. Based on these modifications Terminal Operator shall assess whether the LNG Ship requires a new approval.

Terminal Operator may conduct additional safety and technical inspections, in order to check the continued compliance of the LNG Ship with safety and/or operational requirements of the LNG Terminal. These inspections may occur during the berthing time at the LNG Terminal or at any other time and place.

## 3.3 SPECIFICATION FOR LNG AT THE DELIVERY POINT, THE REDELIVERY POINT FOR LOADING, THE DELIVERY POINT FOR TRANSSHIPMENT, THE REDELIVERY POINT FOR TRANSSHIPMENT AND NATURAL GAS AT THE REDELIVERY POINT

### 3.3.1 Part A – LNG Specification for the Delivery Point and for the Redelivery Point for Loading

| | Unit | Min | Max | Test Method |
|---|---|---|---|---|
| Methane | Mol % | 80.0 | 100 | see AC 3.4 |
| Nitrogen | Mol % | 0.0 | 1.2 | see AC 3.4 |
| Gross Heating Value | kWh/m3(n) | 10.83 | 12.43 | see AC 3.4 |
| Wobbe Number | kWh/m3(n) | 14.17 | 15.56 | see AC 3.4 |
| LNG density at atmospheric equilibrium pressure, i.e. 1,013.25 mbar absolute | kg/m3 LNG | 425 | 480 | see AC 3.4 |

**Reference standards**

ISO standards, e.g. ISO 6976: 1995 for calorific values (combustion reference temperature: +25°C)

Calculated LNG density : revised Klosek-McKinley method (Technical Note Nr. 1030, 1980).

#### 3.3.1.1 Specific limitations for trace components and impurities in LNG

| | Unit | Min | Max | Test Method |
|---|---|---|---|---|
| iC4 | Mol % | - | 1.0 | see AC 3.4 |
| nC4 | Mol % | - | 1.0 | see AC 3.4 |
| iC5 | Mol % | - | 0.20 | see AC 3.4 |
| nC5 | Mol % | - | 0.20 | see AC 3.4 |
| C6+: | Mol % | - | 0.10 | see AC 3.4 |
| H2S + COS (as Sulfur) | mg/m³(n | - | 5 | ISO 8943 (EN12838), ISO 19739 |
| Total Sulfur (as Sulfur) | mg/m³(n) | - | 22.4 | ISO 8943 (EN12838), ISO 19739 |
| Mercaptans (as Sulfur) | mg/m³(n) | - | 6 | ISO 8943 (EN12838), ISO 19739 |
| Oxygen | ppm (vol) | - | 10 | Electrochemical cell (Panametrics O2X1 for ex.) |
| $CO_2$ | ppm (vol) | - | 100 | ISO 8943 (EN12838), ISO 6974 |
| CO | ppm (vol) | - | 1 | ISO 8943 (EN12838), ISO 6974 |
| Hydrogen | ppm (vol) | - | 1 | ISO 8943 (EN12838), ISO 6974 |
| $H_2O$ | ppm (vol) | - | 0.1 | ISO 8943 (EN12838), ISO 15972-1 (Capacitance method for ex: Panametrics Al2O3 cell) |
| Mercury | Nano g/m³(n | - | 50 | ISO 8943 (EN12838), ISO 6978 |
| Hydrocarbon dewpoint (cricondentherm) | C (1-70 bara) | - | Minus 20 | Automatic chilled mirror (for ex.: Condumax) |
| Solids (no deposits on 32 mesh strainers) | | | | 32 mesh strainers installed in Ship's LNG manifold |

#### 3.3.1.2 Impurities

To avoid internal clogging or erosion of equipment, as a general rule the delivered LNG shall not contain any fluid component (e.g. aromatics, C6H6, $CO_2$, $CH_3OH$, etc.) in a concentration higher than 50 % of the solubility limit in LNG of that particular fluid component in the operating pressure and operating temperature range of respectively 0 to 100 bar absolute and -162 to + 50 °C. C6H6 : max. 1 ppm, $CH_3OH$: max. 0.5 ppm.

As a general rule, the delivered LNG shall not contain any liquid or solid contaminants. The Natural Gas may not contain other elements and impurities (including but not limited to methanol, condensates, gas odorants) to the extent that such Natural Gas cannot be transported, stored and marketed without incurring additional cost for quality adjustment.

#### 3.3.1.4 Vapour pressure at the Delivery Point

Shipper shall use all reasonable endeavours to limit the saturated vapour pressure of each LNG cargo, delivered at the Delivery Point, to 1,160 mbar(a) (determined by a mutually agreed test method). It is understood that an LNG cargo shall not be considered as an Off-Specification LNG cargo solely due to the cargo saturated vapour pressure not being on or below 1,160 mbar(a).

However in such case, Terminal Operator shall discuss and agree with Shipper to increase the Send Out rate or to reduce the unloading rate at a level where flaring will not occur. If such measures are not reasonably possible or agreed, Terminal Operator may refuse to accept an LNG cargo if Terminal Operator reasonably expects that unloading such LNG cargo will jeopardize Terminal Operator's environmental permits.

If the saturated vapour pressure of an LNG cargo is higher than 1,160 mbar(a) and as result thereof flaring occurs, such flared Quantity of LNG shall be deducted from Shipper's Gas In Storage.

### 3.3.2 Part B – General Natural Gas Specification for the Redelivery Point

| | Unit | Min | Max | Test Method |
|---|---|---|---|---|
| Gross Heating Value | kWh/m3(n) | 10.83 | 12.79 | see AC 3.4 |
| Wobbe Number | kWh/m3(n) | 14.17 | 15.56 | see AC 3.4 |
| Pressure (1) | barg | 55 | 80 | ISO 15970-Part 1 |
| Temperature | °C | 2 | 38 | ISO 15970-Part 1 |
| Hydrocarbon Dewpoint | °C from 0 barg to 69 barg | | Minus 2 | Automatic chilled mirror (for ex.: Condumax) |
| Water Dewpoint | °C at 69 barg | | Minus 8 | ISO 15972-1 Measurement of properties- single components and condensation properties – part 1 |
| $O_2$ | ppm (vol) | - | 5,000 | Electrochemical cell (Panametrics O2X1 for ex.) |
| $CO_2$ | Vol % | - | 2.0 | ISO 8943 (EN12838), ISO 6974 |
| H2S+COS (as Sulfur) | $mg/m^3(n)$ | - | 5 | ISO 8943 (EN12838), ISO 19739 |
| Total Sulfur (as Sulfur) | $mg/m^3(n)$ | - | 30 | ISO 8943 (EN12838), ISO 19739 |

(1) The Natural Gas shall be made available at any pressure within that range as requested by the Transporter.

The Natural Gas may not contain other elements and impurities (including but not limited to methanol, condensates, gas odorants) to the extent that the Natural Gas cannot be transported, stored and marketed in Belgium without incurring additional cost for quality adjustment.

### 3.3.3 Part C – Shipper specific Natural Gas Specification for the Redelivery Point

Shipper is at any moment entitled to request Terminal Operator to deliver Natural Gas at the Redelivery Point which shall meet more stringent Specifications than shown under **Part B**, as long as such more stringent Specifications do not conflict with the Specification under **Part A**. This request shall be granted by Terminal Operator to the extent that this more stringent Specification is consistent with the Transport Services Agreement to deliver the Natural Gas at the redelivery point executed between Shipper's Client and Transporter. Shipper shall at all times have the right to amend this Specification set out in this Part C by giving notice to Terminal Operator as long as it does not conflict with the Specifications under **Part A**.

The following Specification I and Specification II shall apply to Natural Gas at the Redelivery Point that Shipper's Client has nominated for exit at the Zeebrugge Hub. The Specification sets out in Specification I below, except for the maximum GHV and maximum Wobbe Number, is appropriate for deliveries of Natural Gas from the Redelivery Point with exit to the Zeebrugge Hub and from the Zeebrugge Hub with exit into the Grid and into the adjacent grids of any of GRT Gaz, I(UK), Wingas Transport, OGE, GTS or Zebra. The Specification sets out in Specification II below, is appropriate for deliveries of Natural Gas from the Redelivery Point with exit to the Zeebrugge Hub and from the Zeebrugge Hub with exit into the Grid and into the adjacent grids of any of GRT Gaz, I(UK), Wingas Transport, OGE, GTS or Zebra.

Specification I shall be used as the Specification for the Redelivery Point if no action pursuant to AC 3.8 is taken.

Specification II shall be used as the Specification for exit of Natural Gas at the Zeebrugge Hub. Terminal Operator shall procure Transporter to take action pursuant to and in accordance with the provisions of AC 3.8 in order for the Natural Gas of Shipper's Client to meet Specification II, provided the LNG delivered at the Delivery Point met the Specification in **Part A**.

If during the Contract Term, Shipper or Shipper's Client wishes to amend the associated Transport Services Agreement with the Transporter to deliver the Natural Gas to an exit point other than the Zeebrugge Hub, the Parties shall meet and discuss the required amendments, if any, to this **Part C** and other required amendments, if any.

## Specification I

| | Unit | Min | Max | Test Method |
|---|---|---|---|---|
| Gross Heating Value | kWh(25°C)/m3(n) | 10.83 | 12.43 | see AC 3.4 |
| Wobbe Number | kWh(25°C)/m3(n) | 14.17 | 15.56 | see AC 3.4 |
| Pressure (1) | barg | 55 | 80 | ISO 15970-Part 1 |
| Temperature | °C | 2 | 38 | ISO 15970-Part 1 |
| Hydrocarbon Dewpoint | °C from 0 barg to 69 barg | - | Minus 3 | Automatic chilled mirror (for ex.: Condumax) |
| Water Dewpoint | °C at 69 barg | - | Minus 12 | ISO 15972-1 Measurement of properties- single components and condensation properties – part 1 |
| $O_2$ | ppm (vol) | - | 10 | Electrochemical cell (Panametrics O2X1 for ex.) |
| $CO_2$ | Mol % | - | 2.0 | ISO 8943 (EN12838), ISO 6974 |
| H2S+COS (as Sulfur) | mg/m3(n) | - | 5 | ISO 8943 (EN12838), ISO 19739 |
| Total Sulfur (as Sulfur) | mg/m3(n) | - | 22.4 | ISO 8943 (EN12838), ISO 19739 |
| Mercaptans (as Sulfur) | mg/m3(n) | - | 6 | ISO 8943 (EN12838), ISO 19739 |
| Hydrogen | Mol% | - | 0.1 | ISO 8943 (EN12838), ISO 6974 |

(1) The Natural Gas shall be made available at any pressure within that range as requested by the Transporter.

The Natural Gas may not contain other elements and impurities (including but not limited to methanol, condensates, gas odorants) to the extent that the Natural Gas cannot be transported, stored and marketed without incurring additional cost for quality adjustment.

## Specification II

| | Unit | Min | Max | Test Method |
|---|---|---|---|---|
| Gross Heating Value | kWh/m3(n) | 10.83 | 12.38 | see AC 3.4 |
| Wobbe Number | kWh/m3(n) | 14.17 | 15.05 | see AC 3.4 |
| Pressure (1) | barg | 55 | 80 | ISO 15970-Part 1 |
| Temperature | °C | 2 | 38 | ISO 15970-Part 1 |
| Hydrocarbon Dewpoint | °C from 0 barg to 69 barg | - | Minus 3 | Automatic chilled mirror (for ex.: Condumax) |
| Water Dewpoint | °C at 69 barg | - | Minus 12 | ISO 15972-1 Measurement of properties- single components and condensation properties – part 1 |
| $O_2$ | ppm (vol) | - | 10 | Electrochemical cell (Panametrics O2X1 for ex.) |
| $CO_2$ | Mol % | - | 2.0 | ISO 8943 (EN12838), ISO 6974 |
| H2S+COS (as Sulfur) | mg/m3(n) | - | 5 | ISO 8943 (EN12838), ISO 19739 |
| Total Sulfur (as Sulfur) | mg/m3(n) | - | 22.4 | ISO 8943 (EN12838), ISO 19739 |
| Mercaptans (as Sulfur) | mg/m3(n) | - | 6 | ISO 8943 (EN12838), ISO 19739 |
| Hydrogen | Mol% | - | 0.1 | ISO 8943 (EN12838), ISO 6974 |

(1) The Natural Gas shall be made available at any pressure within that range as requested by the Transporter.

The Natural Gas may not contain other elements and impurities (including but not limited to methanol, condensates, gas odorants) to the extent that the Natural Gas cannot be transported, stored and marketed without incurring additional cost for quality adjustment.

### 3.3.4 Part D – LNG Specification for the Delivery Point for Transshipment and the Redelivery Point for Transshipment

| | Unit | Min | Max | Test Method |
|---|---|---|---|---|
| Methane | Mol % | 80.0 | 100 | see AC 3.4 |
| Nitrogen | Mol % | 0.0 | 1.2 | see AC 3.4 |
| Gross Heating Value | kWh/m3(n) | 10.83 | 12.43 | see AC 3.4 |
| Wobbe Number | kWh/m3(n) | 14.17 | 15.56 | see AC 3.4 |
| LNG density at atmospheric equilibrium pressure, i.e. 1,013.25 mbar absolute | kg/m3 LNG | 425 | 480 | see AC 3.4 |

**Reference standards**

ISO standards, e.g. ISO 6976: 1995 for calorific values (combustion reference temperature: +25°C)

Calculated LNG density: Revised Klosek-McKinley method (Technical Note Nr. 1030, 1980).

#### 3.3.4.1 Specific limitations for trace components and impurities in LNG

| | Unit | Min | Max | Test Method |
|---|---|---|---|---|
| iC4 | Mol % | - | 1.0 | see AC 3.4 |
| nC4 | Mol % | - | 1.0 | see AC 3.4 |
| iC5 | Mol % | - | 0.20 | see AC 3.4 |
| nC5 | Mol % | - | 0.20 | see AC 3.4 |
| C6+: | Mol % | - | 0.10 | see AC 3.4 |
| H2S + COS (as Sulfur) | $mg/m^3(n$ | - | 5 | ISO 8943 (EN12838), ISO 19739 |
| Total Sulfur (as Sulfur) | $mg/m^3(n)$ | - | 30 | ISO 8943 (EN12838), ISO 19739 |
| Mercaptans (as Sulfur) | $mg/m^3(n)$ | - | 6 | ISO 8943 (EN12838), ISO 19739 |
| Oxygen | ppm (vol) | - | 10 | Electrochemical cell (Panametrics O2X1 for ex.) |
| $CO_2$ | ppm (vol) | - | 100 | ISO 8943 (EN12838), ISO 6974 |
| $H_2O$ | ppm (vol) | - | 1 | ISO 8943 (EN12838), ISO 15972-1 (Capacitance method for ex: Panametrics Al2O3 cell) |
| Mercury | Nano $g/m^3$ | - | 50 | ISO 8943 (EN12838), ISO 6978 |
| Hydrocarbon dewpoint (cricondentherm) | C (1-70 bara) | - | Minus 2 | Automatic chilled mirror (for ex.: Condumax) |
| Solids (no deposits on 32 mesh strainers) | | | | 32 mesh strainers installed in Ship's LNG manifold |

#### 3.3.4.2 Impurities

To avoid internal clogging or erosion of equipment, as a general rule the delivered LNG shall not contain any fluid component (e.g. aromatics, C6H6, $CO_2$, $CH_3OH$, etc.) in a concentration higher than 50 % of the solubility limit in LNG of that particular fluid component in the operating pressure and operating temperature range of respectively 0 to 100 bar absolute and -162 to + 50 °C.

#### 3.3.4.3 Contaminants

As a general rule, the delivered LNG shall not contain any liquid or solid contaminants. The Natural Gas may not contain other elements and impurities (including but not limited to methanol, condensates, gas odorants) to the extent that such Natural Gas cannot be transported, stored and marketed without incurring additional cost for quality adjustment.

#### 3.3.4.4 Vapour pressure at the Delivery Point for Transshipment

Transshipper shall use all reasonable endeavours to limit the saturated vapour pressure of each LNG cargo, delivered at the Delivery Point for Transshipment, to 1130 mbar(a) (determined by a mutually agreed test method). It is understood that an LNG cargo shall not be considered as an Off-Specification LNG cargo solely due to the cargo saturated vapour pressure not being on or below 1130 mbar(a).

However in such case, Terminal Operator shall discuss and agree with Transshipper that more TBOG shall be generated than the values in AC 3.1.6.2.2 and/or to reduce the unloading rate to such a level such that the pressure in the Transshipment Storage in which the LNG is being unloaded is acceptable for loading this LNG at the Fast Loading Rate. If such measures are not reasonably possible or agreed, Terminal Operator may refuse to accept an LNG cargo if Terminal Operator reasonably expects that unloading such LNG cargo will jeopardize Terminal Operator's environmental permits and the safety at the LNG Terminal.

If the saturated vapour pressure of an LNG cargo being unloaded is higher than 1160 mbar(a) and as result thereof flaring occurs, such flared Quantity of LNG shall be deducted from Transshipper's Gas In Storage.

#### 3.3.4.5 Vapour pressure at the Redelivery Point for Transshipper

Subject to AC 3.9, Terminal Operator shall redeliver the LNG cargo at the Redelivery Point for Transshipment at a saturated vapour pressure (determined by a mutually agreed test method) which is maximum 60 mbar higher than the saturated vapour pressure of this LNG when delivered at the Delivery Point for Transshipment.

Notwithstanding the above, Terminal Operator shall upon explicit and written request by Transshipper do its reasonable endeavours to load the outgoing vessel at a higher saturated vapour pressure, subject to both the approval of the master of the outgoing LNG Ship and Terminal Operator being able to continue its operations as Reasonable and Prudent Operator.

## 3.4 TESTING AND MEASURING METHODS

The following contains the detailed procedures for sampling and analysing LNG and for gauging the LNG volume unloaded from or loaded into the LNG Ship and calculating the density and Gross Heating Value of LNG delivered at the Delivery Point, the Delivery Point for Transshipment, the Redelivery Point for Loading or the Redelivery Point for Transshipment.

### 3.4.1 Section I - Definitions

Reference to GIIGNL LNG Custody Transfer Handbook, (GIIGNL LNG CTHB), GPA, ISO, or ASTM standards and procedures shall be to the latest officially published revisions thereof, amongst others:

a) ISO 8943 and EN 12838 for LNG sampling (continuous respectively discontinuous methods).

b) ISO 6578 for LNG density calculation procedure (inputs : LNG molar composition and LNG temperature)

c) ISO 6974 for gas chromatographic analysis to determine the gas molar composition

d) ISO 6976 for combustion (heating) properties calculated from molar composition

e) ISO 19739 Determination of sulfur compounds using gas chromatography

f) ISO 15972-1 Measurement of properties - single components and condensation properties – part 1: water content and water dew-point determination

### 3.4.2 Section II - Tank gauge tables

#### 3.4.2.1 Calibration of LNG tanks

Prior to the utilization of any LNG Ship, Shipper respectively Transshipper shall:

a) in the case of an LNG Ship the tanks of which have never been calibrated, arrange for each LNG tank of such LNG Ship to be calibrated for volume against level to existing ISO standards by an independent surveyor agreed by Shipper or Transshipper and Terminal Operator, or

b) in the case of an LNG Ship the tanks of which have previously been calibrated, furnish to Terminal Operator evidence of such currently valid calibration by an independent surveyor, and if otherwise required arrange for the re-calibration of all tank volume measuring devices by an independent surveyor

agreed by Shipper or Transshipper and Terminal Operator, subject to the related measurement and testing provisions of the LNG Agreement.

#### 3.4.2.2 Preparation of tank gauge tables

Shipper or Transshipper shall have an independent surveyor prepare tank gauge tables for each LNG tank of each vessel which Shipper or Transshipper intends to use as an LNG Ship from the results of the calibration referred to in AC 3.4.2.1 above. Such tank gauge tables shall include sounding tables, correction tables for list (heel) and trim, volume corrections to tank service temperature, and other corrections if necessary.

#### 3.4.2.3 Inaccuracy of tank gauge tables

The tank gauge tables prepared pursuant to AC 3.4.2.2 above shall indicate volumes in Cubic Meters expressed to the nearest thousandth, with tank depths expressed in Meters to the nearest hundredth for the whole range of tank depths, and in addition expressed in millimetres of tank depth in the range 0 to 8% and 92% to 100% of maximum effective LNG cargo tank volume. The inaccuracy of the tank gauge tables shall not exceed ± 0.2% in any case.

#### 3.4.2.4 Re-calibration of LNG tanks in case of distortion, reinforcement, modification or expiry of calibration certification

In the event that any LNG tank of any LNG Ship suffers distortion or undergoes reinforcement or modification of such a nature as to cause either Shipper or Transshipper or Terminal Operator reasonably to question the validity of the tank gauge tables referred to in AC 3.4.2.2 above, Shipper or Transshipper shall arrange for such LNG tank to be re-calibrated in the same manner as set forth in AC 3.4.2.1 and 3.4.2.2 hereof during any period when such LNG Ship is out of service for inspection and/or repairs. To that effect, Shipper or Transshipper shall keep Terminal Operator promptly informed and updated on any such event that may affect the accuracy of the LNG tank gauge tables for any of the LNG Ships.

In the event any LNG tank of any LNG Ship has an expiry date associated with its tank calibration, Shipper or Transshipper shall arrange for such LNG tanks to be re-calibrated in the same manner as set forth in AC 3.4.2.1 and 3.4.2.2.

Except as provided in this AC 3.4.2.4, no other re-calibration of any LNG tank of any LNG Ship shall be required.

### 3.4.3 Section III - Selection of gauging devices

#### 3.4.3.1 Liquid level gauging devices

3.4.3.1.1 Each LNG tank of each LNG Ship shall be equipped with a main and an auxiliary liquid level gauging device each of a different measuring principle, to existing ISO standards. Prior to the utilization of any LNG Ship, Shipper or Transshipper and Terminal Operator shall mutually agree on which liquid level gauging device shall be considered as the main and auxiliary device for each LNG tank on each LNG Ship. Unless otherwise agreed, each LNG tank of each LNG Ship will have a radar type system as the main liquid level device and a float type gauge as the auxiliary liquid level device.

3.4.3.1.2 The measurement inaccuracy of the main liquid level gauging devices shall be as small as possible, and no greater than +10 millimeters.

3.4.3.1.3 The level in each LNG tank shall be logged or printed.

#### 3.4.3.2 Temperature gauging devices

3.4.3.2.1 Unless otherwise approved by Terminal Operator, each LNG tank of each LNG Ship shall be equipped with a minimum of five (5) temperature gauging devices (1 for vapour and minimum 4 for liquid) located on or near the vertical axis of such LNG tank. Each temperature sensor shall be supported by a spare sensor, for emergency use.

3.4.3.2.2 Two sensors including a spare shall be installed each at or near the tank bottom and the tank top, in order to constantly measure the temperatures of liquid and vapour respectively. The remaining sensors and their spares shall be installed at equally spaced distances between the tank bottom and top. All the sensors shall be mounted such that they are not affected by the spray of LNG when the spray pumps are in operation.

3.4.3.2.3 The measurement inaccuracy of the temperature gauging devices shall not exceed the following limits:

| Temp. Range, °C | Limit, +/- °C |
|---|---|
| -165 to -140 | 0.2 |
| -140 to -120 | 0.3 |
| -120 to +80 | 1.5 |

3.4.3.2.4 The temperatures in each LNG tank shall be logged or printed.

#### 3.4.3.3 Pressure gauging devices

3.4.3.3.1 Each LNG tank of each LNG Ship shall have one absolute pressure gauging device (as input for custody transfer calculations), and one relative pressure gauging device for operational purposes.

3.4.3.3.2 The measurement inaccuracy of the pressure gauging device shall be within plus or minus one percent (+1.0%) of full-scale. The expected inaccuracy shall be + 0.01 bar.

3.4.3.3.3 The pressure in each LNG tank shall be logged or printed.

#### 3.4.3.4 Verification of gauging devices

Gauging devices shall be verified for accuracy, and any inaccuracy of a device exceeding the permissible tolerance shall require correction of recordings and computations.

### 3.4.4 Section IV - Measurement procedures

#### 3.4.4.1 General

All readings and computations shall be witnessed by appointed representatives of both Shipper or Transshipper and Terminal Operator. However the absence of the appointed representatives of either Shipper or Transshipper or Terminal Operator shall not prevent any operation or computation from being performed provided that reasonable notice to attend was provided.

#### 3.4.4.2 Liquid level

3.4.4.2.1 Measurement of the liquid level in each LNG tank of each LNG Ship shall be made to the nearest millimeter by using the main liquid level gauging device referred to in AC 3.4.3.1 hereof. Should the main device for a specific LNG cargo tank fail, the auxiliary device for that specific LNG cargo tank shall be used.

3.4.4.2.2 At least five (5) readings shall be made in rapid succession. The arithmetic average of the readings shall be deemed the liquid level.

3.4.4.2.3 Such arithmetic average shall be calculated to the nearest 0.1 millimeter and shall be rounded to the nearest millimeter.

#### 3.4.4.3 Temperature

3.4.4.3.1 At the same time that the liquid level is measured, temperature shall be measured to the nearest zero decimal one degree Celsius (0.1°C) by using the temperature gauging devices referred to in AC 3.4.3.2 hereof.

3.4.4.3.2 In order to determine the temperature of liquid and vapor in the LNG tanks of an LNG Ship, one (1) reading shall be taken at each temperature gauging device in

each LNG tank. An arithmetic average of such readings with respect to vapor and liquid in all LNG tanks shall be deemed final vapor temperature and final liquid temperature respectively.

3.4.4.3.3 Such arithmetic average shall be calculated to the nearest zero decimal zero one degree Celsius (0.01°C) and shall be rounded to the nearest zero decimal one degree Celsius (0.1°C).

### 3.4.4.4 Pressure

3.4.4.4.1 At the same time that the liquid level is measured, the absolute pressure in each LNG tank shall be measured to the nearest 0.001 bar by using the pressure gauging device referred to in AC 3.4.3.3 hereof.

3.4.4.4.2 The determination of the absolute pressure in the LNG tanks of each LNG Ship shall be made by taking one (1) reading of the pressure gauging device in each LNG tank, and then by taking an arithmetic average of all such readings.

3.4.4.4.3 Such arithmetic average shall be calculated and rounded to the nearest 0.001 bar.

### 3.4.4.5 Procedures in case of gauging device failure

Should the measurements referred to in AC 3.4.4.2, 3.4.4.3 and 3.4.4.4 hereof become impossible to perform due to a failure of gauging devices, alternative gauging procedures shall be determined by mutual agreement between Terminal Operator and Shipper or Transshipper.

#### 3.4.4.6 Determination of volume of LNG unloaded or loaded.

3.4.4.6.1 The list and trim of the LNG Ship shall be measured at the same time as the liquid level and temperature of LNG in each LNG tank of the LNG Ship are measured. Such measurements shall be made immediately before cargo operations commence and immediately after cargo operations are completed, after draining of liquid arms, closure of ship's manifold isolation valves and stabilized liquid level conditions are obtained. All of the LNG Ship's cargo liquid lines shall be in the same condition, i.e. all either drained or full of LNG, both at the opening (before cargo operations) and closing (after cargo operations) custody transfer measurement. The volume of LNG, stated in Cubic Meters to the nearest 0.001 Cubic Meter, shall be determined by using the tank gauge tables referred to in AC 3.4.2 hereof and by applying the volume corrections set forth therein.

3.4.4.6.2 The volume of LNG unloaded shall be determined by deducting the total volume of LNG in all the LNG tanks immediately after unloading is completed from the total volume in all the LNG tanks immediately before unloading commences. This volume of LNG unloaded is then rounded to the nearest Cubic Meter.

3.4.4.6.3 The volume of LNG loaded shall be determined by deducting the total volume of LNG in all the LNG tanks immediately before loading commences from the total volume in all the LNG tanks immediately after loading is completed. This volume of LNG loaded is then rounded to the nearest Cubic Meter.

### 3.4.5 Section V - Determination of composition of LNG

#### 3.4.5.1 Sampling procedures

3.4.5.1.1 Representative samples of LNG shall be obtained continuously according to the method described in the latest version of the ISO 8943, at an even rate during the period starting immediately after a steady flow rate has been reached, all involved lines are full of liquid and continuous unloading or loading has commenced and ending immediately prior to the suspension of continuous unloading or loading.

3.4.5.1.2 A composite gaseous sample shall be collected in a suitable gas holder using a continuous gasification/collection method agreed upon by Shipper or Transshipper and Terminal Operator.

3.4.5.1.3 Three (3) samples shall be transferred from the gas holder to sample bottles after completion of unloading or loading. Such sample bottles shall be sealed by the independent surveyor who witnessed such sampling and shall be delivered to Terminal Operator. Each Party shall provide the appropriate gas sample bottles for analysis or retention by that same Party.

3.4.5.1.4 The gaseous samples taken at the Port shall be distributed as follows:

| | |
|---|---|
| **First sample bottle** | for analysis by Terminal Operator |
| **Second sample bottle** | for analysis by Shipper or Transshipper |
| **Third sample bottle** | for retention by Terminal Operator for at least forty five (45 Days) |

In case any dispute as to the accuracy of any LNG sampling and/or analysis is raised within this subsequent period of forty-five (45) Days, the third gas sample bottle shall be analyzed by a laboratory agreed upon by Shipper or Transshipper and Terminal Operator and its conclusion shall prevail. The samples should be taken and verified by the independent surveyor, however the absence of such independent surveyor shall not prevent such samples from being taken and sealed provided that reasonable notice to attend was provided.

3.4.5.1.5 Online discontinuous sampling

In addition to the systems and process described in AC 3.4.5.1.1 to 3.4.5.1.4 included above, Terminal Operator shall also sample and analyse LNG unloaded or loaded by the discontinuous sampling method (for which EN 12838 (European standard) describes the test on LNG sampling systems). LNG samples flow from the two main LNG (un)loading lines at the LNG Terminal and shall be continuously vaporized, and discontinuous samples shall be subsequently analysed by gas chromatography at regular intervals but at least every fifteen (15) minutes during cargo operations.

These analysis results shall be primarily used for on-line monitoring of LNG cargo operations.

In the event that the on-line monitoring of LNG cargo unloading would indicate that the LNG cargo does not meet the Specifications set forth in AC 3.3, the applicable provisions of the LNG Agreement shall apply.

3.4.5.1.6 Failure in collecting samples and in determining the composition of LNG

a) Unloading for Shipper

Except in the event of manifest error or the application of this AC 3.4.5.1.6, the results from the continuous system, described in AC 3.4.5.1.1 to 3.4.5.1.4 inclusive above, shall always prevail over results of the discontinuous system with regard to unloading operations. If sampling and/or analysis as described in AC 3.4.5.1.1 to 3.4.5.1.4 inclusive fails for any reason, the Parties agree to use the analysis results obtained using the discontinuous sampling method. Such analysis results will be the average of all analyses performed during full rate unloading. Individual erroneous analysis results may be discounted from the calculated average provided that all such results are reported to and agreed by Shipper.

In the event both the continuous and discontinuous systems fail to determine the composition of LNG unloaded, the Parties shall use the analysis results of the cargo at the loading port, corrected as per the formulae below using results of the five (5) immediately preceding Shipper's cargoes from the same origin (or of the total cargoes delivered if less than five) under the LNG Agreement.

**(V m³ actually unloaded x MWh/m³ actually loaded) x [$\Sigma^5$ (MWh/m³ DES) / $\Sigma^5$ (MWh/m³ B/L)] = MWh unloaded**

**(V m³ actually unloaded x kg/m³ actually loaded) x [$\Sigma^5$ (kg/m³ DES) / $\Sigma^5$ (kg/m³ B/L)] /1,000 = ton LNG unloaded**

whereby :

- **B/L** shall mean MWh/m³ or kg/m³ for the preceding 5 cargoes at the loading port

- **DES** shall mean MWh/m³ or kg/m³ for the preceding 5 cargoes at the Port.

b) Unloading for Transshipper

Except in the event of manifest error or the application of this AC 3.4.5.1.6, the results from the discontinuous system, described in AC 3.4.5.1.5 above, shall always prevail over results of the continuous system as described in AC 3.4.5.1.1 to 3.4.5.1.4 inclusive with regard to unloading operations. Such analysis results will be the average of all analyses performed during full rate unloading. Individual erroneous analysis results may be discounted from the calculated average provided that all such results are reported to and agreed by Transshipper. If the discontinuous sampling method as described in AC 3.4.5.1.5 above fails for any reason, the Parties agree to use the analysis results obtained using the continuous system as described in AC 3.4.5.1.1 to 3.4.5.1.4 inclusive above.

In the event both the continuous and discontinuous systems fail to determine the composition of LNG unloaded: the Parties shall use the analysis results of the cargo at the loading port, corrected as per the formulae below using results of the five (5) immediately preceding Transshipper's cargoes from the same origin (or of the total cargoes delivered if less than five) under the LNG Agreement.

**(V m³ actually unloaded x MWh/m³ actually loaded) x [$\Sigma^5$ (MWh/m³ DES) / $\Sigma^5$ (MWh/m³ B/L)] = MWh unloaded**

**(V m³ actually unloaded x kg/m³ actually loaded) x [$\Sigma^5$ (kg/m³ DES) / $\Sigma^5$ (kg/m³ B/L)] /1,000 = ton LNG unloaded**

whereby :

- **B/L** shall mean MWh/m³ or kg/m³ for the preceding 5 cargoes at the loading port

- **DES** shall mean MWh/m³ or kg/m³ for the preceding 5 cargoes at the Port.

c) Loading from storage tank to LNG Ship

Except in the event of manifest error or the application of this AC 3.4.5.1.6, the results from the discontinuous system, described in AC 3.4.5.1.5 above, shall always prevail over results of the continuous system as described in AC 3.4.5.1.1 to 3.4.5.1.4 inclusive with regard to loading operations. Such analysis results will be the average of all analyses performed during full rate loading. Individual erroneous analysis results may be discounted from the calculated average provided that all such results are reported to and agreed by Terminal User. If the discontinuous sampling method as described in AC 3.4.5.1.5 above fails for any reason, the Parties agree to use the analysis results obtained using the continuous system as described in AC 3.4.5.1.1 to 3.4.5.1.4 inclusive above.

In the event both the continuous and discontinuous systems fail to determine the composition of LNG loaded, the Parties shall use the composition of the LNG in the storage tanks from which the LNG was loaded, as determined by Terminal Operator.

d) Ship-to-Ship Transshipment

Except in the event of manifest error or the application of this AC 3.4.5.1.6, the results from the discontinuous system of the Jetty at which the Ship that is being unloaded, is berthed, as described in AC 3.4.5.1.5 above, shall always prevail over results of the continuous system of this Jetty as described in AC 3.4.5.1.1 to 3.4.5.1.4 inclusive with regard to Ship-to-Ship Transshipments. Such analysis results will be the average of all analyses performed during full rate ship-to-ship transfer. For the avoidance of doubt, the same analysis results will be used for the unloading as for the loading operations in this case. Individual erroneous analysis results may be discounted from the calculated average provided that all such results are reported to and agreed by Terminal User. If the discontinuous sampling method as described in AC 3.4.5.1.5 above fails for any reason, the Parties agree to use the analysis results obtained using the continuous system of the Jetty at which the LNG Ship that is being unloaded, is berthed, as described in AC 3.4.5.1.1 to 3.4.5.1.4 inclusive above.

In the event both the continuous and discontinuous systems of the Jetty at which the LNG Ship that is being unloaded, is berthed, fail to determine the composition of LNG transferred from one LNG Ship to another, the Parties shall use the analysis results from the discontinuous system of the Jetty at which the LNG Ship that is being loaded, is berthed, as described in AC 3.4.5.1.5 above.

### 3.4.5.2 Analysis procedures

3.4.5.2.1 Hydrocarbons and nitrogen – Terminal Operator's sample of the unloaded or loaded LNG, shall be analyzed as soon as reasonably possible by Terminal Operator to determine, by gas chromatography, the mol fraction of hydrocarbons and nitrogen in the sample. The method used shall be the method described in the latest version of the ISO 6974 standard or any other method agreed upon by Terminal Operator and Shipper or Transshipper. Duplicate runs shall be made on each sample to determine that the repeatability of peak heights or peak areas are within acceptable limits. The calculated results of such duplicate runs shall be averaged.

3.4.5.2.2 Sulfur, mercaptans, hydrogen sulfide - The ISO 19739 shall be used to determine the sulfur compounds content of Terminal Operator's sample of unloaded LNG, unless Shipper or Transshipper and Terminal Operator mutually agree that some other method should be used.

3.4.5.2.3 Quality determination – The results of the analysis under section (a) above shall be used with calculation methods in AC 3.4.6 to determine if the LNG meets the quality specifications set forth in AC 3.3.

### 3.4.5.3 Correlation of analytical equipment and devices

Terminal Operator and Shipper or Transshipper shall perform regular correlation tests, i.e. at intervals determined under mutual agreement among Terminal Operator and Shipper or Transshipper, using a standard gas sample in order to properly maintain the accuracy of Shipper's or Transshipper's and Terminal Operator's equipment and devices, prior to use and during periods of use. Such correlation tests are subject to the following conditions:

a) Mutual agreement of Shipper or Transshipper and Terminal Operator as to timing of a test;

b) The standard gas sample shall be obtained by Terminal Operator;

c) The standard gas sample shall be transported to the unloading or loading port on an LNG Ship operated by Shipper or Transshipper;

d) Shipper or Transshipper shall analyze the sample and return it to Terminal Operator on an LNG Ship;

e) Terminal Operator shall analyze the sample; and

f) The results of these tests shall be made available to Shipper or Transshipper and Terminal Operator.

In the event the correlation results are not within agreed limits, the Parties shall investigate the source of such errors and take appropriate corrective action.

### 3.4.6 Section VI - Determination of energy quantity of LNG delivered at the Delivery Point, Delivery Point for Transshipment, or LNG redelivered at the Redelivery Point for Loading or at the Redelivery Point for Transshipment

#### 3.4.6.1 Calculation of density

The density of LNG stated in kilograms per Cubic Meter shall be calculated in accordance with ISO 6578:1991 by use of the formula:

$$D = \frac{\Sigma (X_i \times M_i)}{\Sigma (X_i \times V_i) - \left(K1 + (K2 - K1) \times X_n\right) \times X_m \left\{\frac{}{0.0425}\right\}}$$

where:

**D** is the density to six (6) significant figures of the LNG unloaded or loaded, stated in kilograms per Cubic Meter at temperature $T_L$;

**$T_L$** is the temperature of the LNG in the tanks of the LNG Ship before unloading or after loading, stated in degrees Celsius to the nearest 0.1°C;

**$X_i$** is the mol fraction, to the nearest sixth (6th) decimal place, of component (i) from the composition obtained in accordance with AC 3.4.5 hereof. The mol fraction of methane shall be adjusted so as to make the total mol fraction equal to 1.000000;

**$M_i$** is the molecular weight of component (i), stated in kg/kmol, as set forth in Table 1 attached hereto;

**$V_i$** is the molar volume, to the nearest sixth (6th) decimal place, of component (i), stated in Cubic Meters per kilogram-mol at temperature $T_L$ and obtained by linear interpolation of the data set forth in Table 2 attached hereto;

**$X_m$** is the mol fraction, to the nearest sixth (6th) decimal place, of methane from the composition obtained in accordance with AC 3.4.5.2 hereof;

**$X_n$** is the mol fraction, to the nearest sixth (6th) decimal place, of nitrogen from the composition obtained in accordance with AC 3.4.5.2 hereof;

**K1** is the volume correction, to the nearest sixth (6th) decimal place, stated in Cubic Meters per kilogram-mol at temperature $T_L$ and obtained by linear interpolation of the data set forth in Table 3 attached hereto; and

**K2** is the volume correction, to the nearest sixth (6th) decimal place, stated in Cubic Meters per kilogram-mol at temperature $T_L$ and obtained by linear interpolation of the data set forth in Table 4 attached hereto.

### 3.4.6.2 Calculation of Gross Heating Value (GHV)

3.4.6.2.1 The Gross Heating Value (mass basis) of LNG in kWh per kilogram shall be calculated by use of the formula:

$$H_m(t_1) = \{\frac{\Sigma\ [X_i \times H_{vi}(t_1)]}{\Sigma\ (X_i \times M_i) \times 3.6}\}$$

where:

$H_m$ is the Gross Heating Value of LNG, stated in kWh per kilogram;

$H_{vi}$ is the Gross Heating Value of component (i), stated in kJ / mol at a combustion reference temperature $t_1$ of 298.15 K, as set forth in Table 1 attached hereto;

$X_i$ is the mol fraction, to the nearest sixth (6th) decimal place, of component (i) from the composition obtained pursuant to section V hereof. The mol fraction of methane shall be adjusted so as to make the total mol fraction equal to 1.000000; and

$M_i$ is the molecular weight of component (i) stated in kg / kmol as set forth in Table 1 attached hereto.

3.4.6.2.2 The Gross Heating Value (volume basis) for the purpose of AC 3.1 of the LNG Access Code shall be calculated by use of the formula):

$$H_v[t_1, V(t_2,p_2)] = \frac{101.325 \times \Sigma\ (X_i \times H_{vi}[t_1, V(t_2,p_2)])}{R \times 273.15 \times z_{mix}(t_2,p_2) \times 3.6}$$

where:

$H_v$ is the Gross Heating Value, stated in kWh per $m^3(n)$ at normal volume conditions of ($t_2$) 273.15 K, absolute pressure 1,013.25 mbar and combustion reference temperature $t_1$ of 298.15 K.

$X_i$ is the mol fraction, to the nearest sixth (6th) decimal place, of component (i) from the composition obtained pursuant to AC 3.4.5 hereof. The mol

fraction of methane shall be adjusted so as to make the total mol fraction equal to 1.000000;

$H_{vi}$ $[t_1, V(t_2,p_2)]$is the Gross Heating Value of component (i), stated in kJ / mol, as set forth in Table 1 attached hereto;

**R** is the molar gas constant = 8.314510 J per mol per K; and

$z_{mix}$ $(t_2,p_2)$ is the compression factor under normal conditions calculated in accordance with:

$$z_{mix}\ (t_2,p_2) = 1 - (\ \Sigma\ X_i \times \sqrt{b_i}\ )^2$$

where:

$\sqrt{b_i}$ is the summation factor of component (i) at normal volume conditions of temperature 273.15 °K and absolute pressure 1,013.25 mbar, as set forth in Table 1 attached hereto.

3.4.6.2.3 The Wobbe Number for the purposes of AC 3.3 of the LNG Access Code shall be calculated by use of the formula:

$$\text{Wobbe Number} = \frac{H_v[t_1, V(t_2,p_2)]}{\text{square root } \{[(\ \Sigma\ (X_i \times M_i)) / 28.9626)] \times [0.99941 / z(t_2,p_2)]\}}$$

where:

**Wobbe Number** is the Gross Heating Value, stated in kWh per m³(n) at normal conditions of temperature 273.15 K and absolute pressure 1,013.25 mbar;

**0.99941** is the compression factor of dry air at normal conditions of temperature 273.15 K and absolute pressure 1,013.25 mbar;

$H_v$ is the Gross Heating Value, stated in kWh per m³(n) at normal volume conditions of temperature 273.15 K and absolute pressure 1,013.25 mbar, calculated and obtained in accordance with AC 3.4.4.2.2 hereof;

$X_i$ is the mol fraction, to the nearest sixth (6th) decimal place, of component (i) from the composition obtained pursuant to AC 3.4.5 hereof. The mol fraction of methane shall be adjusted so as to make the total mol fraction equal to 1.000000;

$M_i$ is the molecular weight of component (i), stated in kg/kmol, as set forth in Table 1 attached hereto; and

$z_{mix}$ $(t_2,p_2)$ is the compression factor under normal volume conditions of temperature 273.15 K and absolute pressure 1,013.25 mbar, calculated in accordance with:

$$z_{mix}\,(t_2,p_2) = 1 - (\,\Sigma\, X_i \times \sqrt{b_i}\,)^2$$

where:

$\sqrt{b_i}$ is the summation factor of component (i) at normal conditions of temperature 273.15 K and absolute pressure 1,013.25 mbar, as set forth in Table 1 attached hereto.

### 3.4.6.3 Calculation of energy quantity of LNG delivered or redelivered

The energy quantity of LNG delivered or redelivered, expressed in MWh, (combustion reference temperature 25 °C) shall be computed by using the formula below and applying the method of rounding set forth in AC 3.4.6.4.1:

$$Q = (V \times D \times H_m / 1{,}000) - Q_R +/- Q_F + Q_{CD} + Q_{GU}$$

where:

**Q** is the energy quantity delivered or redelivered, expressed in MWh, where 1 MWh = 1,000 kWh). For information purposes, Q shall also be expressed in MBTU, which shall be determined by multiplying Q in MWh by 3.4121412;

**V** is the volume of the LNG unloaded or loaded, stated in Cubic Meters, obtained pursuant to AC 3.4.4.5 hereof;

**D** is the density of the LNG, stated in kilograms per Cubic Meter, as calculated in accordance with AC 3.4.6.1 hereof;

**$H_m$** is the Gross Heating Value of the LNG, stated in kWh per kilogram, as calculated in accordance with AC 3.4.6.2.1 hereof; and

**$Q_R$** is the Buy-Back Gas, expressed in MWh, which replaced the volume of the LNG unloaded or loaded (V) in the LNG Ship's cargo tanks or in the shore tanks respectively. $Q_R$ is computed by use of the formula:

$$Q_R = V \times \frac{273.15}{273.15 + T_V} \times \frac{P_a}{1{,}013.25} \times \frac{GHV_v}{1{,}000}$$

where:

**Tv** is the arithmetic average temperature of the vapor in the tanks of the LNG Ship after unloading or before loading, stated in degrees

Celsius and rounded to the nearest zero decimal one (0.1) degree Celsius;

**$P_a$** is the arithmetic average absolute pressure of the vapor in the tanks of the LNG Ship after unloading or before loading, stated in millibars to the nearest mbar; and

**$GHV_v$** is 10.4 , kWh per m3(n) based upon a return vapour composition of 94% methane and 6% nitrogen at a combustion reference temperature of 25 °C.

The Parties agree that should the molar composition of the return vapour be shown to be significantly different from the value stated above for a period not less than six (6) months, the Parties will meet in good faith to discuss a revision to the assumed heating value for return vapour which would be applicable thereafter.

**$Q_F$** is the quantity of fuel consumed as gas in the LNG Ship's engine room, expressed in MWh, between opening and closing custody transfer measurements while moored alongside Port. The above mentioned formula of the energy quantity of LNG delivered Q shall be applied with the following sign convention for $Q_F$:

+ for an LNG loading operation

- for an LNG unloading operation

If gas was not consumed as fuel, $Q_F$ is zero MWh, otherwise $Q_F$ is computed by use of the formula:

$$\mathbf{Q_F = KG_F \times 13.874 / 1{,}000}$$

where:

**$KG_F$** is the mass of gas consumed between opening and closing custody transfer measurements stated in kilograms and rounded to the nearest kilogram, noted directly from the LNG Ship's counters readings; and

**13.874** is the heating value of the vapour consumed in the LNG Ship's engine room (assumed to be 94% of methane and 6% of nitrogen) stated in kWh per kilogram at a combustion reference temperature of 25 °C.

If the measurement of the quantity of fuel consumed as gas in the LNG Ship's engine room is faulty or not available or in case of conflict between the above determination of the value of $Q_F$ and the procedures applicable at the LNG Terminal, then the value of $Q_F$ shall be determined by the Terminal Operator, acting as a Reasonable and Prudent Operator in accordance with the procedures applicable at the LNG Terminal.

**$Q_{CD}$** is the energy quantity delivered during the Cool Down Services, if applicable, expressed in MWh. $Q_{CD}$ is computed by use of the formula:

$$Q_{CD} = V_{TOT} \times \frac{273.15}{273.15 + T_2} \times \frac{P_2}{1{,}013.25} \times \frac{GHV_{v2}}{1{,}000} - V_{TOT} \times \frac{273.15}{273.15 + T_1} \times \frac{P_1}{1{,}013.25} \times \frac{GHV_{v1}}{1{,}000}$$

where:

$V_{TOT}$ is the total volume (100% capacity at -163 °C) of the LNG Ship's cargo tanks, stated in Cubic Metres;

$T_2$ is the arithmetic average temperature of the vapor in the tanks of the LNG Ship after the Cool Down Services, stated in degrees Celsius and rounded to the nearest zero decimal one (0.1) degree Celsius;

$P_2$ is the arithmetic average absolute pressure of the vapor in the tanks of the LNG Ship after the Cool Down Services, stated in millibars to the nearest mbar;

$GHV_{v2}$ is the Gross Heating Value of the LNG delivered during the Cool Down Services, stated in kWh per m³(n), as calculated in accordance with AC 3.4.6.2.2 hereof;

$T_1$ is the arithmetic average temperature of the vapor in the tanks of the LNG Ship before the Cool Down Services, stated in degrees Celsius and rounded to the nearest zero decimal one (0.1) degree Celsius;

$P_1$ is the arithmetic average absolute pressure of the vapor in the tanks of the LNG Ship before the Cool Down Services, stated in millibars to the nearest mbar; and

$GHV_{v1}$ is the Gross Heating Value of the LNG delivered during the Gassing Up Services, if applicable, stated in kWh per m³(n), as calculated in accordance with AC 3.4.6.2.2 hereof. In the case of no Gassing Up Services, $GHV_{v1}$ is 10.4 kWh per m³(n) based upon an initial cargo composition of 94% methane and 6% nitrogen at a combustion reference temperature of 25 °C.

$Q_{GU}$ is the energy quantity delivered during the Gassing Up Services, if applicable, expressed in MWh. $Q_{GU}$ is computed by use of the formula:

$$Q_{GU} = KG_{GU} \times GHV_{GU} / 1{,}000$$

where:

$KG_{GU}$ is the mass of gas through the Ship's LNG vaporizer between the start and end of the Gassing Up Services, stated in kilograms and rounded to the

nearest kilogram, noted directly from the LNG Ship's counters readings; and

**$GHV_{GU}$** is the Gross Heating Value of the LNG delivered during the Gassing Up Services, stated in kWh per kg, as calculated in accordance with AC 3.4.6.2.1 hereof.

If the measurement of the quantity of LNG consumed during the Gassing Up Services is faulty or not available or in case of conflict between the above determination of the value of $Q_{GU}$ and the procedures applicable at the LNG Terminal, then the value of $Q_{GU}$ shall be determined by the Terminal Operator, acting as a Reasonable and Prudent Operator in accordance with the procedures applicable at the LNG Terminal.

### 3.4.6.4 Method of rounding numbers

3.4.6.4.1 General

If the first of the figures to be discarded is five (5) or more, the last of the figures to be retained is increased by one (1).

If the first of the figures to be discarded is four (4) or less, the last of the figures to be retained is unaltered.

For the purpose of rounding to a zero (0), the last of the figures to be retained shall have the same value as a ten (10).

The following examples are given to illustrate how a number is to be established in accordance with the above:

| Number to be rounded | Number after being rounded to First Decimal Place |
|---|---|
| 2.24 | 2.2 |
| 2.249 | 2.2 |
| 2.25 | 2.3 |
| 2.35 | 2.4 |
| 2.97 | 3.0 |

3.4.6.4.2 Determination of the energy quantity of LNG delivered or redelivered, expressed in MWh (combustion reference temperature 25°C) :

The energy quantity of LNG delivered or redelivered is computed by use of the formula:

$$\mathbf{Q = (V \times D \times H_m / 1{,}000) - Q_R +/- Q_F + Q_{CD} + Q_{GU}}$$

where:

**Q** is the energy quantity delivered or redelivered, expressed in MWh (combustion reference temperature 25 °C). The energy quantity shall be rounded to the nearest MWh. For information purposes, Q shall also be expressed in MBTU, which shall be determined by multiplying Q in MWh by 3.4121412 and rounded to the nearest MBTU;

**V** is the volume of the LNG unloaded or loaded, stated in Cubic Meters. The volume shall be rounded to the nearest Cubic Meter;

**D** is the density of the LNG, stated in kilograms per Cubic Meter at temperature $T_L$. The density shall be rounded to the nearest tenth (0.1) of a kg/m³;

**$T_L$** is the temperature of the LNG in the tanks of the LNG Ship before unloading or after loading, stated in degrees Celsius to the nearest tenth (0.1) degree C;

**$H_m$** is the Gross Heating Value of the LNG, stated in kWh per kilogram. The Gross Heating Value shall be rounded to the nearest thousandth (0.001) of a kWh/kg;

**$VxDxH_m / 1{,}000$** 'VxDx$H_m$ / 1,000' shall be calculated and rounded to the nearest MWh; and

**$Q_R$** is the energy quantity of the vapour which was displaced by the volume of the LNG unloaded or loaded (V), and shall be rounded to the nearest MWh.

$Q_R$ is computed by use of the formula:

$$\mathbf{Q_R = V \times \left(\frac{273.15}{273.15 + T_V}\right) \times \left(\frac{P_a}{1{,}013.25}\right) \times \frac{GHV_v}{1{,}000}}$$

where:

**$T_V$** is the arithmetic average temperature of the vapour in the tanks of the LNG Ship after unloading or before loading, stated in degrees Celsius to the nearest tenth (0.1) degree C;

| | | |
|---|---|---|
| **273.15** | **" 273.15** | corrects the vapour temperature $T_V$ to 0°C |
| **273.15 + $T_V$** | **(----------) 273.15+ $T_V$ "** | and shall be rounded to three decimal places; |

**$P_a$** is the arithmetic average absolute pressure of the vapour in the tanks of the LNG Ship after unloading or before loading, stated in millibars rounded to the nearest mbar;

| | | |
|---|---|---|
| **$P_a$** | **" $P_a$** | |
| **(---------)** | **(-------- )** | corrects the vapour pressure $P_a$ to 1,013.25 mbar |
| **1,013.25** | **1,013.25"** | and shall be rounded to three decimal places; |

**V x (----------) x (---------) x --------- "V x (----------) x (---------) x ----------**
**273.15+$T_V$ 1,013.25 1,000 273.15+$T_V$ 1,013.25 1,000"**

shall be calculated and rounded to the nearest MWh; and

**$Q_F$** is the quantity of fuel consumed as gas in the LNG Ship's engine room, expressed in MWh, between opening and closing custody transfer measurements while moored alongside Port and shall be rounded to the nearest MWh. The sign convention of AC 3.4.6.3 hereof shall be applied. If gas was not consumed as fuel, $Q_F$ is zero MWh, otherwise $Q_F$ is computed by use of the formula:

$$Q_F = KG_F \times 13.874 / 1{,}000$$

where:

**$KG_F$** is the mass of gas consumed between opening and closing custody transfer measurements stated in kilograms, noted directly from LNG Ship's counters readings and shall be rounded to the nearest kilogram;

**$KG_F$ x 13.874 / 1,000 "$KG_F$ x 13.874 / 1,000"**

shall be calculated and rounded to the nearest MWh;

**$Q_{CD}$** is the energy quantity delivered during the Cool Down Services, if applicable, expressed in MWh and rounded to the nearest MWh.

$Q_{CD}$ is computed by use of the formula:

$$Q_{CD} = V_{TOT} \times \frac{273.15}{273.15 + T_2} \times \frac{P_2}{1{,}013.25} \times \frac{GHV_{v2}}{1{,}000}$$

$$- \; V_{TOT} \times \frac{273.15}{273.15 + T_1} \times \frac{P_1}{1{,}013.25} \times \frac{GHV_{v1}}{1{,}000}$$

where:

$V_{TOT}$ is the total volume (100% capacity at -163 °C) of the LNG Ship's cargo tanks, stated in Cubic Metres and rounded to the nearest Cubic Metre;

$T_2$ is the arithmetic average temperature of the vapor in the tanks of the LNG Ship after the Cool Down Services, stated in degrees Celsius and rounded to the nearest zero decimal one (0.1) degree Celsius;

$$\frac{273.15}{273.15 + T_2} \quad " \left(\frac{273.15}{273.15 + T_2}\right)"$$

corrects the vapour temperature $T_2$ to 0°C and shall be rounded to three decimal places;

$P_2$ is the arithmetic average absolute pressure of the vapor in the tanks of the LNG Ship after the Cool Down Services, stated in millibars to the nearest mbar;

$$\frac{P_2}{1{,}013.25} \quad " \left(\frac{P_2}{1{,}013.25}\right)"$$

corrects the vapour pressure $P_2$ to 1,013.25 mbar and shall be rounded to three decimal places;

$GHV_{v2}$ is the Gross Heating Value of the LNG delivered during the Cool Down Services, stated in kWh per $m^3(n)$, as calculated in accordance with AC 3.4.6.2.2 hereof, and rounded to three decimal places;

$$\text{“}V_{TOT} \times \frac{273.15}{273.15+T_2} \times \frac{P_2}{1{,}013.25} \times \frac{GHV_{v2}}{1{,}000}\text{”}$$

shall be calculated and rounded to the nearest MWh;

$T_1$ is the arithmetic average temperature of the vapor in the tanks of the LNG Ship before the Cool Down Services, stated in degrees Celsius and rounded to the nearest zero decimal one (0.1) degree Celsius;

$$\frac{273.15}{273.15 + T_1} \quad " \left(\frac{273.15}{273.15 + T_1}\right)"$$

corrects the vapour temperature $T_1$ to 0°C and shall be rounded to three decimal places;

$P_1$ is the arithmetic average absolute pressure of the vapor in the tanks of the LNG Ship before the Cool Down Services, stated in millibars to the nearest mbar; and

$$\frac{P_1}{1{,}013.25} \quad " \left(\frac{P_1}{1{,}013.25}\right)"$$

corrects the vapour pressure $P_1$ to 1,013.25 mbar and shall be rounded to three decimal places;

**$GHV_{v1}$** is the Gross Heating Value of the LNG delivered during the Gassing Up Services, if applicable, stated in kWh per $m^3(n)$, as calculated in accordance with AC 3.4.6.2.2 hereof and rounded to three decimal places. In the case of no Gassing Up Services, $GHV_{v1}$ is 10.4 kWh per $m^3(n)$ based upon an initial cargo composition of 94% methane and 6% nitrogen at a combustion reference temperature of 25 °C.

$$\text{“}V_{TOT} \times \left(\frac{273.15}{273.15+T_1}\right) \times \left(\frac{P_1}{1{,}013.25}\right) \times \frac{GHV_{v1}}{1{,}000}\text{”}$$

shall be calculated and rounded to the nearest MWh;

**$Q_{GU}$** is the energy quantity delivered during the Gassing Up Services, if applicable, expressed in MWh and rounded to the nearest MWh. $Q_{GU}$ is computed by use of the formula:

$$Q_{GU} = KG_{GU} \times GHV_{GU} / 1{,}000$$

where:

**$KG_{GU}$** is the mass of gas through the Ship's LNG vaporizer between the start and end of the Gassing Up Services, stated in kilograms and rounded to the nearest kilogram, noted directly from the LNG Ship's counters readings; and

**$GHV_{GU}$** is the Gross Heating Value of the LNG delivered during the Gassing Up Services, stated in kWh per kg, as calculated in accordance with AC 3.4.6.2.1 hereof and rounded to three decimal places;

$KG_{GU} \times GHV_{GU} / 1{,}000$ “$KG_{GU} \times GHV_{GU} / 1{,}000$”

shall be calculated and rounded to the nearest MWh; and

$V \times D \times H_m/1{,}000 - Q_R +/- Q_F + Q_{CD} + Q_{GU}$

"$V \times D \times H_m/1{,}000 - Q_R +/- Q_F + Q_{CD} + Q_{GU}$"

shall be calculated and rounded to the nearest MWh;

3.4.6.4.3 Determination of LNG Density

The density of the LNG is calculated by use of the formula:

$$D = \frac{\Sigma (Xi \times Mi)}{\Sigma (Xi \times Vi) - \left(K1 + \frac{(K2 - K1) \times Xn}{0.0425}\right) \times Xm}$$

where:

**D** is the density of the LNG, stated in kilograms per Cubic Meter at temperature $T_L$. The density shall be rounded to the nearest tenth (0.1) of a $kg/m^3$;

**$T_L$** is the temperature of the LNG in the tanks of the LNG Ship before unloading or after loading, stated in degrees Celsius to the nearest tenth (0.1) °C;

**$X_i$** is the mol fraction, to the nearest sixth (6th) decimal place, of component (i) from the composition obtained in accordance with AC 3.4.5 hereof. The mol fraction of methane shall be adjusted so as to make the total mol fraction equal to 1.000000;

**$M_i$** is the molecular weight of component (i), stated in kg/kmol, as set forth in Table 1 attached hereto;

**$\Sigma (X_i \times M_i)$** The result of the calculation of "$X_i \times M_i$" of component (i) shall be rounded to the nearest sixth (6th) decimal place, and then, "$\Sigma(X_i \times M_i)$" shall be calculated to the nearest sixth (6th) decimal place;

**$V_i$** is the molar volume, to the nearest sixth (6th) decimal place, of component (i), stated in Cubic Meters per kmol at temperature $T_L$, and shall be obtained by linear interpolation of the data set forth in Table 2 attached hereto;

**$\Sigma (X_i \times V_i)$** The result of the calculation of "$X_i \times V_i$" of component (i) shall be rounded to the nearest sixth (6th) decimal place, and then "$\Sigma(X_i \times V_i)$" shall be calculated to the nearest sixth (6th) decimal place;

**$X_m$** is the mol fraction, to the nearest sixth (6th) decimal place, of methane from the composition obtained in accordance with AC 3.4.5 hereof;

**$X_n$** is the mol fraction, to the nearest sixth (6th) decimal place, of nitrogen from the composition obtained in accordance with AC 3.4.5 hereof;

**K1** is the volume correction, to the nearest sixth (6th) decimal place, stated in Cubic Meters per kmol at temperature $T_L$ and obtained by linear interpolation of the data set forth in Table 3 attached hereto;

**K2** is the volume correction, to the nearest sixth (6th) decimal place, stated in Cubic Meters per kmol at temperature $T_L$ and obtained by linear interpolation of the data set forth in Table 4 attached hereto.

$$(K1 + (K2 - K1) \times X_n) \times X_m \quad \text{“}(K1 + (K2 - K1) \times X_n) \times X_m \text{“}$$
$$\{\text{----------}\} \qquad\qquad \{\text{----------}\}$$
$$0.0425 \qquad\qquad 0.0425$$

shall be calculated to the nearest sixth (6th) decimal place; and

$$\Sigma (X_i \times V_i) - (K1 + (K2 - K1) \times X_n) \times X_m$$
$$\{\text{----------}\}$$
$$0.0425$$

$$\text{“}\Sigma (X_i \times V_i)\ \Sigma (X_i \times V_i) - (K1 + (K2 - K1) \times X_n) \times X_m \text{“}$$
$$\{\text{----------}\}$$
$$0.0425$$

shall be calculated to the nearest sixth (6th) decimal place;

3.4.6.4.4 Determination of Gross Heating Value

a) The Gross Heating Value (mass basis) of the LNG is calculated by use of the formula:

$$H_m(t_1) = \frac{\Sigma (X_i \times H_{vi}(t_1))}{\Sigma (X_i \times M_i) \times 3.6}$$

where:

**$H_m$** is the Gross Heating Value of the LNG, stated in kWh per kilogram. The Gross Heating Value shall be rounded to the nearest thousandth (0.001) of a kWh/kg;

**$H_{vi}$** is the Gross Heating Value of component (i), stated in kJ / mol, as set forth in Table 1 attached hereto;

**$X_i$** is the mol fraction, to the nearest sixth (6th) decimal place, of component (i) from the composition obtained in accordance with section V hereof. The mol fraction of methane shall be adjusted so as to make the total mol fraction equal to 1.000000;

**$X_i \times H_{vi}(t_1)$** “Xi x $H_{vi}(t_1)$” shall be calculated and rounded to the nearest sixth (6th) decimal place;

**$\Sigma X_i \times H_{vi}(t_1)$** “Σ Xi x $H_{vi}(t_1)$” shall be calculated and rounded to the nearest sixth (6th) decimal place;

$M_i$ is the molecular weight of component (i), stated in kg/kmol, as set forth in Table 1 attached hereto;

$X_i \times M_i$ "$X_i \times M_i$" of component (i) shall be calculated to the nearest sixth (6th) decimal place; and

$\Sigma(X_i \times M_i)$ "$\Sigma (X_i \times M_i)$" shall be calculated to the nearest sixth (6th) decimal place by summing all "$X_i \times M_i$" obtained as above.

b) The Gross Heating Value (volume basis) of the LNG shall be calculated by use of the formula:

$$H_v [t_1, V(t_2,p_2)] = \frac{101.325 \times (\Sigma (X_i \times H_{vi} [t_1, V(t_2,p_2)])}{R \times 273.15 \times z_{mix} (t_2,p_2)}$$

where:

$H_v$ is the Gross Heating Value of LNG, stated in kWh per normal Cubic Meter. The Gross Heating Value shall be rounded to the nearest thousandth (0.001) of a kWh / $m^3(n)$;

$X_i$ is the mol fraction, to the nearest sixth (6th) decimal place, of component (i) from the composition obtained pursuant to AC 3.4.5 hereof. The mol fraction of methane shall be adjusted so as to make the total mol fraction equal to 1.000000;

$H_{vi}$ is the Gross Heating Value of component (i), stated in kJ / mol, as set forth in Table 1 attached hereto;

$X_i \times H_{vi} [t_1, V(t_2,p_2)]$ "Xi x $H_{vi}$ ($t_1$)" shall be calculated and rounded to the nearest sixth (6th) decimal place;

$\Sigma X_i \times H_{vi} [t_1, V(t_2,p_2)]$ "Σ Xi x $H_{vi}$ ($t_1$)" shall be calculated and rounded to the nearest sixth (6th) decimal place; and

$R$ is the molar gas constant = 8.314510 J per mol per K

$z_{mix} (t_2,p_2)$ is the compression factor, rounded to the nearest sixth (6th) decimal place, under normal conditions calculated in accordance with:

$$z_{mix} (t_2,p_2) = 1 - ( \Sigma X_i \times \sqrt{b_i} )^2$$

where:

$\sqrt{b_i}$ is the summation factor of component (i) as set forth in Table 1 attached hereto;

$X_i \times \sqrt{b_i}$ "$X_i \times \sqrt{b_i}$" shall be calculated for component (i) to the nearest sixth (6th) decimal place;

$(\Sigma X_i \times \sqrt{b_i})^2$ shall be calculated to the nearest sixth (6th) decimal place.

c) The determination of the **Wobbe Number** for the purposes of AC 3.3 of the LNG Access Code shall be calculated by use of the formula:

$$\text{Wobbe Number} = \frac{H_v\,[t_1, V(t_2,p_2)]}{\sqrt{\{[(\Sigma (X_i \times M_i)) / 28.9626)] \times [0.99941 / z_{mix}(t_2,p_2)]\}}}$$

where:

**Wobbe Number** is the Gross Heating Value of LNG, stated in kWh per normal Cubic Meter. The Gross Heating Value shall be rounded to the nearest thousandth (0.001) of a kWh / m³(n);

$H_v$ is the Gross Heating Value of LNG, calculated and obtained in accordance with AC 3.4.6.2.2 hereof shall be rounded to the nearest thousandth (0.001) of a kWh / m³(n);

$X_i$ is the mol fraction, to the nearest sixth (6th) decimal place, of component (i) from the composition obtained pursuant to AC 3.4.5 hereof. The mol fraction of methane shall be adjusted so as to make the total mol fraction equal to 1.000000;

$M_i$ is the molecular weight of component (i), stated in kg/kmol, as set forth in Table 1 attached hereto; and

$z_{mix}(t_2,p_2)$ is the compression factor, rounded to the nearest sixth (6th) decimal place, under normal conditions calculated in accordance with ISO 6976:1995:

$$z_{mix}(t_2,p_2) = 1 - (\Sigma X_i \times \sqrt{b_i})^2$$

where:

$\sqrt{b_i}$ is the summation factor of component (i) as set forth in Table 1 attached hereto;

$X_i \times \sqrt{b_i}$ "$X_i \times \sqrt{b_i}$" shall be calculated for component (i) to the nearest sixth (6th) decimal place; and

$(\Sigma X_i \times \sqrt{b_i})^2$ shall be calculated to the nearest sixth (6th) decimal place.

**Table 1 - Physical constants**

| | Molecular weight | Gross Heating Value (kJ/mol) | Summation Factor |
|---|---|---|---|
| Component | $M_i$ (kg/mol) | $H_{vi}$ | $\sqrt{b}$ |
| Methane ($CH_4$) | 16.043 | 890.63 | 0.0490 |
| Ethane ($C_2H_6$) | 30.070 | 1560.69 | 0.1,000 |
| Propane ($C_3H_8$) | 44.097 | 2219.17 | 0.1453 |
| Iso-butane (i-$C_4H_{10}$) | 58.123 | 2868.20 | 0.2049 |
| Normal Butane (n-$C_4H_{10}$) | 58.123 | 2877.40 | 0.2069 |
| Iso-pentane (i-$C_5H_{12}$) | 72.150 | 3528.83 | 0.2510 |
| Normal Pentane (n-$C_5H_{12}$) | 72.150 | 3535.77 | 0.2864 |
| n-HexanePlus ($C_6H_{14+}$) | 86.177 | 4194.95 | 0.3286 |
| Nitrogen ($N_2$) | 28.0135 | n/a | 0.0224 |
| Oxygen ($O_2$) | 31.9988 | n/a | 0.0316 |
| Carbon Dioxide ($CO_2$) | 44.010 | n/a | 0.0819 |

Reference: The above table of physical constants, developed from ISO 6976:1995 Table 1, Table 2 and Table 3, shall be used for all density and heating value calculations associated with the LNG Agreement. This table of Physical Constants shall be revised to conform to any subsequent officially published revision of ISO 6976:1995. The values for the Gross Heating Value in kJ/mol and the Summation Factors as shown above are based on combustion reference temperature 25 °C and normal conditions of 0 °C and 1,013.25 mbar for volumetric reference.

Note: All components of $C_6$ and above shall be deemed to be $C_6$ for the purposes of calculations using Table 1 above.

**Table 2 - Molar volumes of individual components**

| Molar Volumes ($m^3$/kmol) at Various Temperatures x 103 | | | | |
|---|---|---|---|---|
| Component | -165°C | -160°C | -155°C | -150°C |
| $CH_4$ | 37.500 | 38.149 | 38.839 | 39.580 |
| $C_2H_6$ | 47.524 | 47.942 | 48.369 | 48.806 |
| $C_3H_8$ | 62.046 | 62.497 | 62.953 | 63.417 |
| i-$C_4H_{10}$ | 77.851 | 78.352 | 78.859 | 79.374 |
| n-$C_4H_{10}$ | 76.398 | 76.875 | 77.359 | 77.847 |
| i-$C_5H_{12}$ | 91.179 | 91.721 | 92.267 | 92.817 |
| n-$C_5H_{12}$ | 91.058 | 91.583 | 92.111 | 92.642 |
| $C_6H_{14+}$ | 104.34 | 104.89 | 105.45 | 106.02 |
| $N_2$ | 44.043 | 47.019 | 51.022 | 55.897 |

Reference: The above table of molar volumes, as referenced in ISO 6578:1991, Table B.1, shall be used for all LNG density and heating value calculations associated with the LNG Agreement. This table of Molar Volumes shall be revised to conform to any subsequent officially published revision of ISO 6578:1991.

Note:

1. For intermediate temperatures a linear interpolation shall be applied.

2. The above values are expressed as the values derived after multiplying by $10^3$ to avoid an excessive number of decimal places in the table. When applying the values, a compensating multiplier of $10^{-3}$ should be entered to reduce the above values to the correct magnitude.

**Table 3 - Correction K1 for volume reduction of mixture**

| K1 ($m^3$/kmol) at Various Temperatures x $10^3$ | | | | |
|---|---|---|---|---|
| Molecular Weight of Mixture<br><br>Σ(Xi x Mi) | -165°C | -160°C | -155°C | -150°C |
| 16.00 | -0.01 | -0.01 | -0.01 | -0.01 |
| 17.00 | 0.18 | 0.21 | 0.24 | 0.28 |
| 18.00 | 0.37 | 0.41 | 0.47 | 0.56 |
| 19.00 | 0.51 | 0.58 | 0.67 | 0.76 |
| 20.00 | 0.67 | 0.76 | 0.86 | 0.98 |
| 21.00 | 0.79 | 0.89 | 1.00 | 1.13 |
| 22.00 | 0.90 | 1.01 | 1.17 | 1.32 |

**Reference**: The above table of correction K1 for volume reduction, as referenced in ISO 6578:1991, Table C.1, shall be used for all LNG density calculations associated with the LNG Agreement. This table of correction K1 for volume reduction shall be revised to conform to any subsequent officially published revision of ISO 6578:1991.

**Note:**

1. Molecular mass of mixture equals (Σ(Xi x Mi).

2. For intermediate values of temperature and molecular mass a linear interpolation shall be applied.

3. The above values are expressed as the values derived after multiplying by $10^3$ to avoid an excessive number of decimal places in the table. When applying the values, a compensating multiplier of $10^{-3}$ should be entered to reduce the above values to the correct magnitude.

**Table 4 - Correction K2 for volume reduction of mixture**

| K2 ($m^3$/kmol) at Various Temperatures x $10^3$ | | | | |
|---|---|---|---|---|
| Molecular Weight of Mixture<br><br>Σ(Xi x Mi) | -165°C | -160°C | -155°C | -150°C |
| 16.00 | -0.01 | -0.02 | -0.03 | -0.04 |
| 17.00 | 0.29 | 0.46 | 0.68 | 0.91 |
| 18.00 | 0.53 | 0.67 | 0.84 | 1.05 |
| 19.00 | 0.71 | 0.88 | 1.13 | 1.39 |
| 20.00 | 0.86 | 1.06 | 1.33 | 1.62 |
| 21.00 | 1.01 | 1.16 | 1.48 | 1.85 |
| 22.00 | 1.16 | 1.27 | 1.65 | 2.09 |

Reference: The above table of correction K2 for volume reduction, as referenced in ISO 6578:1991, Table C.2, shall be used for all LNG density calculations associated with the LNG Agreement. This table of correction K2 for volume reduction shall be revised to conform to any subsequent officially published revision of ISO 6578:1991.

Note:

1. Molecular mass of mixture equals Σ(Xi x Mi).

2. For intermediate values of temperature and molecular mass a linear interpolation shall be applied.

3. The above values are expressed as the values derived after multiplying by $10^3$ to avoid an excessive number of decimal places in the table. When applying the values, a compensating multiplier of $10^{-3}$ should be entered to reduce the above values to the correct magnitude.

**Table 5 - Approximate physical conversion factors**
**Conversions for information only**

| To convert from | To | Multiply by | Reference |
|---|---|---|---|
| kWh | MJ | 3.6 | [1] |
| MWh | GJ | 3.6 | [1] |
| GJ | MBTU | 0.947817 | [1] |
| MWh | MBTU | 3.4121412 | [1] |
| GJ | MJ | 1,000 | |
| MWh | kWh | 1,000 | |
| MBTU | GJ | 1.055056 | [1] |
| MBTU | MJ | 1055.056 | [1] |
| MBTU | MWh | 0.293071 | [1] |
| MBTU | kWh | 293.071 | [1] |
| GHV on a molar or a mass basis, with reference temperature of 25 °C for combustion | GHV on a molar or a mass basis, with reference temperature of 15 °C for combustion | 1.0010 | [2] |
| GHV (volume basis) with reference temperatures of 25 °C for combustion and 0 °C for volume | GHV (volume basis) with reference temperatures of 15 °C for combustion and 15 °C for volume | 0.9486 | [2] |
| Wobbe Number with reference temperatures of 25 °C for combustion and 0 °C for volume | Wobbe Number with reference temperatures of 15 °C for combustion and 15 °C for volume | 0.9487 | [2] |
| pound (avoirdupois) | kg | 0.45359237 | [1] |
| pound-force per square inch (p.s.i.) | Pascal | 6,894.757 | [1] |

Reference sources:
[1]: LNG Measurement, A user's manual for custody transfer, first edition 1985, Table 1.1.7 (page 1.1-4) - Douglas Mann, General Editor - Sponsored by Groupe International des Importateurs de GNL (G.I.I.G.N.L.), Paris, and Center for Chemical Engineering, National Bureau of Standards, Boulder, Colorado 80303
[2]: ISO 6976:1995, Tables J.1 and J.3 (informative)

## 3.5 TERMINAL NOMINATIONS PROCEDURES

### 3.5.1 Subject

This Chapter 3.5 provides for the exchange of operational information between Terminal Operator and the Terminal Users, which is required in order to have quantities of Natural Gas delivered by the Terminal Users at the Flange or Commodity Transfer Point.

### 3.5.2 General provisions

#### 3.5.2.1 Time reference

Any reference to time shall be construed as whatever time shall be in force in Belgium.

#### 3.5.2.2 Transmission protocol

The protocol, to be used by the Terminal User and Terminal Operator for exchanging Edig@s messages which contain contractual data and dispatching information, shall be AS2 (Applicability Statement 2).

For the avoidance of doubt, the specifications of all Edig@s notices which need to be exchanged between Terminal Operator and the Terminal User can be retrieved sorted by versions on the Edig@s website (http://www.edigas.org), more particularly in the guidelines section. All information about the AS2 protocol can be retrieved on the EASEE-gas website (http://www.easee-gas.org).

#### 3.5.2.3 Nominations and matching procedures

The procedures described in this AC 3.5 are in line with the EASEE-gas Common Business Practice 2003-002/03 "*Harmonization of the Nomination and Matching Process*".

The procedures in this AC 3.5 in respect of constraints are in line with the EASEE-gas Common Business Practice 2005-003/01 "*Constraints*".

#### 3.5.2.4 User Edig@s code

Terminal Operator shall provide the Terminal Users with one "User code" for nominations, matching and allocation purposes.

#### 3.5.2.5 Company Terminal User code

The Terminal User shall use its Energy Identification Coding Scheme (EIC code) to set up the EDIG@s communication with the Terminal Operator. The Terminal User shall use its Energy Identification Coding Scheme (EIC code delivered by either ENTSO-E or ENTSO-G) or its company EDIG@S code (delivered by EDIG@S Working group) in the EDIG@S message.

### 3.5.3 Description of the terminal nomination model

#### 3.5.3.1 Basic concept

3.5.3.1.1 Throughout the Service Term, Terminal User shall have the right to make Nominations for Send Out, injection (Backhaul Liquefaction or Reverse Nominations) and tank transfer and Terminal Operator shall accept, cap or reject any such Nominations in accordance with the provisions of this AC 3.5.

3.5.3.1.2 Without prejudice to AC 3.5.7.2, Terminal Operator shall off-take the Confirmed Quantities of Natural Gas made available by Terminal User at the Flange or Commodity Transfer Point and shall make available the Confirmed Quantities of Natural Gas off-taken at the Flange or Commodity Transfer Point.

3.5.3.1.3 Backhaul Liquefaction and Reverse Nomination both refer to injection in the Terminal. Reverse Nomination refers to injection made by a Shipper during the Service Term of Shipper's Subscribed Slots. Other injections are considered as Backhaul Liquefaction.

For the avoidance of doubt, Backhaul Liquefaction Service is subject to a monthly fee which will be the Regulated Tariff for Backhaul Liquefaction applied to the injected Quantity of Natural Gas for the relevant Month.

### 3.5.4 Nominations

#### 3.5.4.1 Introduction

Notwithstanding the provision of AC 3.5.2.2, if for whatsoever reason, Terminal Operator or the Terminal User is prevented from exchanging messages via Edig@s, communication by fax will be used as a temporary fall-back solution. Terminal Operator shall use its reasonable endeavours to treat these fax messages as if they were sent by Edig@s.

#### 3.5.4.2 Daily nomination procedures

In order to notify Terminal Operator of the quantities of Natural Gas to be transported, the Terminal User shall notify Terminal Operator by sending Nominations and, if applicable, re-nominations to Terminal Operator, according to the following procedure.

The Terminal User shall communicate to Terminal Operator the initial Nominations for the Flange or Commodity Transfer Point, being the last Nomination received by Terminal Operator before 14h00 on Gas Day *d*-1 and accepted by Terminal Operator. The Nominations received after the 14h00 deadline will be buffered until 16h00, the revised Nomination being the last Nomination received by Terminal Operator before 16h00 on Gas Day *d*-1 and accepted by Terminal Operator.

If applicable, the Terminal User shall communicate to Terminal Operator a re-nomination for the Flange or Commodity Transfer Point. The last re-nomination shall be the last re-nomination accepted by Terminal Operator. If no re-nomination is received by Terminal Operator, the last Nomination is deemed equal to the accepted value of the (initial) Nomination.

In the rest of this section, only the initial Nomination will be mentioned. This value has to be considered as an initial Nomination or as a last Nomination according to the above-mentioned rule.

The general procedure consists of four steps:

a) The Terminal User sends a *"User's Daily Transmission Notice"* ("SDT") to Terminal Operator with the Nomination for the Flange or Commodity Transfer Point in accordance with AC 3.5.4.2.4;

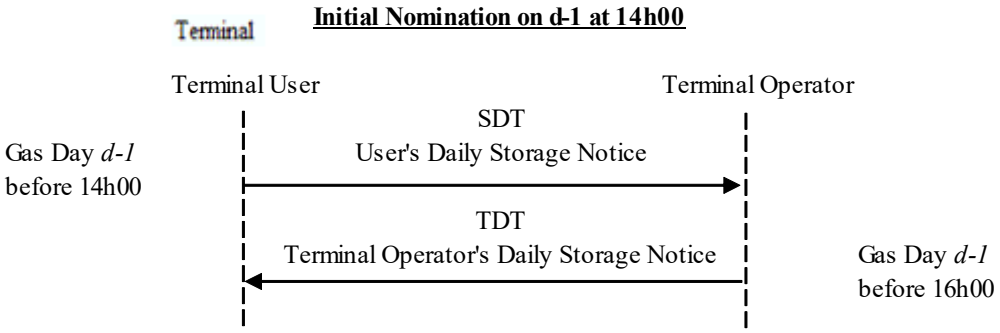
b) Terminal Operator checks validity of the message format;

c) Terminal Operator computes the Terminal User's hourly Confirmed Quantities of Natural Gas scheduled to be delivered to or from the Terminal User at the Flange or Commodity Transfer Point in accordance with AC 3.5.7; and

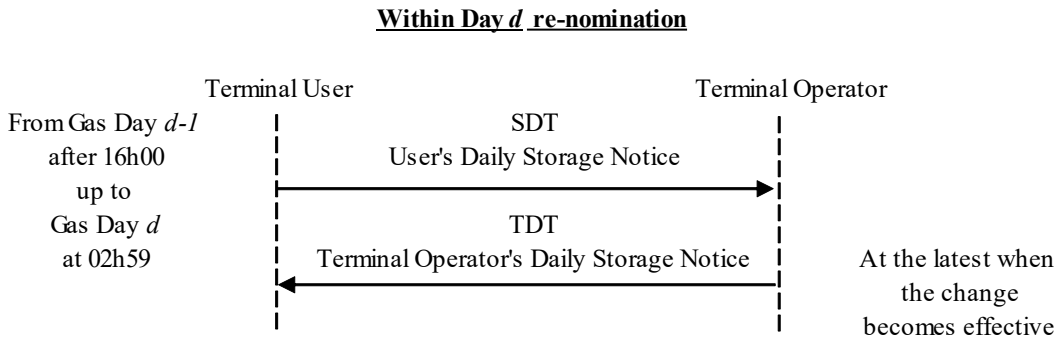
d) Terminal Operator sends a "*Terminal Operator's Daily Transport Notice*" ("TDT") to the Terminal User in accordance with AC 3.5.4.2.6.

If, for any reason, the Terminal User is requested to revise its nomination, then the Terminal User shall without delay issue a revised "*User's Daily Transmission Notice*".

3.5.4.2.1 Initial nomination on Gas Day d-1 at 14h00 hours



3.5.4.2.2 Re-nomination cycle




The re-nomination is optional. It is only used either in case of changes to the (initial) Nomination.

3.5.4.2.3 User's Daily Transmission Notice (SDT)

This notice shall be issued by the Terminal User to inform Terminal Operator about the quantities, expressed in kWh/hour to be delivered at the Flange or Commodity Transfer Point for each hour of the Gas Day. At the same time, for matching and allocation purposes, the Terminal User will indicate which (coded) upstream or downstream counterparty(ies) will make available Natural Gas at the Flange or Commodity Transfer Point.

On both the Flange and Commodity Transfer Point, a positive direction is conventionally defined:

- the positive direction (positive quantity) is the entry direction;
- the negative direction (negative quantity) is the exit direction.

During the Gas Day, the SDT will be considered valid when received before the Applicable Renomination Lead-Time change should take effect. If a SDT is received after the Applicable Renomination Lead-Time change takes effect, the SDT will be rejected and the Terminal User will receive a notification by fax accordingly.

The Edig@s notice type of the SDT will be "NOMINT".

The User's Daily Transmission Notice shall be revised if the nominated hourly Flange or Commodity Transfer Point Nomination is to change from the previous notification. Such re-nomination shall at the earliest and within technical and operational limits, become effective after the Applicable Renomination Lead-Time, following the issue of a revised User's Daily Transmission Notice.

In the event that the Terminal User does not issue a valid User's Daily Transmission Notice by Edig@s or by fax, the Confirmed Quantities for the related Flange or Commodity Transfer Point will be zero (0) kWh/h.

3.5.4.2.4 Terminal Operator's Daily Transport Notice (TDT)

This notice shall be used by Terminal Operator to notify the Terminal User for each hour of the relevant Gas Day of:

(i) The hourly Confirmed Quantities of Natural Gas scheduled to be delivered to the Terminal User at the Flange or Commodity Transfer Point, computed in accordance with AC 3.5.5 and AC 3.5.7; and,

(ii) For the Flange, the quantities the TSO is able to receive or deliver for such pair of Terminal Users, based on the counterparties' Nominations and taking constraints into account (hourly Processed Quantities).

The deadline for Terminal Operator for sending a TDT to the Terminal User will be 16h00 on the Gas Day before the delivery Gas Day. Any change after 16h00 on the Gas Day before the delivery Gas Day will be confirmed before the re-nomination becomes effective.

The Edig@s notice type of the TDT will be "NOMRES".

In the event that the Processed and/or Confirmed Quantities have changed, Terminal Operator shall, before the change becomes effective, issue a revised Terminal Operator's "Daily Confirmation Notice". In the event that the Terminal User issues a revised User's Daily Transmission Notice, Terminal Operator shall before the re-nomination becomes effective, issue a revised Terminal Operator's "Daily Confirmation Notice". Terminal Operator shall also issue a revised Terminal Operator's "Daily Confirmation Notice" whenever for any reason, deliveries or off-takes have been adjusted.

### 3.5.5 Applicable Renomination Lead-Time

The Applicable Renomination Lead-Time at the Flange and the Commodity Transfer Point is next full hour +2 hours, but this can be decreased by the Terminal Operator at the Flange and/or Commodity Transfer Point after notification by fax to the Terminal Users.

### 3.5.6 Applicable Interruption/Constraint Lead-Time

The Applicable Interruption/Constraint Lead-Time is the minimum lead-time the Terminal Operator shall apply to inform Terminal Users of any interruption or constraint. The standard Applicable Interruption/Constraint Lead-Time is next full hour+1.

### 3.5.7 Confirmations

Terminal Operator will maximize the total hourly Confirmed Quantities of all Terminal Users in the Terminal Operator's Daily Transport Notice (TDT) taking

into account the Users' Nominated Quantities at the Flange and Commodity Transfer Point and the following rules:

- Capacity rules in accordance with AC 3.5.7.1,
- Constraint management rules in accordance with AC 3.5.7.2, and
- Matching rules in accordance with AC 3.5.7.3.

### 3.5.7.1 Capacity rules

3.5.7.1.1 Capacity check

a) Upon receipt of an SDT, Terminal Operator shall compare the Nominated Hourly Delivery, with:

(i) the aggregate of Terminal Users' Send Out Capacity (including Send Out entitlements); and,

(ii) the then applicable Send Out Capacity (including Send Out entitlements) Terminal User is entitled to nominate against.

Terminal User's capacity shall be deemed unlimited on the following nominations:

(i) Flange in the positive direction; and

(ii) Commodity Transfer Point in both the positive and the negative direction.

b) In case the Nominated Hourly Delivery is greater than the aggregate of Terminal Users' Send Out Capacity (including Send Out entitlements), Terminal Operator shall cap the Nominated Hourly Delivery to the aggregate of Terminal Users' Send Out Capacity (including Send Out entitlements)

The Send Out Nomination (or any part thereof) in exceeding of the applicable Terminal User's Send Out Capacity (including Send Out entitlements) Terminal User is entitled to make, shall be deemed to be the Non-Nominated Services requested by Terminal User.

If in such case the aggregate Terminal Users' Terminal Nominations (or any part thereof) relating to the Non-Nominated Send Out Rights exceeds the available Non-Nominated Send Out Rights for a certain hour, Terminal User's and/or Other NNS Users' Terminal Nominations (or any part thereof) relating to such Non-Nominated Send Out Rights shall be capped pro rata Terminal User's and/or Other NNS Users' Terminal Nominations (or any part thereof) relating to such Non-Nominated Send Out Rights.

c) The part of the Confirmed Quantities relating to the use of the Non Nominated Services may be reduced by Terminal Operator in accordance with the LNG Services Agreement. In case of reduction, Terminal Operator shall issue a revised Terminal Operator's "Daily Transport Notice" to Terminal User.

### 3.5.7.2 Constraint management rules

3.5.7.2.1 Constraint at the Flange

In the event Terminal User's Confirmed Quantities cannot be met for any reasons outside Terminal Operator' control, Terminal Operator shall:

a) put a constraint at the Flange; and,

b) in accordance with AC 3.5.4.2.6, issue a new TDT to notify Terminal User's Client of the revised hourly Confirmed Quantities at the Flange.

3.5.7.2.2 Reverse Nomination and Backhaul Liquefaction constraint

If the difference between the sum of Terminal Users' Nominations for Send Out and the sum of Terminal Users' Nominations for injection is less than the Minimum Send Out rate, such Nominations for injection (Reverse Nomination and/or Backhaul Liquefaction) shall be capped to the difference between the sum of Terminal Users' Nominations for Send Out and the Minimum Send Out rate, pro rata Terminal Users' Nominations for injection, it being understood that the latter will first be capped if applicable to the difference between the sum of Terminal Users' Nominations for Send Out and the Minimum Send Out rate.

3.5.7.2.3 Gas In Storage constraint

Terminal Operator may reduce any Nominations which would lead to Terminal User's Gas In Storage being or becoming smaller than zero (0) or, in the event of Reverse Nomination and/or Backhaul Liquefaction, exceeding Terminal User's Storage Capacity. Subject to AC 3.1, Terminal Operator shall have no obligation to unload or store LNG if Terminal User's Nominations would result in a situation whereby Terminal User's Gas In Storage exceeding Terminal User's Storage Capacity would, in Terminal Operator's reasonable opinion, have an impact on the system integrity of the LNG Terminal.

3.5.7.2.4 Allocation principle in case of a constraint

In case of a constraint(s), the confirmation process described in this AC 3.5.7 will maximize the total Hourly Confirmed Quantities of all Terminal Users taking into account the applicable constraint(s) and will allocate the available confirmation level between the Terminal Users being in equivalent situation pro-rata of their requested use of the related Flange or Commodity Transfer

Point, Terminal Operator is under no obligation to justify its decisions in respect of the confirmation process vis-à-vis the Terminal User.

3.5.7.2.5 Action of the Terminal User

Notwithstanding the provisions of AC 3.5.7.2.1, the normal nomination procedure described under AC 3.5.4.2 shall apply. Terminal Users shall not be obliged to re-nominate during a constraint.

3.5.7.2.6 Terminal Operator's Constraint Notice

In the cases as described in AC 3.5.7.2, Terminal Operator shall:

- use its reasonable endeavours to give timely notice – at least before the Applicable Interruption/Constraint Lead-Time – to the Terminal Users about the reduced availability of the capacity by sending a "Terminal Operator's Constraint Notice" by fax to the Terminal Users specifying the constraint start period, the constraint end period, the Flange, the direction and the remaining capacity,

- Apply a constraint on the Flange that limits the total hourly Confirmed Quantities of the affected Terminal Users; and

- Send a new TDT to notify the Terminal Users of the revised hourly Confirmed Quantities at the Flange in accordance with the confirmation process as described in this article 3.5.4.2 if necessary. Before the constraint end period, the Terminal Operator may issue a revised "Terminal Operator's Constraint Notice" in order to modify the constraint end time and/or the remaining capacity.

### 3.5.7.3 Matching procedure

3.5.7.3.1 Matching rules at the Commodity Transfer Point

At the Commodity Transfer Point Terminal Operator shall verify whether:

a) for each pair of shippers the Processed Quantities, nominated by Terminal User for delivery and/or redelivery at the CTP and the Processed Quantities nominated by Terminal User's counterparty for delivery to and/or redelivery from Terminal User at the Commodity Transfer Point are equal; and,

b) the upstream and downstream coded shippers contained in the notices emanating from the Terminal User and Terminal User's Counterparty(ies) are the same.

c) the upstream coded Terminal User remains with a positive Gas In Storage after the commodity transfer.

In case the result of the verification performed by Terminal Operator pursuant to and in accordance with AC 3.5.7.3.1:

a) is positive for both AC 3.5.7.3.1 (a), (b) and (c), then the Matched Quantities are equal to the Processed Quantities;

b) without prejudice to the next paragraph, in case the check is not positive for AC 3.5.7.3.1 (a), then the Matched Quantities will be the lesser of:

   (i) the Processed Quantities at the Commodity Transfer Point by Terminal User; and,

   (ii) the Processed Quantities nominated by Terminal User's Counterparty(ies); and,

   (iii) the Terminal User's Gas In Storage before commodity transfer;

c) is not positive for AC 3.5.7.3.1 (b), the Matched Quantities will be zero (0).

3.5.7.3.2 Matching rules at the Flange

At the Flange, Terminal Operator shall verify whether:

a) for each Terminal User/ Terminal User's Counterparty pair the processed quantities as notified by the Adjacent TSO, nominated by Terminal User's Counterparty for delivery) and/or redelivery) at the Flange and the Processed Quantities nominated by Terminal User for delivery to and/or redelivery from Terminal User's Counterparty at the Flange are equal; and,

b) the coded shipper pair contained in the notice emanating from the Adjacent TSO and the coded shipper pair resulting from Terminal User's Nomination at the Flange are the same.

In case the result of the verification performed by Terminal Operator pursuant to and in accordance with AC 3.5.7.3.2 is:

a) Positive for both AC 3.5.7.3.2 (a) and (b), then the Matched Quantities are equal to the Processed Quantities;

b) Is not positive for AC 3.5.7.3.2 (a), then the Matched Quantities will be the lesser of:

   (i) the Processed Quantities at the Flange by Terminal User; and,

   (ii) the processed quantities as notified by the TSO, nominated by Terminal User's counterparty;

c) Not positive for AC 3.5.7.3.2 (b), the Matched Quantities will be zero (0).

## 3.6 OPERATING PROCEDURES FOR MEASUREMENT AND TESTING

### 3.6.1 General Description

#### 3.6.1.1 Definitions and units

The definitions and units are in accordance with those defined in the LNG Access Code.

Specifically:

a) Units

| | |
|---|---|
| **Volume** | $m^3$ |
| **Flow rate** | $m^3/h$ |
| **Energy** | Joule or Wh and its multiples kJ, MJ and GJ ; kWh, MWh and GWh |
| **Pressure** | bar |
| **Temperature** | K or °C |
| **Normal density** | $kg/m^3(n)$ |
| **Gross calorific value** | $kJ/m^3(n)$ |
| **Wobbe Index** | $kJ/m^3(n)$ |
| **Reference volume** | $m^3(n)$ |
| **Reference flow rate** | $m^3(n)/h$ |
| **Energy flow rate** | GJ/h |

b) Reference conditions: normal

| | |
|---|---|
| **Temperature** | 273.15 °K or 0 °C |
| **Pressure** | 1.01325 bar |

#### 3.6.1.2 Quality assurance

The quality assurance of each instrument is intended to detect any failure of the instrument and to trigger corrective action. This quality assurance check is achieved by the on-line control completed by the software, the off-line comparisons and the checking procedures for each instrument.

### 3.6.1.3 Principle of metering

Quantities measured by the system: actual volume flow rate, normal flow rate, calorific flow rate and the hourly and daily totals of actual volume, normal volume and energy for the complete station.

The gas quality parameters determined by the system are as follows: gross calorific value, reference density, mole fractions of components in the gas, actual and normalized compressibility factor, $CO_2$ and Wobbe index.

The main characteristics of the metering system are:

a) Measurement of the actual volume flow rate using turbine meters as the primary device.

b) Pressure and temperature transmitters for measuring the actual thermodynamic conditions.

c) Conversion of the actual flow to the reference conditions using the actual composition of the gas.

d) Each turbine meter equipped with temperature sensor and line pressure transmitter.

e) Gas properties determined by on-line gas chromatographs. The analysed gas components are: saturated hydrocarbons from methane to pentane, carbon dioxide and nitrogen (main components).

f) Energy calculated by multiplying the gross calorific value calculated from the composition of the gas by the gas flow at reference conditions.

g) Normal density, Wobbe factor and compressibility factor as determined from the composition of the gas.

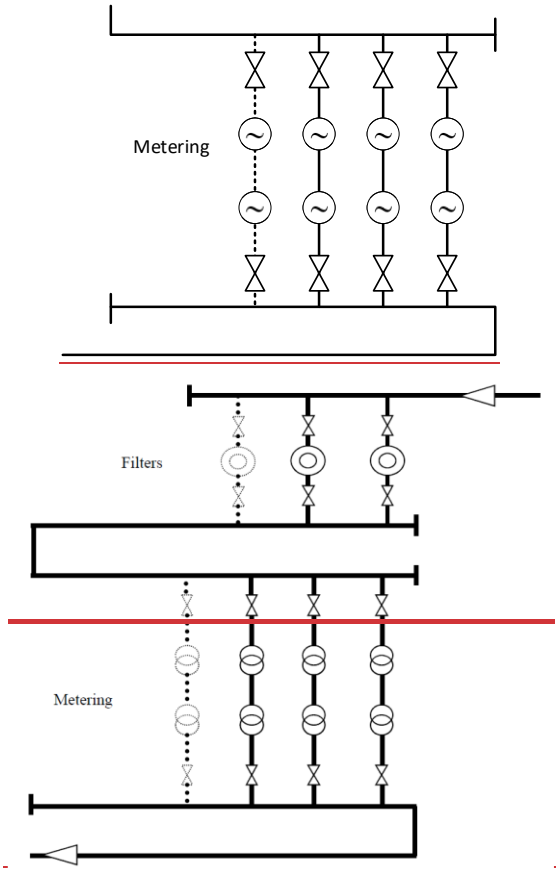
h) Data acquisition and calculations performed by one central computing system.

The metering station is equipped with two chromatographs. These chromatographs communicate their results to all central computing systems.

In the event of a serious fault, the quantity of natural gas shall be determined, in agreement with the parties, on the basis of the best data available.

### 3.6.1.4 General layout

The general layout is set out below:

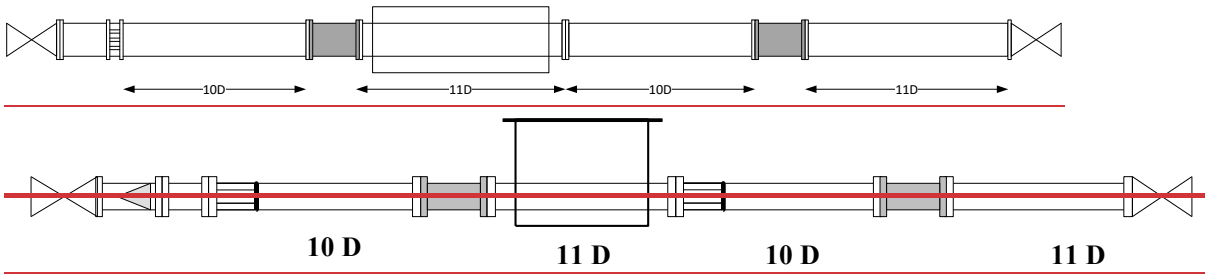



~~3.6.1.4.1 Central filtering~~

~~The gas is filtered by a group of filters to protect the turbines from the attack of hard dusts.~~

~~3.6.1.4.2~~3.6.1.4.1 Design of the metering lines:

Distance D is the internal diameter of the metering pipe.




From upstream to downstream:

- Upstream valve;
- ~~3D straight length including a conic filter;~~
- ~~2D body to extract the conic filter;~~

- 10D upstream straight tube including the flow straightener at the inlet side of the tube. The type of flow straightener is "a bundle straightener" following ISO 5167;
- 3D meter spool;
- 11D spool including thermowells and an insulating cabinet;
- 10D upstream straight tube without ~~including the~~ flow straightener for the second meter;
- 3D meter spool;
- 11D spool including thermowells and sampling tap for the chromatographs and water dew point sensor; and
- Downstream valve.

The metering lines are thermally insulated over the full length between the inlet and outlet valves, excluding the valves.

### 3.6.1.5 Measurement of volume flow at line conditions

~~a) Four blade detectors generating a high-frequency signal (two on the turbine wheel and two on the reference wheel).~~

~~b) Two low-frequency generators in the totaliser of the meter.~~

~~c) Two thermowells in the meter itself, one for temperature measurement and one for checking (present during all the calibrations and checks).~~

~~The volume of gas flowing through the meter is proportional to the rotating speed of the turbine wheel. At each blade passage, the detector produces a pulse, which represents a certain quantity of gas.~~

~~This quantity is specific for each meter and is determined during calibration. The frequency of the signal is proportional to the flow. It is the high-frequency or "HF" signal. Since the deviation of the meter is a function of the Reynolds number, the quantity of gas represented by one HF pulse is dynamically adapted by the metering computer to force the error to be as close to zero as possible.~~

~~The mechanical totaliser is linked to the turbine wheel and generates a second pulse signal: the low-frequency or "LF" signal (max 1 Hz).~~

~~Each LF pulse corresponds to a rounded volume of gas.~~

~~This quantum is corrected by the metering computer to take into account the calibration curve of the meter in the same way as for the HF signal.~~

~~The totaliser also indicates the metered volume of gas by the means of a multiple-digit mechanical display not compensated for the real error curve of the meter.~~

~~Assuming there is no failure on the meter, the quantities provided by the LF and HF signals must be absolutely identical (permitted tolerance: quantity equivalent to one LF pulse). The system computer checks this tolerance.~~

Ultrasonic meter according to ISO 17089-1, Class 0.5

The output will include at least 2 programmable HF pulse signals of maximum 3.5 kHz, each able to transmit the linearized measured volume independent of the direction.

Fail Safe status outputs will include at least a digital signal (Fail Open) for detection of flow direction, malfunction and out of range operation.

Both directions will have a separate totalizer

### 3.6.1.6 Conversion of volumes to reference conditions

~~If by definition:~~ $$K = \frac{Z}{Zn}$$

~~According to the law of gases:~~

$$V_n m^3(n) / h = V_a m^3 / h \frac{PT_n 1}{P_n TK}$$

~~Where:~~

~~**Vn** is the volume at base conditions (Pn,Tn)~~

~~**Va** is the volume under the thermodynamic conditions of the meter~~

~~**P** is the absolute pressure in the meter measured at point "pr"~~

~~**Pn** = 1.01325 bar~~

~~**T** is the temperature in the meter expressed in K~~

~~**Tn** = 273.15 K~~

~~**Z** is the compressibility factor at (P,T)~~

~~**Zn** is the compressibility factor at (Pn,Tn)~~

~~The "K" value is easily computed from the "Kref" value, when the composition of the gas is known. This method called "Z or K transfer" is explained in detail in AC 3.6.3.2.~~

According to EN 12405-1

### 3.6.1.7 Determining energy density

~~E = Vn x GHV~~

~~Where:~~

~~Vn is the volume under normal conditions~~

~~GHV is the gross calorific value~~

The gross calorific value is calculated at 25°C from the gas composition determined by on-line gas chromatographs in accordance with the provisions set out in the EN ISO 6976~~-~~:1995 ~~standard~~.

## 3.6.2 Metering Accuracy

### 3.6.2.1 Core Principles

The purpose of the metering station is to accurately determine the quantities of energy imported via the terminal.

The concept of "Measurement Accuracy" is not a quantity and is not given a numerical value. A measurement is said to be more accurate when it offers a smaller measurement error.

To this end, maximum permissible errors (MPE) have been established as tolerances centred on a true value (traceable reference) so as not to favour or disadvantage either party.

These maximum permissible errors (MPE) are specified in accordance with the OIML R 140metrological requirements for Accuracy Class A.

Also, measurement uncertainties must remain substantially lower than the maximum permissible errors (less than one-fifth of the MPE).

### ~~3.6.2.1~~3.6.2.2 Measurement Uncertainty (k=2)~~Summary~~

a) In general

The measurement uncertainty for the metering station (based on the layout in 3.6.1.4)

| | |
|---|---|
| On volume | 0.13~~1~~ % |
| On energy | 0.16~~21~~ % |

Note

A statistical study on a representative number of measuring line and with turbine meters randomly calibrated over a period of six years per the harmonization of the European cubic Meter of Gas, showed that a major part of the calibration uncertainty is not systematic. Uncertainty on gross volumes for each meter may thus be considered as statistically independent

~~a) Detail per component~~

~~A statistical study on a representative number of measuring line and with turbine meters random calibrated on a period of six years after the harmonization of the European cubic Meter of Gas showed that the major part of the calibration uncertainty is not systematic. Uncertainty due to gross volumes of each meter may thus be considered as statistically independent.~~

b) Measurement uncertainty per module or associated measuring instrument

To achieve and ensure the measurement uncertainty for the metering station, maximum permissible errors (MPE) and uncertainties for the measurement system modules and the associated measuring instruments, are specified in accordance with the OIML R 140 metrological requirements for Accuracy Class A.

### ~~3.6.2.2~~3.6.2.3 Systemic Measurement Error~~Primary devices~~

To ensure that the metering stations' systematic measurement error is minimized as much as possible (centring on true value), calibration adjustments should be made to minimize the Weighted Mean Errors of each module or associated measuring instrument.

~~The real accuracy of a turbine meter in a metering field depends on several parameters. The main ones are:~~

~~a) The accuracy of the flow standard used for the calibration;~~

~~b) The repeatability of the turbine meter itself in a stable environment;~~

~~c) The pressure, the temperature and the flow profile effects on the calibration curve and consecutive differences between the on-site and the calibration environment;~~

~~d) The quality of the adjustment function for the individual calibration points; and~~

~~e) The mechanical disturbances.~~

~~In order to minimise these effects, every precaution is taken:~~

~~a) The meter and its 10D upstream piping including the flow straightener is considered as being a fixed package. The meter will be calibrated under pressure and temperature conditions close to the on-site conditions of the gas to be measured.~~

~~Since the flow straightener isolates the meter from the specific flow profile and from possible swirl effect, the environment of the meter during calibration and on site will be virtually identical.~~

~~b) The calibration curve in the range 25 - 100 % of the flow must be as flat as possible (within a band of max 0.3% wide) and the number of individual metering points will be sufficient to achieve a valid adjustment of the error curve. A polynomial function of the 3rd order is used.~~

~~c) The calibration facility performs the calibration at high pressure. This facility claims an accuracy of 0.2 %.~~

~~Based on the manufacturer's specifications and up-to-date experiences, namely the comparative analysis work led by the GERG, the repeatability of the meters is greater than 0.1 % within a confidence level of 95 %.~~

~~The total resulting error is composed of the calibration error, the repeatability error, the adjustment error and a small "site inaccuracy". According to estimates, the magnitude of the total error may not exceed 0.1 %.~~

~~Due to the statistical independence of the sources, the total estimated inaccuracy is:~~

$$~~e = \sqrt{0.2^2 + 0.1^2} = 0.22\%~~$$

~~3.6.2.3 GHV/K~~

~~Resulting from the same measuring devices (GC), it is important to consider the uncertainty of GHV and K together.From experience, the inaccuracy in calculating the "GHV/K" value can be estimated as being 0.18 %.~~

3.6.2.4 Flow requisites ~~Conversion factor~~

To reduce measurement errors and uncertainties, the flows through the metering lines must be conditioned with flow conditioners to reduce potential swirl(velocity angle)

~~The conversion factor is expressed as being:~~

$$\frac{pTn1 \cdot GCV}{PnTK}$$

$$~~e = \sqrt{0.1^2 + 0.04^2 + 0.18^2} = 0.21\%~~$$

~~3.6.2.5 Resulting accuracy on the measured volumes and energy data~~

~~The errors on the volumes measured by the turbine meters, on the conversion factor and on the calorific value being statistically independent:~~

~~General inaccuracy in volume:~~

$$~~e = \sqrt{0.22^2 + 0.21^2} = 0.3\%~~ ~~\text{(for one measuring line)}~~$$

~~Inaccuracy in energy:~~

$$~~e = \sqrt{0.11^2 + 0.18^2} = 0.21\%~~ ~~\text{(with 5 double measuring lines in service)}~~$$

## 3.6.3 Procedures for Calibration and Checking

### 3.6.3.1 Introduction

The metering techniques have been selected to ensure that the metering equipment will perform within the defined tolerances over several years without any need for recalibration. The metering system is also designed in such a way that almost any malfunction or drift likely to affect a metering device will be detected immediately by real time checking. This is achieved by a centralized approach towards data acquisition and system computing power.

The detailed automatic procedures managed by the software and the

consequence on the measuring process (alarms, substitution values etc. ) are touched on in this chapter. This level of checking is referred to as "level 1", a manual check on site is referred to as "level 2" and the calibration on site and in the laboratory is referred to as "level 3".

A distinction must be made between calibration (adjustment) and checking (verification):

a) The significance of calibration is that metering equipment is physically adjusted or that the coefficients of the transfer function are adapted to adhere to the reference~~calibration~~ values as closely as possible.

b) The aim of checking is to verify that a metering device works within its defined tolerances (MPE) by comparing single or several measurements with the corresponding reference values (automatically or manually) or by carrying out a correlative comparison of several similar measurements provided by independent metering devices. The reason for the distinction between checking and calibration is that for some devices ~~, such as the Z-meters,~~ an accurate check is easy to make on site, whereas a full calibration is only made in a laboratory environment and can take several days.

### 3.6.3.2 General rules

Fluxys LNG shall undertake to directly or indirectly maintain and operate all measurement and testing equipment. This equipment will be subject to the applicable laws and regulations in force and relevant to natural gas measurement and testing equipment.

The level 1 checks shall be made continuously by software. No measurement will be taken into account if it has not been fully validated through the automatic test procedure described for each device in this chapter.

The level 2 "manual check/inspections" shall be completed at regular intervals as agreed upon between the parties concerned or systematically in case of permanent drifts detected by a level 1 check.

The proposed frequencies for conducting level 2 checking are based on the stability of each metering device, backed up by experience. However, in case of any doubt, the parties shall be entitled to require manual tests to be completed no more frequently than once a month.

The equipment used for checking shall be calibrated and certified by an ISO/IEC 17025 accredited laboratory ~~able to guarantee compliance with international or national standards~~. Valid certificates shall always be available for this equipment.

The composition of the calibration gases should be certified by an ISO/IEC 17025 accredited laboratory.

~~The pure gases should be certified by the manufacturer or proven to be of the claimed purity by analysis of the content of the impurities. The current thermodynamic properties will be taken from ISO 6976-1995.~~

The Z factor tables or the method for calculating the Z factor values for gases shall be based on reference values resulting from the work carried out by GRI and GERG: 1988 or AGA 8:1992.

Fluxys LNG shall provide reasonable notice to enable concerned parties to witness the procedures and to observe the operation of the measuring and testing facilities.

Calibration form sheets have to be arranged so that errors before and after any adjustment are immediately apparent~~evident~~.

In case the measurements are within the permitted tolerances, the corresponding device will normally not be recalibrated except if the previous check shows that the discrepancies are systematic and are frequently close to the tolerance limits.

### 3.6.3.3 Tables of tolerance and frequencies

| Instruments | Level 1 check | Level 2 check | Level 3 check |
|---|---|---|---|
| | Frequency | Frequency | Frequency |
| ~~Turbine meter~~ Ultrasonic meter (UFM) | Daily | | ~~six years~~ |
| G chromatograph | C | 4~~Three~~ months | 12~~six~~ months |
| P transmitter | C | 6~~Six~~ months | commissioning |
| ~~Pt 100 sensors~~ T transmitters | C | 6~~Six~~ months | Commissioning |
| Multimeters A/D | C | | Change of Software |

Ultrasonic Flow Meter: Based upon the philosophy of the PTB guideline TR-G18 issue 11/13, the recalibration period of the UFM package **can be unlimited** if the following conditions are fulfilled:

- The UFM is continuously in series with a second meter of different technology (The different technology can be a turbine meter or an UFM with different sensors path configuration).
- An initial comparison of the flow meters in series is performed at commissioning with Q>Qt for > 1 hour. Comparison will be performed with volume in base condition.
- During annual comparison of the ultrasonic flow meters in series, an operational test with Q>Qt for > 1 hour shall be executed. Comparison will be performed with volume in base condition. The change in difference between two meters in series should be ≤ 50% of the MPE compared to the difference determined during commissioning.
- The annual comparison shall be executed in-situ.

C continuously by software (in real time)

% accuracy of the reading value within the working range

~~(1) of the gross calorific value~~

### 3.6.3.4 ~~Turbine m~~Meters

#### 3.6.3.4.1 Standard

Calibration will take place in an internationally recognizedISO/IEC 17025 metrological calibration site ~~designated by Fluxys LNG at it sole discretion~~.

#### 3.6.3.4.2 Uncertainty~~Inaccuracy~~

See 3.6.2.2~~0.20 %~~

#### 3.6.3.4.3 Primary calibration

a) Every meter is individually calibrated at atmospheric pressure (legal European Calibration) and at high pressure in order to use the meter within the range specified in the calibration certificate(s) according to Reynolds

number. ~~Moreover the calibrations results will be in accordance with Annex E of the standard EN 12261;~~

~~b) At atmospheric pressure, the meter will be calibrated at six flow rates: 100, 70, 40, 25, 10 and 5% of the Qmax;~~

~~c) At high pressure, the meter will be calibrated at least eight flow rates at 100, 85, 70, 55, 40, 25, 10, and 5% and possibly 3% of the Qmax depending of the contractual flow rate requirement; and~~

~~d) The high pressure calibration is performed by an accredited (ISO 17025) calibration facility that maintains measurement traceability to the European Harmonized cubic meter of gas (L.N.E., N.M.I. , P.T.B. – Westerbork, TransCanada Calibrations, …), designated by Fluxys LNG at it sole discretion.~~

**Correction curve**

- The results of the calibration certificate will be used by the flow computer in order to correct any known systematic error. The correction function can be
    - A piecewise linearization depending on the Reynolds number
    - A polynomial function of the 3rd order determined by the least squared method and calculated by fitting the correcting factors of the certificate, to force the resulting error to zero:

If f (Q) is the value of this polynomial at flow "Q", the corrected flow will be:

$$Qc = Q \cdot f(Q)$$

If f (Re) is the value of this polynomial at flow "Q", the corrected flow will be:

$$Qc = Q \cdot f(Re)$$

- The four coefficients a, b, c, d defining the polynomial will be put in the flow computer. The hourly and daily reports recorded will include for each Measuring line the actual volumes and the corrected volumes in order to appreciate the mean level of the correction. An example thereof is shown in Appendix C[AB1] .

a) The value of the quantity of the gas represented by one LF pulse and the number of HF pulses corresponding to 1 m³ is given on the official certificate from the calibration facility. The input value for the WattMan is the HF frequency at 100 % of the range of the Meter. It will be calculated by the following formula:

$$f = R \cdot p / 3600$$

Where:

- **R** is the nominal range of the Meter; and
- **P** is the number of HF pulses for 1 m³.

b) A polynomial of the 3rd order will be determined by the least squared method and calculated by fitting the correcting factors of the certificate, to force the resulting error to zero:

c) If f (Q) is the value of this polynomial at flow "Q", the corrected flow will be:

$$Qc = Q \cdot f(Q)$$

d) If f (Re) is the value of this polynomial at flow "Q", the corrected flow will be:

$$Qc = Q \cdot f(Re)$$

e)a) The four coefficients a, b, c, d defining the polynomial will be put in the WattMan. The hourly and daily reports recorded will include for each measuring line the actual volumes and the corrected volumes in order to appreciate the mean level of the correction.

f) Automatic check (level 1)

g) The software allows a systematic and sophisticated on-line checking of the turbine meters:

h) The presence of all the blades is guaranteed by the on-line comparison between HF and LF pulses.

i) The previous test also ensures the correct operation of the mechanical totaliser.

j) The calculation of flow ratio

3.6.3.4.4 Off-line checking:

The flow ratio (= Q line / Q tot) are listed on a daily basis. Graphs completed on a monthly basis, make it possible to detect any drift in a turbine meter. In case a drift is detected, a detailed analysis will be started and if necessary, the suspected turbine meter will be replaced.

3.6.3.4.5 Recalibration

A primary recalibration will be made after 6 years.

After the calibration, a new error curve will be determined and entered into the metering computer even if all the new calibration points were within the tolerance of 0.3 %

### 3.6.3.5 Pressure transmitters

3.6.3.5.1 Primary calibration

Primary calibration of each transmitter is completed in an ISO/IEC 17025 accrited laboratory.the central laboratory using a Rosemount barometer and a Desgranges & Huot automatic reference pressure generator. The electrical signal is converted into a digital signal using a HP3458 multimeter to a basic accuracy of 0.0025 %.

Random pressures of between 40 and 90 barg are generated in increments of 2.5 bar. For each pressure, the system records the voltage supplied by the transducer and measured at the terminals with a parallel resistor to an accuracy of 0.005%. The voltage is expressed on a graduated scale from 0 to 100,000 points. Calibration consists of defining a polynomial curve of the second order with the "pressure, points" pairs:

$$p = a + b\,v + c\,v^2$$

a, b and c represent the calibration coefficients for the transmitter; these coefficients are entered into the computer.

~~3.6.3.5.2 Primary calibration standard~~

~~a) Dead weight scale~~

~~Desgranges & Huot, group S2, type 50.000-II.~~

~~Maximum inaccuracy: 0.005 %.~~

~~b) Barometer~~

~~Rosemount type 1201 F1.~~

~~Maximum inaccuracy: 0.05 %.~~

~~3.6.3.5.3~~3.6.3.5.2 Uncertainty~~Inaccuracy~~

0.75~~1~~ % of the value displayed between 40 and 90 barg.

~~3.6.3.5.4 Calibration card sample~~

~~3.6.3.5.5~~3.6.3.5.3 Automatic check (level 1)

Before a reading is taken into consideration during the metering process, a series of rigorous tests must be undertaken to detect and rule out suspect values. The software part of the present document outlines a description of these tests.

Due to the symmetry of the metering lines, the pressure measured at point pr at each of the ~~turbine~~ meters within the same system must be identical whilst allowing a tolerance of 0.2%.

As a result, comparing all of the on-line measurements to detect any drift or fault in a piece of equipment is an attractive idea.

In the event of any divergence between one or several pressure transducers and the "majority" of the other transducers, an alarm state is loaded and the suspect values are ruled out. The alarm type as well as the number of the alarms generated per hour and per day are printed in the log book.

~~3.6.3.5.6~~3.6.3.5.4 Manual check on site (level 2)

The following three pressures will be generated:

a) Minimum contractual pressure (1)

b) Maximum permissible pressure (2)

c) $\frac{(1)+(2)}{2}$ bar

Exception to the general rule governing the absence of any adjustment of the metering device in question if the permitted tolerance is observed during operation, any drift from zero (the most frequent effect on equipment of this type) will be eliminated by adapting the calibration polynomial "a" factor for the transmitter.

If after resetting zero, the transmitter fails to observe the conformity threshold, ~~you will need to replace~~ it will be replaced with a backup transmitter and send it to the laboratory for recalibration.

~~3.6.3.5.7 On-site calibration standard~~

~~a) Manometric scale~~

~~Desgranges & Huot type DPG 5, with an inaccuracy of 0.01%~~

~~b) Precision barometer~~

~~Desgranges & Huot type, with an inaccuracy of 0.005 %~~

~~3.6.3.5.8 Frequency of the manual checks~~

~~The pressure transmitters are all subject to an annual check (they are not tested at the same time, but at regular intervals; for example, at a station equipped with six pressure transmitters, this equipment will be tested at the rate of one transmitter every two months). Each line is checked every six months.~~

~~If there is continuous on-line comparison, then it is not critical to test all of the pressure transmitters at the same time. In case of any abnormal divergence between the average hourly values for the equipment being operated, the suspect transmitters will be subject to an individual check.~~

### 3.6.3.6 Temperature sensors

Primary calibration of each transmitter is completed in an ISO/IEC 17025 accredited laboratory

~~Resistance-type Pt 100 four-threaded sensor.~~

~~3.6.3.6.1 Standard~~

~~A Leeds & Northrop 25 reference resistor Ω calibrated by the NMi (Nederlands Meetinstituut) and associated with the use of a Wheatstone $10^{-6}$ measuring bridge. Accuracy: greater than 0.01°C.~~

~~Temperatures shall be calculated taking the ITS-90 recommendations into account.~~

~~3.6.3.6.2~~3.6.3.6.1 Uncertainty~~Inaccuracy~~

0.1°C (0.04 %) of the value displayed within a range of between 10 and ~~7~~30°C.

~~3.6.3.6.3 Primary calibration~~

~~To calculate the temperature being measured from resistance R that is being measured, all you need do is use the following formula:~~

~~$T = (R-R_0) / 0.390$~~

~~Primary calibration consists of determining the resistance R0 (resistance value at 0°C) of each element submerged in a bath of iced water the characteristics of which are standardised. The temperature/resistance ratio is based upon the linear regression between (R–R0) and T given in table 1 of the EN 60751 :1995 standard, which is graduated from 0° to 15°C.~~

~~3.6.3.6.4 Calibration card sample~~

~~3.6.3.6.5~~3.6.3.6.2 Automatic check (level 1)

Before a reading is taken into consideration during the metering process, a series of rigorous tests must be undertaken to detect and rule out suspect values. The software part of the present document outlines a description of these tests.

Due to the symmetry of the metering lines and due to their excellent thermal insulation, the temperatures measured within each one of the turbine meters must be identical whilst allowing a tolerance of 0.3°C.

As a result, comparing all of the on-line measurements to detect any drift or fault in a piece of equipment is an attractive idea.

In the event of any divergence between one or several temperature transmitters and the "majority" of the other transmitters, an alarm state is loaded and the suspect values are ruled out. The alarm type as well as the number of the alarms generated per hour and per day are printed in the log book.

~~3.6.3.6.6 Manual check on site (level 2)~~

~~In principle, the characteristics of the Pt 100 plate sensors are extremely stable. Due to their stability and the systematic use of paired elements, it is not critical to frequently carry out level 2 checks. In case of doubt, the displayed value can be compared with the measured value using a reference thermometer fitted independently on the same metering line.~~

~~3.6.3.6.7 Frequency of the manual checks~~

~~These instruments are all subject to an annual check (they are not tested at the same time, but at regular intervals; for example, at a station equipped with six temperature transmitters, this equipment will be tested at the rate of one transmitter every two months).~~

### 3.6.3.7 Chromatographs

3.6.3.7.1 Standard

The calibration gas is certified in an ISO/IEC 17025 accredited laboratory.~~reference gas is a calibrated gas and prepared by gravimetric analysis the composition of which is known, traceable and certified~~.

3.6.3.7.2 Uncertainty~~Inaccuracy~~

0.15 % of the gross calorific value based on the ISO 6976-1995 standard, the reference density under base conditions based on the ISO 6976-1995 standard and 0.18 % of the Z/Zn factor in accordance with the GERG:1998 or AGA8:1992 method based on a full analysis of its composition.

3.6.3.7.3 Automatic check (level 1)

Every time that the chromatograph produces an analysis, the metering computer performs a series of tests to validate this analysis. Calculated from analyses of the same gas originating from all ~~of~~ the chromatographs, the GHV, reference density and factor Z values are also the subject of a comparative analysis to highlight any abnormal divergences. In this case, the number of devices (2) allows you to identify the faulty instrument.

If the difference between the value of one GC~~H~~V measured by a gas chromatograph and the GC~~H~~V measured by the other gas chromatograph is greater than the tolerance, then the GC~~H~~V measured by the first gas chromatograph is rejected. If this rejection is due to variable composition of the gas, the rejected analysis is likely to be used.

3.6.3.7.4 Manual check on site (level 2)

This manual check requires the use of a secondary reference gas whose composition is known. This gas consists of a sample of grid gas taken and bottled at the metering station. After being bottled, the composition of the gas is determined by an ISO/IEC 17025 accredited laboratory ~~a certified laboratory~~. The check in question consists of performing five consecutive analyses of the secondary reference mix using the chromatograph being studied. If the difference between the reference density and the GHV measured by the chromatograph and the values calculated from the composition of the secondary reference mix exceeds 0.15%, the chromatograph must be checked.

~~3.6.3.7.5 Frequency of the manual checks~~

~~Selected alternately, the two chromatographs are the subject of a six-monthly check performed every three months~~.

### 3.6.3.8 Energy Conversion Devices~~A/D converters~~

~~Two A/D converters are installed on each of the metering computers.~~

Two fully equipped Energy conversion devices (ECD) " perform the measuring and conversion function and the gas quality control. The ECD "A" is dedicated to the upstream Measuring System and the ECD "B" to the downstream Measuring System. Each ECD is equipped with a central computer and a data acquisition system. This subsystem includes A/D converters for the 4-20 mA analogue inputs; the pulse counters for the digital inputs and the HART modules for the transducers.

3.6.3.8.1 Standards

A procedure should be carried out to ensure that the relevant configuration has been properly inserted in the computer software and that it performs the flow calculation in accordance with the appropriate standard.

~~In order to calibrate and test the A/D converters (digital multimeters), a calibrated reference power source that comply with the national or international standards in force will be required.~~

3.6.3.8.2 Uncertainty~~Inaccuracy~~

ng

~~8 millionths of the value displayed + 1 millionth of the metering range when performing the measurements within the range 1 V.~~

~~12 millionths of the value displayed + 5 millionth of the metering range when performing the measurements within the range 100 Ω.~~

~~The parallel resistors used to convert the current into voltage add 50 millionths to the voltages measured.~~

3.6.3.8.3 Automatic check (level 1)

~~The A/D converters perform voltage and resistance measurements. A high-quality multiplexer performs an analysis of the various sources of signals originating from the transmitters. The maximum thermal phase displacement specified for the relays increases to 5 µV. Two reference voltages and one reference resistance will be added to the other sources being measured in order to check the actual accuracy of the A/D converters in real time. If the tolerance is not observed, the A/D converter in question will be replaced by a backup device and will be returned to the manufacturer for repair and/or recalibration.~~

- At the start of an hour, simultaneously record the timer index and the Vm index.
- Each minute print a snapshot report and record pressure, temperature, K and GCV.
- At the start of the following hour, simultaneously record the timer index and the Vm index.

- Record the Vm, Vb, pressure, temperature, K, GCV and energy in the hourly line report.
- Check that the flow stability within the hour is ≤5%. If this is not the case, restart the procedure.
- Check the correspondence between the arithmetic average of the values (P, T, K, GCV) and the weighted values of the HOURLY VALUE.
- Check the HF-timer, calculation of the Vm to the Vb with pressure, K, temperatures, correction curve of the Gas Volume Meter. Calculation of energy from volume and GCV.
- Compare the analyses given by the chromatographic integrators and the computer log.
- Calculate the calorific value, the density and the compressibility factor by means of a procedure independent of the ECD. Care should be taken to use the same standards for the calculations of checks as those used in the ECD.
- Check agreement of other apparatus measurements read from apparatus and those given by the ECD.

3.6.3.8.4 On site check (level 2)

Due to the real time checking technique of the A/D converters, any level 2 on site check is superfluous.

3.6.3.8.5 Primary calibration

~~The multimeters or A/D converters are the subject of a main calibration performed by the manufacturer using standard measures that comply with national or NIST standards.~~

The procedure is conducted by the commissioning after any significant change of software. For a minor software update, the updates of system A and system B are staggered to validate the update by comparison of the logs of the 2 systems.

3.6.3.8.6 Recalibration

In case of any abnormal drift detected during an in line check or following a repair, the manufacturer will have to recalibrate the A/D converter in question using the same procedures as those used during primary calibration.

## 3.6.4 References

**Note**: Unless otherwise specified, all referenced norms and standards shall be applied in their latest published versions. Any updates to a more recent edition of a referenced standard will be adopted as soon as their implementation is reasonably practicable.

OIML R 140: Measuring Systems for Gaseous Fuel

ISO CD 15970~~: 1997~~ : Natural gas – Measuring the properties - Part 1: Volumetric properties: density, pressure, temperature and compression factor

ISO/DIS 14111~~: 1994~~ : Guidelines for traceability in analysis

NBN EN ISO~~/FDIS~~ 6974: ~~1997 :~~ Natural gas: Determination of composition with defined uncertainty by gas chromatography – Part 1: Guidelines for custom analysis

ISO 19739:~~6326: 1997 :~~ ~~Natural gas – Determination of sulfur compounds – Part 2: Gas chromatographic method using an electrochemical detector for determining odoriferous sulphur compounds~~ Natural gas Determination of sulfur compounds using gas chromatography

NBN EN ISO 6976: 1995 : Natural gas – Calculation of calorific value, density, relative density and Wobbe Index from composition

~~ISO 9951: 1993 : Measurement of gas flow in closed conduits – Turbine meters~~

EN 60751: ~~1995 :~~ Industrial Platinum Resistance Thermometer Sensors

~~EN 12261: Turbine gas meters~~

NBN EN 12405-1: Gas meters – Conversion devices – Part 1 : Volume conversion

ISO 17089-1: Measurement of fluid flow in closed conduits — Ultrasonic meters for gas — Part 1: Meters for custody transfer and allocation measurement

PTB guideline TR-G18 issue 11/13: Gas Measuring Instruments - Requirements for continuous series connection of two ultrasonic gas meters

ISO 5167 -1: Measurement of fluid flow in circular cross-section conduits running full using pressure differential devices – Part 1: General

ISO 10715: ~~1997 :~~ Natural gas – Sampling guidelines

ISO 6143: ~~1981:~~ Gas analysis - Determination of composition of calibration gas – Comparison methods

ISO/UIC 17025: General Requirements for the Competence of Testing and Calibration Laboratories

ISO 12213: ~~1997:~~ Calculation of compression factor (GERG '88 and AGA 8 – '92)

~~Any change made to a more recent edition of any of the standards referred to will be implemented as soon as its application is reasonably possible.~~

## 3.7 MAINTENANCE OF THE FACILITIES AT THE LNG TERMINAL

### 3.7.1 Terminal Operator's obligation to operate, maintain and repair the LNG Terminal

Terminal Operator shall, operate, maintain and repair the LNG Terminal and keep the LNG Terminal in good working order and condition in order to fulfil its obligations and operate the LNG Terminal in accordance with the standards of a Reasonable and Prudent Operator.

Subject to the provisions of this chapter, Terminal Operator has the right to shut-off, reduce or curtail all or part of the LNG Terminal for maintenance, repair or replacement works of the LNG Terminal which works may have an impact on the availability of the LNG Services. Such maintenance, repair or replacement works shall be limited in duration and instances insofar as reasonably possible in accordance with the provisions of this section.

Any reduction in LNG Service for amongst others maintenance, repair or replacement works shall be allocated by Terminal Operator between Shipper or Transshipper and the Other Shippers or Other Transshippers and, as the case maybe, the Other Users, on a fair and equitable basis, and to the extent possible pro rata their respective LNG Service for the parts of the service being unavailable.

To the extent the LNG Service or any part thereof is unavailable due to such maintenance, repair and replacement works, the Basic Storage Duration and Basic Send Out Capacity associated with the impacted LNG Service will be extended pro rata temporis.

### 3.7.2 Planned Maintenance

**3.7.2.1** As soon as possible and in any event not later than 15 September prior to the beginning of each Contract Year, Terminal Operator and Shipper or Transshipper shall consult with the Other Shippers and Other Transshippers and the Other Users and shall use their reasonable endeavours to agree on or before 30 September prior to the beginning of each Contract Year on a program designed to co-ordinate and synchronise the anticipated maintenance, repair and replacement works to be performed at the LNG Terminal and Segment 1, (the "***Long Term Planned Maintenance***") so as to minimise any disruptions in the ability of Shipper or Transshipper to use its LNG Services, taking into account Other Shipper and Other Transshippers and Other Users similar interests. For the avoidance of doubt, the Long Term Planned Maintenance for Shipper and Other Shippers does not necessarily need to coincide with the Long Term Planned Maintenance for Transshipper and Other Transshippers.

Any Long Term Planned Maintenance scheduled during any Contract Year shall be performed during the period between 1 April and 30 September of any given Contract Year, unless it is impossible to execute such Long Term Planned

Maintenance in said period (e.g. for reason of unavailability of qualified contractors). The schedule of such Long Term Planned Maintenance shall be binding once scheduled by Terminal Operator either pursuant to the agreement with Shipper or Transshipper and Other Shippers and Other Transshippers and Other Users or if no such agreement is reached as scheduled by Terminal Operator, and shall not be rescheduled thereafter and if rescheduled, the aggregate of the previously scheduled and the rescheduled planned maintenance days shall count towards the Reduced Service Days for such Contract Year and Terminal Operator shall be responsible for any impacts to Shipper's or Transshipper's ability to use its Capacity Service.

**3.7.2.2** Without prejudice to the above, Terminal Operator shall have the right to perform maintenance, repair and replacement works required in order to maintain the safety and integrity of the operations of the LNG Terminal or Segment 1 which Terminal Operator was unable to schedule according to the provisions of AC 3.7.2.1 above (the "***Medium Term Planned Maintenance***").

Terminal Operator shall notify Shipper or Transshipper the schedule of such Medium Term Planned Maintenance as soon as possible but not later than one hundred (100) Days before such Medium Term Planned Maintenance is due to be performed. Terminal Operator shall use reasonable endeavours to perform such Medium Term Planned Maintenance in the Months of April through September. The date(s) of such Medium Term Planned Maintenance shall be binding once notified and shall not be rescheduled thereafter and if rescheduled the previously scheduled planned maintenance days shall count towards the Reduced Service Days for such Contract Year and Terminal Operator shall be responsible for any impacts to Shipper's or Transshipper's ability to use its LNG Services. For the avoidance of doubt, the Medium Term Planned Maintenance for Shipper and Other Shippers does not necessarily need to coincide with the Medium Term Planned Maintenance for Transshipper and Other Transshippers.

**3.7.2.3** Where hereby referred, Planned Maintenance shall mean Long Term Planned Maintenance and/or Medium Term Planned Maintenance.

### 3.7.3 Short Term Planned Maintenance and Unplanned Maintenance

**3.7.3.1** Without prejudice to AC 3.7.2.1 and 3.7.2.2, Terminal Operator shall have the right to perform maintenance, repair or replacement works which are required to be promptly performed in order to maintain the safety and integrity of the operations of the LNG Terminal or Segment 1 (the "***Short Term Planned Maintenance***"). Terminal Operator shall promptly notify Shipper or Transshipper thereof and shall notify Shipper Transshipper of the expected duration and extent of the reduction of the LNG Services and any such reduction shall be fairly and equitably allocated to Shipper or Transshipper and the Other Shippers and Other Transshippers and Other Users. The date(s) of such Short Term Planned Maintenance shall be binding once notified and shall not be rescheduled thereafter and if rescheduled, the aggregate of the

previously scheduled and the rescheduled Short Term Planned Maintenance Days shall count towards the Reduced Service Days for such Contract Year and Terminal Operator shall be responsible for any impacts to Shipper's or Transshipper's ability to use its LNG Services. For the avoidance of doubt, the Short Term Planned Maintenance for Shipper and Other Shippers does not necessarily need to coincide with the Short Term Planned Maintenance for Transshipper and Other Transshippers.

**3.7.3.2** In case of an Emergency, Terminal Operator shall have the right to reduce in all or in part the LNG Services provided Terminal Operator shall promptly notify Shipper or Transshipper thereof and shall notify Shipper or Transshipper of the expected duration of the reduction of the LNG Services and any such reduction shall be fairly and equitably allocated to Shipper or Transshipper and the Other Shippers and Other Transshippers to the extent possible on a pro rata basis (the "***Unplanned Maintenance***").

**3.7.3.3** Such Short Term Planned Maintenance or Unplanned Maintenance shall be limited to the reduction of the LNG Services which is strictly necessary for Terminal Operator to remedy the cause thereof. Terminal Operator shall promptly inform Shipper or Transshippers and the Other Shippers and Other Transshippers as soon as possible on the resumption of the performance of the LNG Services.

### 3.7.4 Allowance and Adjustment of the Capacity Charge

**3.7.4.1** Without prejudice to following paragraph, the total number of Days in any Contract Year during which the Capacity Services is reduced in whole or in part by Terminal Operator due to Planned Maintenance, Short Term Planned Maintenance and Unplanned Maintenance (the "***Reduced Service Days***") shall not, in aggregate be more than eight (8) Days for each Shipper or Transshipper.

However, every sixth (6th) Contract Year, starting in 2009, the number of Reduced Service Days for each Shipper or Transshipper in such Contract Year shall not, in aggregate, exceed fourteen (14) Days provided that the six (6) additional Days shall be scheduled under the Long Term Planned Maintenance provisions.

The number of Reduced Service Days for each Shipper or Transshipper in any Contract Year during which the LNG Services are reduced in whole or in part by Terminal Operator due to Short Term Planned Maintenance or Unplanned Maintenance shall not, in aggregate be more than three (3) Days of which only two (2) such Days may be used by Terminal Operator for Unplanned Maintenance.

The number of Reduced Service Days shall be calculated on a full Day equivalent basis meaning, by way of example, that (i) if the LNG Service is completely reduced during six hours it shall be accounted for as 0.25 of a Day and (ii) if 50% of the LNG Service is reduced during four (4) complete Days it shall be accounted for as two (2) Days.

**3.7.4.2** During any Planned Maintenance, Short Term Planned Maintenance and Unplanned Maintenance the Capacity Charge shall remain payable by Shipper or Transshipper to Terminal Operator provided the number of Days during which the LNG Services are reduced does not exceed the number of Days provided for in AC 3.7.4.1.

In the event Terminal Operator exceeds the number of Days of Planned Maintenance, Short Term Planned Maintenance and Unplanned Maintenance above the allowed number of Days, the Capacity Charge shall no longer be payable until the full resumption of the LNG Service.

### 3.7.5 Safe berth

Terminal Operator shall provide a safe berth at the Port. Safe berth means that Terminal Operator shall maintain, operate and keep in good working order the Jetties, the mooring installations and/or its (un)loading installations in compliance with applicable laws and regulations. Notwithstanding Shipper's or Transshipper's obligations in this respect, Terminal Operator shall request at least twice a Year from the relevant authorities (including the Port Authority) information on the available depth of the water in the Port (including the LNG Dock and alongside the Jetties) and shall provide, if and when received, such information to Shipper or Transshipper. It is understood that Terminal Operator shall not be held liable in case such information has not been obtained from the relevant authorities (other than for the reason that Terminal Operator omitted to request such information) and that Terminal Operator only transfers the information obtained from such relevant authorities without any verification on its content, completeness and/or correctness and cannot be held liable for its content, correctness and/or completeness.

Terminal Operator shall use due diligence, upon becoming aware hereof, to notify Shipper or Transshipper of any incident within LNG Dock, which may impact the permissible draft in the LNG Dock, including alongside the Jetties. Shipper shall be responsible for obtaining all port approvals, marine permits and other technical and operational authorisations necessary for the use of LNG Ships at the Port.

## 3.8 OPERATING RULES FOR QUALITY ADJUSTMENT

**3.8.1** Terminal Operator shall, upon specific request of Shipper, use its reasonable endeavours to adjust, or cause Transporter to adjust, the quality of the LNG delivered by Shipper at the Delivery Point, so that the Natural Gas:

a) delivered by Terminal Operator at the Redelivery Point; or,

b) delivered to Shipper's Client by Transporter at the point(s) (the "***Transmission Redelivery Point***") at which Transporter has to deliver Shipper's Client's Natural Gas to Shipper's Client pursuant to a Transmission Services Agreement concluded between Transporter and Shipper's Client;

as applicable, shall be in compliance with the quality specifications (the "***Advised Specifications***") for the Natural Gas for delivery to Shipper by Terminal Operator at the Redelivery Point, or delivered to Shipper's Client by Transporter at the Transmission Redelivery Point, as applicable, so that such Natural Gas shall be in compliance with the specifications of Shipper's Client, as advised and requested by the Shipper to Terminal Operator prior to the unloading of the LNG Ship. Such adjustment is referred to as Quality Adjustment.

**3.8.2** Taking into account the specifications of the LNG delivered by Shipper at the Delivery Point and the commingling of LNG in the LNG Terminal, Quality Adjustment shall be accomplished by the performance by Terminal Operator of the following services (collectively, the "***Quality Adjustment Services***") or a combination thereof:

a) Terminal Operator shall use its reasonable endeavours to bring Shipper's LNG, delivered to Terminal Operator by Shipper at the Delivery Point and to be delivered as Natural Gas to Shipper by Terminal Operator at the Redelivery Point, within the Advised Specifications (or as close as possible thereto) by means of mixing or segregating different LNG qualities in LNG storage tanks and send out lines.

Terminal Operator shall not incur any non-recoverable costs or expenses in relation to this AC 3.8.2 and that Terminal Operator cannot be held liable for the implementation of this AC 3.8.2(a).

b) Terminal Operator shall use it reasonable endeavours to procure that Transporter, upon delivery of Shipper's Client's Natural Gas to Transporter by Shipper's Client at the Transmission Redelivery Point, following its delivery by Terminal Operator to Shipper at the Redelivery Point, shall use its reasonable endeavours to mix or swap Shipper's Client's Natural Gas with Natural Gas in the Grid to bring Shipper's Client's Natural Gas to be delivered to Shipper's Client by Transporter at the Transmission Redelivery Point within the Advised Specifications (or as close as possible thereto).

The Avoided Costs Fee shall be due by Shipper to Terminal Operator, and provided that the Terminal Operator has complied with its obligations to use its reasonable endeavours as per this section, Terminal Operator cannot be held liable for the results of such mixing and/or swaps.

## 3.9 OPERATING RULES FOR LNG SHIP LOADING

Subject to the terms and conditions of the LNG Agreement and the LNG Access Code, Terminal Operator shall load an LNG Ship in the framework of an Additional Berthing Right or Stand Alone Berthing Right (or Berthing Right as the case may be), or Transshipment Berthing Right and/or provide Cool Down Services and/or Gassing Up Services to Shipper or Transshipper provided that:

a) Shipper disposes an Additional Berthing Right or Stand Alone Berthing Right (or Berthing Right as the case may be), or for Transshipper, Transshipper disposes of a Transshipment Berthing Right;

b) Shipper's or Transshipper's LNG Ship berths at the LNG Terminal in accordance with the rules as set out in the LNG Access Code;

c) Terminal Operator has received a duly completed and executed request for such services from Shipper or Transshipper;

d) Shipper's or the supplying Other Shipper's, respectively Transshipper's Gas in Storage, reduced by any Loaned Quantities, insofar applicable, is at least equal to the Nominated Volume of LNG;

e) Shipper or Transshipper shall ensure that such Nominated Volume of LNG will not lead to a threat to the heel, taking into account, amongst others, the required Minimum Send Out, the subsequent scheduled arrivals of Shipper's, Transshipper's, Other Shipper's, Other Transshipper's LNG Ships at the LNG Terminal;

f) Shipper or Transshipper shall ensure that, upon arrival at the LNG Terminal, the cargo tanks of the LNG Ship shall be under Natural Gas atmosphere or under $N_2$-atmosphere with the following gas specifications:

   (i) maximum 1 ppm $H_2O$ vapour;

   (ii) maximum 100 ppm $CO_2$; and

   (iii) maximum 100 ppm $O_2$.

g) Shipper or Transshipper shall ensure that, upon the start of the loading operation associated to respectively an Additional Berthing Right or Stand Alone Berthing Right (or Berthing Right as the case may be), or a Transshipment Berthing Right, the cargo tanks of the LNG Ship shall meet the following temperature specifications:

(i) for a Moss type LNG carrier, the cargo tanks shall be under Natural Gas atmosphere and the equator temperature thereof shall be lower than minus one hundred and ten (-110) degrees Celsius;

(ii) for a Membrane type LNG carrier, the cargo tanks shall be under Natural Gas atmosphere and the average temperature thereof shall be lower than minus one hundred and thirty (-130) degrees Celsius, discounting the very top temperature sensors, which are the temperature around the vapor dome and extreme tank top;

(iii) for any other type LNG carrier, the cargo tank(s) shall be under Natural Gas atmosphere and under cold conditions (cooled down and ready for loading) as prescribed by the manufacturer of the cargo tank(s);

h) Transshipper shall ensure that for a loading operation associated to a Transshipment Berthing Right, the LNG Ship to be loaded disposes of sufficient vapour return compressor capacity for the Fast Loading Rate, corresponding to the volume compensation in the LNG Ship;

i) Transshipper shall ensure that the cargo tank pressure upon arrival of the LNG Ship to be loaded shall be lower than 1160mbar(a);

j) In case the cargo tanks of the LNG Ship do not meet the specifications set out under (g), Shipper or Transshipper shall be deemed to have asked Terminal Operator to provide Cool Down Services in accordance with the LNG Agreement;

k) In case the cargo tanks of the LNG Ship do not meet the specifications set out under (f), Shipper or Transshipper shall be deemed to have asked Terminal Operator to provide Gassing Up Services. For the avoidance of doubt,

(i) in case Shipper's or Transshipper's LNG Ship does not meet the specifications set out under (f) and the cargo tanks are not under inert atmosphere; or

(ii) in case Shipper's or Transshipper's LNG Ship is unable to perform gassing-up without ejecting Natural Gas into the atmosphere,

Shipper or Transshipper shall not be entitled to receive any loading operation associated to an Additional Berthing Right or Stand Alone Berthing Right (or Berthing Right as the case may be), or a Transshipment Berthing Right, and/or Cool Down Services and/or Gassing Up Services;

l) Measurement and testing shall be performed as outlined in the LNG Access Code, it being understood that:

(i) the following order of priority will be used to determine the composition of the LNG loaded:

- the discontinuous system; then,
- the continuous system; and,

(ii) in the event that both the discontinuous system and the continuous system fail to determine the composition of the LNG loaded, the Parties shall use the composition of the LNG in the storage tanks from which the LNG was loaded, as determined by Terminal Operator;

m) The quantity of LNG needed for the Gassing Up Services shall be estimated by Terminal Operator, as a Reasonable and Prudent Operator and shall be deducted from Shipper's or Transshipper's Gas in Storage account; and

l) Given the duration of Cool Down and Gassing Up Services, Transshipper acknowledges that it shall only be entitled to receive Cool Down and Gassing Up Services as long as there is no impact on other Terminal Users. For the same reason Transshipper will fully bear the impact, if any, on the scheduling or execution of its Scheduled Transshipment Berthing Rights, e.g. by letting them forego or reschedule, and which for the avoidance of doubt shall not give rise to any liability by Terminal Operator nor constitute a Service unavailability.

## 3.10 RULES FOR RENEWABLE METHANE~~BIOMETHANE~~ LIQUEFACTION SERVICES

### 3.10.1 General provision around Certification Scheme

In order to be eligible for Renewable Methane~~Biomethane~~ Liquefaction Services, Shipper must be certified under the Certification Scheme with which Terminal Operator is compliant or under another EU recognised voluntary scheme which is compatible ~~for Biomethane and Bio-LNG~~ with the Certification Scheme with which Terminal Operator is compliant[3]. Terminal Operator reserves the right to use the most adequate Certification Scheme at a certain moment in time for the Renewable Methane ~~Biomethane~~ Liquefaction Services.

If Shipper is no longer certified under the applicable Certification Scheme he must inform Terminal Operator immediately thereof. If the loss of certification is not attributable to an action or omission of Shipper, Shipper's Renewable Methane~~Biomethane~~ Liquefaction Services will terminate with immediate effect and without any liability of Shipper. In other cases Terminal Operator shall be able to suspend the Renewable Methane~~Biomethane~~ Liquefaction Services pursuant to article 16.3 of the LNG Terminalling Agreement.

If Terminal Operator is no longer certified under the applicable Certification Scheme he must inform Shippers thereof, as a result of which the Renewable Methane~~Biomethane~~ Liquefaction Services will terminate with immediate effect and without any liability of Terminal Operator if the loss of certification is not attributable to an action or omission of Terminal Operator.

### 3.10.2 Rules for Recondenser Liquefaction Service

#### 3.10.2.1 Actual Liquefaction process

At the LNG Terminal, (re-)liquefaction units, referred to as Recondensers, are used in the process flow for regasification. In those Recondensers the physical contact between LNG and Natural Gas enables Natural Gas to be cooled down and (re-)liquefied.

This technical process enables Terminal Operator to be certified as Processing Unit – Liquefaction Plant and to offer a service for the conversion of Certificates of Biomethane or RFNBO Methane into Certificates of Bio-LNG or RFNBO LNG based on Actual Liquefaction.

[3] The compatibility shall address among others roles and responsibilities on the chain of custody, especially for activities and services within the Terminal, and proof of sustainability (PoS) content requirements such as B~~b~~iomethane production feedstock report rules and accepted greenhouse gases calculation methodologies.

The possibility of this conversion is related to the usage of the Recondensers and in accordance with the mass balance principles as defined in the applicable Certification Scheme.

The Emission From Processing related to the Recondenser Liquefaction Service and reported on the Certificates of Bio-LNG or RFNBO LNG is based on the energy consumption of the Actual Liquefaction process.

### 3.10.2.2 Available Recondenser Liquefaction Service

The quantity of Recondenser Liquefaction Services available depends on the Terminal operations, the Quantity of Natural Gas that is liquified in the Recondensers and the crediting rules of the Certification Scheme. The crediting rules of the Certification Scheme involves a capping of the Recondenser Quantity that can be transferred from a Quarter to the following based on the available LNG in Storage in the Terminal at the end of a Quarter.

To cope with the variability of operations at the Terminal, Terminal Operator makes a distinction between long term offer of Recondenser Liquefaction Service and short term offer of Recondenser Liquefaction Service.

#### 3.10.2.2.1 Long term offer of Recondenser Liquefaction Service

The long term offer of Recondenser Liquefaction Services is calculated as the theoretical Quantity of Natural Gas liquified in the Recondensers when Send Out of the Terminal is equal to Minimum Send Out.

Terminal Operator makes use of the crediting rules of the Certification Scheme in order to reserve this theoretical Quantity liquefied during the Quarter Q-1 for the long term Offer of Recondenser Liquefaction Service of Quarter Q. Consequently, the long term offer of Recondenser Liquefaction Service of Quarter Q is available at the beginning of Quarter Q.

Terminal Operator will perform a production check on the quantity of Recondenser Liquefaction Service offered for Quarter Q to ensure that the sum of the subscribed Recondenser Liquefaction Service of all Shippers for Quarter Q is not higher than the sum of the Recondenser Quantity for Quarter Q-1 and the available Recondenser Quantity of previous Quarters, which was credited to Quarter Q.

In the case of a structural lack of Recondenser Quantity so that the Recondenser Quantity for Quarter Q is not sufficient to cover the Recondenser Liquefaction Service booked for Quarter Q, Terminal Operator shall reduce the Recondenser Liquefaction Service of each Shipper of Quarter Q which has not yet been linked to the submission of a Certificate of Biomethane or RFNBO Methane and relevant input data for the conversion to a Certificate of Bio-LNG or RFNBO LNG.

If this reduction is still not sufficient, Terminal Operator shall reduce the Recondenser Liquefaction Service of each Shipper of Quarter Q which has not yet been linked to the issuance of a Certificate of Bio-LNG or RFNBO LNG by Terminal Operator.

Such capacity reduction shall be executed pro rata to Shipper's Recondenser Liquefaction Service share in the aggregate subscribed Recondenser Liquefaction Services for that Quarter Q.

In any given Quarter, a Shipper shall not be required to pay for such portion of the Recondenser Liquefaction Service to the extent such Recondenser Liquefaction Service has been reduced pursuant to this AC 3.10.2.2.1.

3.10.2.2.2 Short term offer of Recondenser Liquefaction Service

At the start of Quarter Q but not later than the 5th Business Day of the Quarter Q, Terminal Operator will determine the total Recondenser Quantity of previous Quarters which remained available after the necessary reservation for the long term offer of Recondenser Liquiefaction Service of Quarter Q and Quarter Q+1 and which could be credited to Quarter Q according to the Certification Scheme.

The short term offer of Recondenser Liquefaction Service for Quarter Q will be determined by this available Recondenser Quantity.

## 3.10.3 Rules for Equivalence Liquefaction Service

### 3.10.3.1 Equivalence Liquefaction process

~~Terminal Operator is in the process to be certified as Processing Unit – LNG Terminal in order to offer, by the end of 2025, Equivalence Liquefaction Service for the conversion of Certificates of Biomethane into Certificates of Bio-LNG in compliance with the applicable Certification Scheme.~~

The Emission From Processing related to the Equivalence Liquefaction Service and reported on the Certificates of Bio-LNG or RFNBO LNG is based on the default value foreseen by the applicable Certification Scheme[4].

[4] As soon as the default value for RFNBO Methane liquefaction is published by the Certification Scheme and that Terminal Operator is certified for RFNBO Methane liquefaction via Equivalence Liquefaction, the Equivalence Liquefaction Service for RFNBO Methane liquefaction will be available.

#### 3.10.3.2 Available Equivalence Liquefaction Service

The availability of Equivalence Liquefaction Service depends on the Terminal operations and the Send Out Capacity of the Terminal.

#### 3.10.3.3 Equivalence Liquefaction Request

For each Quarter Q, Shipper may submit Equivalence Liquefaction Requests up to the sum of:

- The Quantities of LNG delivered by Terminal Operator to Shipper at the Redelivery Point for Truck Loading during Quarter Q
- The Quantities of LNG delivered by Terminal Operator to Shipper at the Redelivery Point for Loading during Quarter Q
- The Quantities of LNG delivered by Terminal Operator to another Terminal User at the Redelivery Point for Loading during Quarter Q if-:
    - These Quantities of LNG were transferred from Shipper to this other Terminal User at the Commodity Transfer Point during Quarter Q

    And

    - These Quantities of LNG are not subject to an Equivalence Liquefaction Service or a Recondenser Liquefaction Service offered to another Terminal User.

minus the sum of :

- Shipper's Recondenser Liquefaction Service for Quarter Q

#### 3.10.3.4 Equivalence Liquefaction Service confirmation

The available Equivalence Liquefaction Service is automatically allocated on a "first committed/first served basis" based on the Equivalence Liquefaction Requests.

Terminal Operator shall issue a Service Confirmation Form together with the issuance of the Certificates of Bio-LNG or RFNBO LNG.

### 3.10.4 Conversion of Certificates of Biomethane or RFNBO Methane into Certificates of Bio-LNG or RFNBO LNG

For each Quarter Q, Shipper will be allocated Recondenser Liquefaction Service as specified in the relevant Service Confirmation Forms.

For each Quarter Q, Shipper shall submit Certificates of Biomethane or RFNBO Methane and relevant input data required by Terminal Operator for the conversion of these Certificates of Biomethane or RFNBO Methane into Certificates of Bio-LNG or RFNBO LNG based on Actual Liquefaction using his Recondenser Liquefaction Service.

For each Quarter Q, Shipper shall submit Certificates of Biomethane or RFNBO Methane and relevant input data required by Terminal Operator for the conversion of these Certificates of Biomethane or RFNBO Methane into Certificates of Bio-LNG or RFNBO LNG based on Equivalence Liquefaction together with and matching his Equivalence Liquefaction Request.

In both cases, this submission shall be completed by the 20th calendar day after the end of Quarter Q at the latest so that Terminal Operator can convert the Certificates of Biomethane or RFNBO Methane into Certificates of Bio-LNG or RFNBO LNG by the 30th calendar day after the end of Quarter Q at the latest.

## 3.11 MANAGEMENT OF CONGESTION AT THE LNG TERMINAL

Chapters 2.3 and 3.1.10 of the LNG Access Code, and more specifically the provisions dealing with the Secondary Market, contain the applicable procedures in respect of the management of congestion at the LNG Terminal.

## 3.12 OPERATING RULES FOR INCIDENT MANAGEMENT AND EMERGENCIES

### 3.12.1 Introduction

Without prejudice to the Operating Rules related to Unplanned Maintenance (i.e. chapter 3.7 of the LNG Access Code), this chapter defines the incident & emergency procedure of the Terminal Operator applicable for the incidents and emergencies that may occur.

In line with the provisions of the Code of Conduct, the Terminal Operator has (i) determined the phases that might be run through in case of an incident or emergency; (ii) defined the procedure to be followed by the stakeholders concerned in case of an incident or emergency; and (iii) described the possible measures to take by the Terminal Operator as well as by the Terminal Users.

### 3.12.2 Measures in case of incident or emergency

Various incidents and emergencies may occur at the LNG Terminal that can have as a consequence that the safety and/or the integrity of the LNG Terminal cannot be maintained, is endangered, or which could escalate to such situation according to the assessment of the Terminal Operator.

Without prejudice to the measures to be taken within the framework of the Operating Rules related to Unplanned Maintenance, the Terminal Operator is entitled take all necessary measures to guarantee and/or restore the safety and system integrity of the LNG Terminal.

### 3.12.3 First-response phase

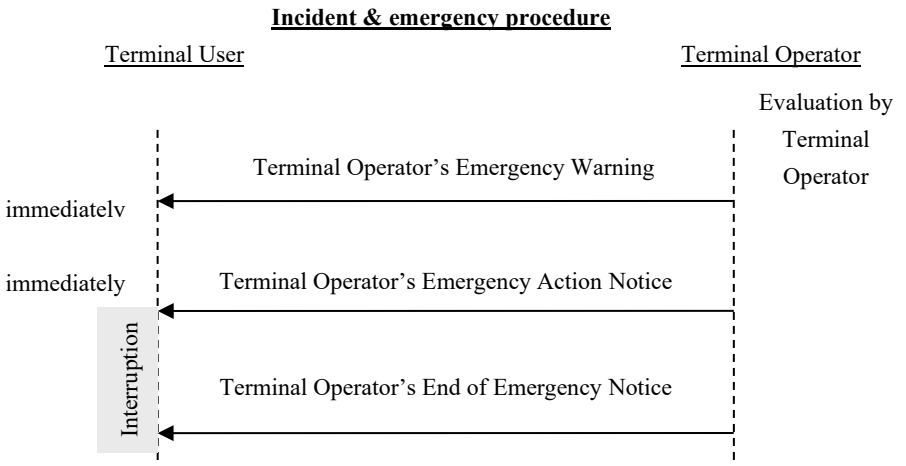
Based upon the available information, the Terminal Operator will assess whether the safety and/or the system integrity of the LNG Terminal can be maintained, is endangered or whether the incident or emergency could escalate to such situation.

Based upon the impact assessment, the Terminal Operator, as the case may be, might decide to qualify the incident or the emergency as an Emergency and to subsequently activate the incident & emergency procedure, without prejudice to any measure(s) taken within the framework of the Operating Rules related to Unplanned Maintenance.

### 3.12.4 Incident & emergency procedure

The incident & emergency procedure is applicable for Emergencies. These measures both have a temporary character and have priority. They can, if necessary, without prejudice to the incident & emergency procedure, at any time without prior notice by the Terminal Operator be changed and adjusted as long as the Emergency persists.

In the following schedule, the incident & emergency procedure between Terminal Operator and Terminal User on the LNG Terminal is reflected. This incident & emergency procedure consists of 3 steps:




In any case, the CREG and the relevant competent authority in case of an Emergency will be informed of its planned duration, its cause (if known), and the measures taken by the Terminal Operator and consequences for the concerned Terminal User(s).

a) Phase 1 – Emergency warning

In case based on the available information, the Terminal Operator evaluates that the incident or emergency qualifies as LNG Emergency, i.e. whether it impacts the safety and/or the system integrity of the LNG Terminal or could escalate to such situation and thus could have consequences for the concerned Terminal Users.

The Terminal Operator sends as soon as reasonably possible a "Terminal Operator's Emergency Warning" announcing the possible impact on the LNG Services. If immediate action is required, the Terminal Operator will not send a warning but immediately will send an "Emergency Action Notice" as provided for in phase 2 below.

Both the related Terminal Users, the CREG, and the concerned competent authority are notified per telephone of such Emergency and receive a notice "Terminal Operator's Emergency Warning" by fax confirming such warning.

b) Phase 2 – Emergency Action Notice

Based upon the available information, the Terminal Operator determines the measures to be taken to guarantee and/or restore the safety and system integrity of the LNG Terminal.

The Terminal Operator confirms to the related Terminal Users and the CREG the measure(s) to be taken through a "Terminal Operator's Emergency Notice" by fax, specifying a start date/time and the action(s) to be taken by the related Terminal Users. In case of reduction or interruption as well as related Terminal Users being hindered to berth, the Terminal Operator shall also constrain the Nominations by sending a revised "Terminal Operator's Daily Transport Notice" (TDT) in accordance with the LNG Access Code. The Emergency measure(s) remain(s) valid until the Terminal Operator sends a "Terminal Operator's End of Emergency Notice" (see phase 3 for more details).

As from the start of LNG Emergency, up to the sending of a "Terminal Operator's End of Emergency Notice", the Terminal Operator will specify the Send Out Capacity as mentioned in the "Terminal Operator's Emergency Notice" to be reduced or interrupted or, as the case may be, due to the unavailability of the Jetty for unloading or loading LNG Ships.

c) Phase 3 – End of Emergency Notice

When based on the evaluation of Terminal Operator and the competent authority (as the case may be), the action(s) are no longer required, the Terminal Operator sends a "Terminal Operator's End of Emergency Notice" by fax to the related Terminal Users and the CREG, specifying the Emergency end date, and lifting constraint(s) at the Delivery or Redelivery Point or LNG Terminal.

### 3.12.5 Emergency procedure for activation of compressors for reduction of Minimum Send Out

In case the aggregated Gas In Storage of Shipper and Other Shippers reaches the Low Inventory Level and in case, based on the evaluation of Terminal operations (based a.o. on RBS, send-out, truck loading planning) by Terminal Operator, this situation might lead to a threat to heel (as per AC 3.1.8), Terminal Operator will inform Shipper and Other Shippers of its intention to activate compressors, if available, in order to reduce the Minimum Send Out rate (as per AC 3.1.9) and extend the lifetime of available Gas In Storage of Shipper and Other Shippers.

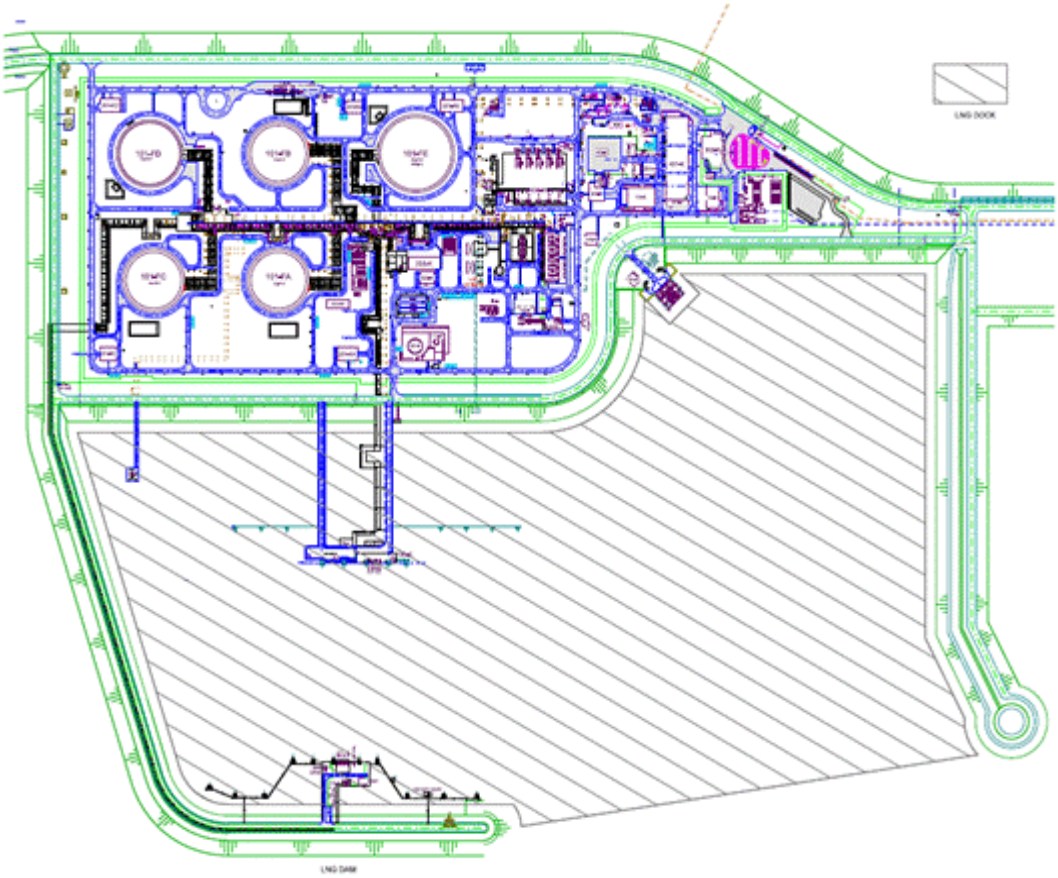
In case the aggregated Gas In Storage of Shipper and Other Shippers reaches the Very Low Inventory Level and in case no replenishment of the Gas In Storage of Shipper and Other Shippers is expected, Terminal Operator will activate compressors, when available, in order to reduce the Minimum Send Out rate of Shipper or Other Shippers. Terminal Operator will communicate to Shipper and Other Shippers the reduced Minimum Send Out rate they must nominate.

Terminal Operator will communicate to Shipper and Other Shippers until when the planned operations of Shipper and Other Shippers could be extended, without any replenishment of Gas in Storage, before the operations will be interrupted in order to preserve the integrity of the Terminal.

Terminal Operator will inform CREG of the expected running time of the compressors and consequences for the concerned Terminal User(s).

Running cost of compressors used for the reduction of the Minimum Send Out rate will be invoiced to Shipper and Other Shippers pro rata their Gas in Storage.

## 3.13 LOCATION OF LNG DOCK



# 4 FORMS

## 4.1 SERVICES CONFIRMATION FORM

### 4.1.1 Services Request Form For Contracting (SRFC)

The Service Request Forms for Contracting can be found on Fluxys LNG's website, in the dedicated webpage of each product.

### 4.1.2 Service Confirmation Form For Contracting (SCFC)

**SERVICE CONFIRMATION FORM for CONTRACTING (SCFC)**

| | |
|---|---|
| **Terminal User Name:** | **xxxx** |
| **Our Reference:** | **FLNG0xxx** |

| LNG Services | Confirmed allocated number of units | Start date | Duration |
|---|---|---|---|
| | | | |
| | | | |

**Terminal User**

Date: .....
Name: .....
Position: .....
.....

Signature: .....

Date: .....
Name: .....
Position: .....
.....

Signature: .....

**Fluxys LNG:**

Date: .....
Name: .....
Position: .....
.....

Signature: .....

Date: .....
Name: .....
Position: .....
.....

Signature: .....

### 4.1.3 Services Request Form For Assignment (SRFA)

# SERVICES REQUEST FORM for ASSIGNMENT (SRFA)

| | | | |
|---|---|---|---|
| **To** | Terminal Operator | **Copy to** | Assignee or Assignor |
| **Fax** | | **Fax** | |
| **reference** | | | |
| **From** | Assignor or Assignee | | |
| **Our reference** | | **N° of pages** | |
| **Tel** | | | |
| **Fax** | | | |
| **Date / time** | dd/mm/yyyy hh:mm | | |

**Subject** Secondary market for LNG Services : Services Assignment Request

Dear,

Hereby (Assignor) requests Fluxys LNG for a LNG Service Assignment from (Assignor) to (Assignee)

| | | |
|---|---|---|
| **Service** | Slot / Berthing Right / … | |
| **Quantity assigned** | XXX | UNIT |
| **Assignment Start date** | From dd/mm/yyyy | |
| **Assignment End date** | To dd/mm/yyyy | |
| **Assignee** | Company | |

*Rights and obligations related to this service will be transferred from Assignor to Assignee in accordance with the AC*

Best regards,

| (Signature Assignor) | name | function |
|---|---|---|
| | | |

| (Signature Assignee) | name | function |
|---|---|---|
| | | |

*yellow fields shall be filled in*

### 4.1.4 Services Confirmation Form For Assignment (SCFA)

# SERVICES CONFIRMATION FORM for ASSIGNMENT (SCFA)

| | | | |
|---|---|---|---|
| **To** | Assignor | **Copy to** | Assignee |
| **Fax** | | **Fax** | |
| **Your reference** | | | |
| **From** | Terminal Operator | | |
| **Our reference** | | **N° of pages** | |
| **Tel** | | | |
| **Fax** | | | |
| **Date / time** | dd/mm/yyyy hh:mm | | |

**Subject** Secondary market for LNG Services: Services Assignment Confirmation

Dear,

Hereby Fluxys confirms the Service Assigment from (Assignor) to (Assignee) with the following characteristics:

| | | |
|---|---|---|
| **Service** | Slot / Berthing Right / ... | |
| **Quantity assigned** | XXX | UNIT |
| **Assignment Start date** | From dd/mm/yyyy | |
| **Assignment End date** | To dd/mm/yyyy | |
| **Assignee** | Company | |

*Rights and obligations related to this service will be transferred from Assignor to Assignee in accordance with the AC*

Best regards,

| Terminal Operator | name | function |
|---|---|---|
| | | |

*yellow fields shall be filled in*

### 4.1.5 Services Request Form For Assignment By Terminal Operator (SRFATO)

# SERVICES REQUEST FORM for ASSIGNMENT by TERMINAL OPERATOR (SRFATO)

**To** Terminal Operator
**Fax**
**reference**

**From** Shipper
**Our reference**
**Tel**
**Fax**

**Date / time** dd/mm/yyyy hh:mm

**Subject** Secondary market : Services Assignment Request by Terminal Operator

Dear,

Hereby (Assignee) requests Fluxys LNG for a LNG Service Assignment

| | | |
|---|---|---|
| **Service** | Slot / Berthing Right / … | |
| **Quantity assigned** | XXX | UNIT |
| **Assignment Start date** | From dd/mm/yyyy | |
| **Assignment End date** | To dd/mm/yyyy | |
| **Assignee** | Company | |

*Rights and obligations related to this service will be transferred from Assignor to Assignee in accordance with the AC*

Best regards,

| Assignee | name | function |
|---|---|---|
| | | |

*yellow fields shall be filled in*

### 4.1.6 Services Confirmation Form For Assignment By Terminal Operator (SCFATO)

# SERVICES CONFIRMATION FORM for ASSIGNMENT by TERMINAL OPERATOR (SCFATO)

| | | | |
|---|---|---|---|
| **To** | Assignor | **Copy to** | Assignee |
| **Fax** | | **Fax** | |
| **Your reference** | | | |
| **From** | Terminal Operator | | |
| **Our reference** | | **N° of pages** | |
| **Tel** | | | |
| **Fax** | | | |
| **Date / time** | dd/mm/yyyy hh:mm | | |

**Subject** Secondary market: Services Assignment Confirmation

Dear,

Hereby Fluxys LNG confirms the Service Assignment from (Assignor) to (Assignee) with the following characteristics:

| | | |
|---|---|---|
| **Service** | Slot / Berthing Right / … | |
| **Quantity assigned** | XXX | UNIT |
| **Assignment Start date** | From dd/mm/yyyy | |
| **Assignment End date** | To dd/mm/yyyy | |
| **Assignee** | Company | |

*Rights and obligations related to this service will be transferred from Assignor to Assignee in accordance with the AC*

Best regards,

| Terminal Operator | name | function |
|---|---|---|
| | | |

*yellow fields shall be filled in*

## 4.2 BANK GUARANTEE FORM

*Document to be sent by the bank of the Shipper to*
*Fluxys LNG, Rue Guimard 4 – 1040 Bruxelles*

**BANK GUARANTEE ON FIRST REQUEST**

**Re: Guarantee number ……**

An LNG Agreement has been concluded on ……...[*Date of the LNG Agreement + reference*]

with "*Shipper*" ……..[*name, address, registration number, VAT number* ]

for the subscription and use of LNG Services offered by FLUXYS LNG SA.

We refer to the request of "*Shipper*" *…[name]…….*

to provide a Bank Guarantee upon first demand in your favour. Pursuant to the aforementioned request, we hereby irrevocably undertake to pay you on your first demand, irrespective of the validity and the legal effects of the above-mentioned contract and waiving all rights of objection and defence arising from said contract, any amount up to ……...[*amount of Bank Guarantee*] €.

The amount of the Bank Guarantee is irrevocably payable to you on your first request, by registered letter, up to the amount mentioned in it, without any justification to us, the issuing bank, and without any possibility for us to put forward either a refusal from the end consumer.

In case of bankruptcy, settlement, winding-up or any other equivalent proceedings instituted against the end consumer, the amount of the guarantee will be rightfully due to you.

Our guarantee expires automatically if your written request for payment and your written confirmation are not in our possession on or before ……..[*date of termination*].

The total amount of this guarantee will be reduced by any payment effected by us hereunder.

For the execution of this agreement and any consequences, our bank elects domicile at ……...[*address + contact services*].

Yours faithfully.

## 4.3 TERMS & CONDITIONS FOR ACCESS/USE OF ELECTRONIC DATA PLATFORM

### 4.3.1 Introduction

Within the framework of the execution of LNG Services, the Terminal Operator offers Terminal Users access to and use of the Electronic Data Platform under the condition that Terminal User applies the terms and conditions for access to and use of the Electronic Data Platform as set forth in this AC 4.3.

Such access will be granted to Terminal User representatives, further referred to as System Users, on a non-exclusive and non-transferable basis and as from the moment those System Users become registered as set forth in AC 4.3.3. The use of the Electronic Data Platform by System Users is further subject to identification and authentication procedures detailed in AC 4.3.4.

Terminal Operator is for commercial, operational and regulatory purposes offering different access rights to the Electronic Data Platform. The following distinction is made depending on the type of data made available:

- Public data is data that is made available to anyone without access restriction placed on such kind of data,
- Private data is data made available to a specific Terminal User, with restricted use depending on the access rights granted by the System User of the Electronic Data Platform, as detailed in AC 4.3.3.

### 4.3.2 Definitions

Unless the context requires otherwise, the definitions set out AC 5 apply to this heading. Capitalized words and expressions used in this heading which are not defined in AC 5 shall have the following meaning:

| | |
|---|---|
| Administration Setup | Set of tasks relating to the creation, modification or deletion of System Users of the Electronic Data Platform linked to a Terminal User and the allocation of access rights to these System Users in accordance with AC 4.3.3.1. |
| Intellectual Property Rights | Patents, trademarks, service marks, logos, get-up, trade names, internet domain names, rights in designs, copyright (including rights in computer software) and moral rights, database rights, semi-conductor topography rights, utility models, rights in know- |

| | |
|---|---|
| | how and other intellectual property rights, in each case whether registered or unregistered and including applications for registration, and all rights or forms of protection having equivalent or similar effect anywhere in the world. |
| Single Point Of Contact or SPOC | Representative appointed by the Terminal User who shall be the contact person between the Terminal User and the Terminal Operator and who is entitled to do the Administration Setup, in accordance with AC 4.3.3.1. |
| System User | A physical person who represents a Terminal User and who has access to private data, in accordance with AC 4.3.3. |
| Working Hours | From Monday to Friday between 9h00 and 18h00 Belgian Local Time, except during bank holidays in Belgium or the Terminal Operator's general holiday schedule. |

### 4.3.3 Access rights

For the avoidance of doubt, Terminal Operator grants System User, that have been registered either as SPOC either by the SPOC, a temporary, personal, non-transferable and non-exclusive right for the use of the Electronic Data Platform for the consultation of data and as the case may be for submitting LNG service requests, scheduling LNG Services or exchanging LNG commodity related messages through the Electronic Booking System based on the combination of one or more of the following access rights.

#### 4.3.3.1 Administration rights

Terminal User shall appoint one or more SPOCs, who shall become System Users granted with administration rights in the Electronic Data Platform. For the registration of a SPOC for a specific Terminal User, Terminal Operator requires at least the name, e-mail address and mobile phone number of such person.

Once the SPOC is registered, Terminal Operator shall send the SPOC its username by e-mail and its password by e-mail[5]. As from this moment, SPOC is entitled to use the Electronic Data Platform administration tool and execute the Administration Setup of all System Users relating to such Terminal User, by:

- Registering System User(s) and their information;
- Password management for System Users, including creation, reset or unlock operations;
- Modifying or deleting the information relating to System Users; and
- Granting or modify granted access rights to System Users.

[5] The password is generated by the system and must be changed at first login attempt;

In order to register a new System User, SPOC of the Terminal User shall register at least its name, e-mail address and mobile phone number in the administration tool.

Once the System User is registered, Terminal Operator shall send the System User its username by e-mail and its password by SMS[1]. As from this moment, System User is entitled to use the Electronic Data Platform and consult private data relating to the Terminal User, according to the access rights granted to him at that time by the SPOC.

#### 4.3.3.2 Read rights

A System User with read rights is entitled to consult public data and private data relating to such Terminal User only, published at the Electronic Data Platform of the Terminal Operator.

#### 4.3.3.3 Transaction rights

A System User with transaction rights is entitled to consult and register transaction information through the Electronic Booking System relating to but not limited to the request or scheduling of LNG Service or the exchange of LNG commodity related messages for the account of Terminal User to Terminal Operator.

The Terminal User guarantees that the System User is authorized to legally bind as the case may be the Terminal User, including but not limited to in accordance with any statutory provision.

### 4.3.4 Access to the Electronic Data Platform

#### 4.3.4.1 Infrastructure

Terminal User must at its own expense and risk:

a) Apply for and obtain a username and password; and,
b) Purchase all necessary hardware, software and licenses, if any, for the use of the username and password for the Electronic Booking System as explained in AC 4.3.3.

All costs made by the Terminal User related to the application and administration of the username, password, including but not limited to the Administration Setup, will be paid by the Terminal User.

Terminal Operator will handle the Terminal User's access request for SPOC and will do its reasonable efforts to grant, as soon as possible, Terminal User access to its data via the Electronic Data Platform. In principle, access will be granted within ten (10) Business Days as from the access request but this timing is not binding towards Terminal Operator. If access is granted, Terminal Operator will provide the Terminal User a manual[6] on the use of the Electronic Data Platform, which may be amended from time to time.

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[6] Such manual will be available on-line with-in the platform and can be sent to Terminal User upon request.

The Terminal User itself must have at its disposal, at its own expense and its own risk, minimum configuration on request of Terminal Operator to access the Electronic Data Platform. These minimum requirements are published on Fluxys website and may be modified from time to time, given possible technological evolutions.

#### 4.3.4.2 Availability of the Electronic Data Platform

The Electronic Data Platform is accessible through the internet. In this regard, Terminal User expressly acknowledges that internet is an open international network whose characteristics and particularities are well known to it. Terminal User agrees that Terminal Operator will not be held liable for any direct or indirect damage Terminal User might incur due to the use of the internet. Terminal Operator reserves the right to modify at any time the electronic means of communication used for the services offered through the Electronic Data Platform.

The Electronic Data Platform is intended to be accessible 24 hours per day and 7 days per week, except as otherwise indicated. Assistance in case of technical problems or unavailability of the Electronic Data Platform for whatsoever reason or the helpdesk will only be assured by Terminal Operator during Working Hours. Terminal Operator reserves the right at any moment to suspend or otherwise limit the availability of part or all of the Electronic Data Platform from time to time to make all modifications likely to improve or expand its operation and to ensure its maintenance. Terminal Operator will notify Terminal User in due time of any change in the Electronic Data Platform or any such unavailability and will use its reasonable endeavours to keep such unavailability to a minimum.

#### 4.3.4.3 Availability of the Electronic Booking System

The Electronic Booking System is intended to be accessible 24 hours per day and 7 days per week. Assistance in case of technical problems or unavailability of the Electronic Booking System for whatsoever reason or the helpdesk will only be assured by Terminal Operator during Working Hours. Terminal Operator reserves the right at any moment to suspend or otherwise limit the availability of part or all of the Electronic Booking System from time to time to make all modifications likely to improve or expand its operation and to ensure its maintenance. Terminal Operator will notify Terminal User in due time of any change in the Electronic Booking System or any such unavailability and will use its reasonable endeavors to keep such unavailability to a minimum.

The unavailability of the Electronic Booking System, whether or not due to force majeure, shall not affect Terminal User's rights under the LNG Agreement as Terminal User can at any time request for LNG Services via the other channels foreseen by the LNG Access Code.

#### 4.3.4.4 Access refusal

Terminal Operator may block System User's access to the Electronic Data Platform at any time with immediate effect, without giving right to compensation and without affecting the Parties' rights and obligations under the LNG Agreement:

a) Upon Terminal User's written request to block or delete an account of a System User for whatever reason,
b) For technical reasons affecting Terminal Operator's IT system; and,

c) In case of a default or breach by System User, not capable of remedy, it being understood that the use of the Electronic Data Platform by System User which adversely affects the smooth operation or the image or the reputation of Terminal Operator (a.o. undue or fraudulent use of the data and/or Electronic Data Platform), will be considered as a breach not capable of remedy with respect to the use of the Electronic Data Platform.

### 4.3.5 Use of the Electronic Booking System

System Users with transaction rights can submit a binding LNG Service transaction request, schedule LNG Services or exchange LNG commodity related messages with Another User.

In case the requested LNG Service is available, the LNG Service transaction will be booked automatically within the Electronic Booking System and a confirmation e-mail shall be sent to the System User who has submitted the binding LNG Service transaction request. In case of unavailability of the requested LNG Service or in case of needed additional processing of the requested LNG Service, the LNG Service transaction will be accepted within the Electronic Booking System and forwarded to Terminal Operator commercial services for further analysis.

The Terminal Operator has the right to ask the Terminal User to provide additional financial security in order to comply with the creditworthiness assessment described in the LNG Agreement. This creditworthiness check can be done after the confirmation in the Electronic Booking System.

The Electronic Booking System allows Terminal User to view and modify its LNG service transaction request before confirming this request. Terminal User is solely responsible for checking the accuracy of any LNG service transaction request and therefore:

a) Terminal User shall not be allowed to invoke any error after confirmation; and,
b) Any such error shall not invalidate the request.

In case the Electronic Booking System is used to exchange LNG commodity related messages with Another User, Terminal User is solely responsible for checking the accuracy of the exchanged messages and for the outcome of any message exchange.

Terminal User's request by using the Electronic Booking System, LNG commodity related messages exchanged with other Terminal Users and any other actions performed under this AC 4.3, if any, will be logged and stored by Terminal Operator for, amongst others:

a) Monitoring and analysis purposes; and,
b) Evidence purposes.

Terminal Operator will store such information as long as it deems necessary and process such information in accordance with AC 4.3.9.

### 4.3.6 Liability

It is expressly agreed between the Parties that liability provisions of the LNG Agreement shall not apply to any liabilities of the Parties arising out of or in connection with this AC 4.3, and that such liabilities, whether in contract, extra-contractually or otherwise, and their respective extent are set out exhaustively and exclusively in this AC 4.3 and shall apply for any rights, claims or indemnifications to which the other Party and its Affiliates may be entitled to under this AC 4.3 regardless of the circumstances under which they occur.

#### 4.3.6.1 Terminal Operator's liability

Terminal Operator makes no warranty that access to or functioning of the Electronic Data Platform will be uninterrupted, timely, secure, effective and reliable or error free, since the provision of the services under this AC 4.3 depends amongst other on the proper functioning of the telecommunications network/internet.

The use of the Electronic Data Platform and the data resulting from it is at the Terminal User's own discretion and risk. Terminal User alone is responsible for any damage to its or others' computer system(s), telephone(s), fax or other devices or loss of data from the use of the Electronic Data Platform.

Terminal Operator shall make no warranty and will not be liable as to the updating, the correctness, the accuracy, or completeness of the data provided on and the good working of the Electronic Data Platform. The System User acknowledges that the data may not always be checked and /or validated by Terminal Operator. For the avoidance of doubt, the lack of availability of the Electronic Data Platform will under no circumstances affect Parties' rights and obligations under the LNG Agreement or with regard to the Services.

Terminal Operator will under no circumstances and to the extent permitted by applicable law, be liable to Terminal User for any direct or indirect, material or immaterial damage, of whatever nature, suffered by Terminal User, including but not limited to loss of profits, loss of business expectations or opportunities, loss of contracts, damage to third parties or any other consequence that might result from:

- The use and/or the lack of availability of the Electronic Data Platform or the Electronic Booking System in general; or,
- The use and or unavailability of the username and password, except in case of Terminal Operator's deliberate fault; or,
- The inaccuracy of data, or lack of data provided under the AC 4.3.

#### 4.3.6.2 Terminal User's liability

The Terminal User is the sole responsible with regard to use and administration of:

- The data in the administration tool; and
- The Electronic Data Platform in general.

The Terminal User is the sole responsible for the administration, including but not limited to the Electronic Data Platform, revocation, and/or suspension, distribution,

circulation, copying of its usernames and passwords, and given access to the content of e-mail and for the use of its administration tool by all (un)authorised person and /or third parties. Terminal User must take all appropriate measures to secure its access to the administration tool.

In general, Terminal User is responsible for maintaining the confidentiality of its usernames, passwords and the content of e-mail, and data for restricting access to its computers. Terminal User shall be responsible for all activities that occur under its accounts or passwords.

Terminal User shall hold harmless and indemnify Terminal Operator for any claims by any third party, including the data subject, relating to the use of Terminal User's usernames, passwords and the content of e-mail by (un)authorised persons, the transfer of personal data to Terminal Operator and in general relating to this Electronic Data Platform.

### 4.3.7 Force Majeure

In addition to the Force Majeure provisions of the LNG Agreement, events which shall be considered as Force Majeure under this AC 4.3 include but are not limited to hacking or malicious interference of third parties prejudicing the electronic facilities, and/or the Electronic Data Platform of the Terminal Operator and software, hardware, telecommunication or other network failures, interruption, disruptions, malfunctions or computer viruses.

In case of Force Majeure leading to the unavailability of the Electronic Data Platform and/or the Electronic Booking System, Terminal User can at any time request for LNG Services via the other channels foreseen by the LNG Access Code.

### 4.3.8 Intellectual property rights

The Intellectual Property Rights associated with the Electronic Data Platform and/or the Electronic Booking System and its component parts belong exclusively to Terminal Operator and/or its licensors. Terminal User undertakes to respect the concerned right holders' intellectual property rights to works, computer software and databases, made available to it, in whatsoever form, with due regard to applicable national and international copyright, software and database protection laws.

### 4.3.9 Legislation on the protection of privacy

The operation of its IT system and the Electronic Data Platform and the execution of other contractual obligations may require that Terminal Operator processes personal data (i.e. data relating to Terminal User's employees using the Electronic Data Platform or applying for access, within the meaning of Belgian and/or European data protection legislation). Where applicable, Terminal Operator undertakes to comply with the applicable legal and statutory data protection provisions including the General Data Protection Regulation 2016/679. Terminal Operator is dedicated to the fair processing of personal data. The personal data is processed by Terminal Operator and/or by Terminal Operator's Affiliate, in its/their capacity as controller(s), for the following purposes:

a) Access administration and control of the Electronic Data Platform;

b) Terminal User relationship management;
c) The prevention of abuse and fraud;
d) For statistical purposes;
e) For evidence purposes;
f) To enable Terminal Operator to provide LNG Services; and,
g) For compliance with its legal and regulatory obligations.

Furthermore, Terminal User acknowledges and approves that personal data may be communicated to a hosting services provider with whom Terminal Operator has made appropriate agreements regarding the protection of personal data. The data subject likewise has the right to consult its personal data by contacting Terminal Operator in writing, or, where appropriate, to ask for rectification of the data that concerns it. The data subject also has the right to object to the processing of its personal data, according to applicable data protection legislation. Where applicable, Terminal User warrants and represents that it will solely communicate personal data to Terminal Operator, on having given the data subject the appropriate legal information as regards the data processing; and as required by applicable data protection legislation, Terminal Operator follows adequate security procedures and takes measures to ensure that the personal data processed is not lost, misused, altered, damaged or destroyed or accidentally disclosed to a third party. Terminal Operator will not disclose personal data to any other third party unless it is requested to do so by law or regulators.

For more information regarding this processing of personal data by Terminal Operator, check https://www.fluxys.com/en/privacy.

# 5 GLOSSARY OF DEFINITIONS

## 5.1 PURPOSE

## 5.2 THE PRESENT GLOSSARY CONTAINS THE DEFINITIONS OF TERMS AND EXPRESSIONS USED IN THE LNG ACCESS CODE AND THE LNG AGREEMENTS. DEFINITIONS

1) ***Accepted Quantities*** means the quantity of Natural Gas notified by the Terminal User at the Flange or Commodity Transfer Point in accordance with AC 3.5.4.2.5, and accepted by Terminal Operator for each hour of a Gas Day.

2) ***Actual Laytime*** means the time actually taken by an LNG Ship to berth, Transfer and depart from the berth, as determined in AC 3.1.

3) ***Actual Liquefaction*** means the physical process taking place in the Recondensers where the physical contact between LNG and Natural Gas enables Natural Gas to be cooled down and liquefied.

4) ***Additional Berthing Right*** means the right to berth an LNG Ship for the purpose of receiving LNG Redelivery Services at the LNG Terminal in connection with a Tide, as allowed under the nautical rules applicable at the Port, in accordance with the LNG Access Code.

5) ***Additional Send Out Capacity*** has the meaning given to it in AC 2.1.11.

6) ***Additional Send Out Capacity Price*** means the price for Additional Send Out Capacity, in accordance with the Regulated Tariff.

7) ***Additional Storage*** has the meaning given to it in AC 2.1.9.

8) ***Additional Storage Price*** means the price specified for Additional Storage, in accordance with the Regulated Tariff.

9) ***Adverse Weather Conditions*** means weather and/or sea conditions actually experienced that are sufficiently severe either:
   a) to prevent an LNG Ship from proceeding to berth, transferring or departing from berth in accordance with the weather and sea standards prescribed in the published regulations in effect at the Port, or by order of the port master; or
   b) to cause an actual determination by the master of the LNG Ship that it is unsafe for the LNG Ship to berth, transfer or depart from the berth at the Port.

10) ***Advised Specifications*** has the meaning given to it in AC 3.8.

11) ***Affiliate*** means a company affiliated to a Party with the meaning of article 11 of the Belgian Company Code and article 19.1 of the Gas Act, as amended, or any successor thereof.

12) ***Allocation Window*** means a window for allocation of LNG Services to Terminal Users which may be a Subscription Window or an Auction Window as the case may be.

13) ***Allowed Laytime*** means the time set forth under AC 3.1.

14) ***Applicability Statement 2*** or ***AS2*** means the electronic data interchange protocol, used for the purpose of exchanging contractual data and dispatching information.

15) ***Applicable Interruption/Constraint Lead-Time*** means the interruption/ constraint lead-time set forth under AC 3.5.6.

16) ***Applicable Renomination Lead-Time*** means the renomination lead-time set forth under AC 3.5.5.

17) ***Applicant*** means the Terminal User applying by means of the Registration Documents to become a Participant for an Auction Window in accordance with the Terms and Conditions of such window.

18) ***Auction*** means the auction, scheduled to take place on Auction Start Date, in accordance with the TCAW.

19) ***Auction End Date*** means the date and time (Server Time) on which the Auction ends.

20) ***Auction Form*** means the form used during a one step Auction on which a Participant can indicate his requested quantity and Duration of offered LNG Services and the Bid Price at which he would like to buy the LNG Service in the Auction.

21) ***Auction Provider*** means a third party (e.g. Prisma) designated by Terminal Operator who is responsible and authorized to organize an Auction according to the provisions of AC 2.2.1.2 and of the TCAW of this Auction Window.

22) ***Auction Start Date*** means date and time (Server Time) on which the Auction will start and the Auction starts.

23) ***Auction Website*** means the website accessible via internet (the address link (URL) will be provided to the Participant by Terminal Operator) through which the Bidders will submit their Bids.

24) ***Auction Window*** means the window for allocating the Services through auctioning in accordance with the provisions set out AC 2.2.1.2 and the Terms and Conditions for such window.

25) ***Available Monthly Slots or AMS*** has the meaning given to it in AC 3.1.

26) ***Available Monthly Transshipment Berthing Rights*** or ***AMTBR*** has the meaning given to it in AC 3.1.

27) ***Avoided Cost Fee*** means the Capacity Charge due for the performance of Quality Adjustment Services, in accordance with the Regulated Tariff.

28) ***Backhaul Liquefaction Service*** or ***Virtual Liquefaction Service*** or ***Backhaul Liquefaction*** has the meaning given to in AC 2.1.19.

29) ***Basic Send Out Capacity*** means an amount of four decimal two zero (4.20) GWh/hour of Send Out capacity for Natural Gas, allocated to each Subscribed Slot during the Basic Storage Duration.

30) ***Basic Storage*** means the quantity of storage capacity at the LNG Terminal allocated to each Subscribed Slot, being equal to one hundred and forty thousand (140,000) Cubic Metre ($m^3$) of LNG, made available commencing at the time of the start of the Basic Storage Duration and decreasing linearly to naught over the Basic Storage Duration.

31) ***Basic Storage Duration*** means a time period commencing at the Tide identified for a Scheduled Slot and ending immediately prior to the 40th (fortieth) Tide thereafter.

32) ***Belgian Consumer Price Index*** or ***CPI*** means the index of consumer prices in Belgium (Indice Normal, base 1996) as published by the Moniteur Belge on a monthly basis.

33) ***Berthing Right*** means the right to berth and to unload an LNG Ship, or alternatively to berth an LNG Ship for the purpose of receiving LNG Redelivery Services, at the LNG Terminal in connection with a High Tide, as allowed under the nautical rules applicable at the Port, in accordance with the LNG Access Code.

34) ***Bid*** means a binding request for LNG Services made by the Bidder for a certain quantity of LNG Services at a certain Bid Price in accordance with the provisions set out AC 2.2.1.2.

35) ***Bidder*** means the person(s) authorized by the Participant through a Power of Attorney in order to submit a Bid for the Participant as provided for in the TCAW.

36) ***Bid Price*** means in case of a multiple round Auction the Round Price set by Terminal Operator for which a Bidder submits a Bid Quantity. In case of a one step Auction, it shall mean either (i) the total amount or (ii) the premium above the Regulated Tariff a Bidder is ready to pay for one (1) unit of the LNG Services offered in the Auction, as specified in the corresponding TCAW.

37) ***Bid Quantity*** means the quantity of a Bid submitted by a Bidder in accordance with the provisions set out AC 2.2.1.2.

38) ***Bid Requirements*** means the criteria used for evaluating the Bids received as defined in AC 2.2.1.2

39) ***Bio-LNG*** means bio-LNG produced from either liquefaction of Natural Gas with a corresponding transfer of an applicable Certificate of Biomethane or physical Bbiomethane liquified with an appropriate Certificate issued under a Certification Scheme.

40) ***Biomethane*** means Bbiomethane injected in a gas grid and/or delivered at the LNG Terminal under the principle of mass balance and for which applicable Certificates are issued.

~~41) ***Biomethane Liquefaction Services*** has the meaning given to in AC 2.1.20.~~

~~42)~~41) ***British Thermal Unit*** or ***BTU*** means that amount of heat which is equal to one thousand fifty-five decimal zero six (1,055.06) Joules.

~~43)~~42) ***Business Day*** means a day in Belgium other than a Saturday or Sunday or a bank holiday, or a "bridging" day which falls between a bank holiday and a Saturday or Sunday. The dates of the bank holidays and bridging days being notified prior to each Contract Year by Terminal Operator to Terminal User.

~~44)~~43) ***Buy-back Gas*** means the Quantity of Natural Gas expressed in energy units returned from the LNG Terminal to the LNG Ship or vice versa via the vapour return line as described in AC 3.4.

~~45)~~44) ***Capacity Charge*** means the charge per Contract Year payable for the LNG Services subscribed to under an LNG Agreement, in accordance with the Regulated Tariffs.

~~46)~~45) ***Capacity Subscription Agreement*** or ***CSA*** means the capacity subscription agreements entered into between Terminal Operator and Tractebel LNG Trading, QTL&ZLNG and Distrigas SA in 2004 relating to the LNG Terminal.

~~47)~~46) ***Celsius degree*** *or* ***°C*** means the specific interval, expressed in °C, between a Kelvin temperature and the temperature of two hundred seventy three comma fifteen (273.15) Kelvin, defined as such in the ISO 1,000 SI units and recommendations for the use of their multiples and of certain other units.

~~48)~~47) ***Certificate*** means a certificate issued by the Certification Scheme.

~~49)~~48) ***Certificate of Biomethane*** means a certificate of Biomethane issued under the Certification Scheme.

49) ***Certificate of Bio-LNG*** means a certificate of Bio-LNG issued under the Certification Scheme.

50) ***Certificate of RFNBO M~~m~~ethane*** means a certificate of RFNBO M~~m~~ethane issued under the Certification Scheme.

~~50)~~51) ***Certificate of RFNBO LNG*** means a certificate of RFNBO LNG issued under the Certification Scheme.

~~51)~~52) ***Certification Scheme*** means the certification scheme(s) (for among others Bio-LNG and RFNBO LNG) recognised as European voluntary certification scheme under the relevant European directives in force and the rules of such scheme.

~~52)~~53) ***Cleared Price*** means the amount, resulting from an Auction, to be paid by the allocated Participants who participated to the respective Auction Window.

~~53)~~54) ***Closing Time*** or ***Round Closing Time*** means the time when a Round is closed (in accordance with the Round Duration) and Bids can no longer be submitted by the Bidder.

~~54)~~55) ***Code of Conduct*** means the annex to CREG decision (B)2411 published on 31 August 2022 as modified or replaced from time to time.

~~55)~~56) ***Collateral*** means the financial security to be provided by Terminal User in accordance with the relevant LNG Agreement.

~~56)~~57) ***Commodity Transfer Point*** or ***CTP*** means a notional point which allows Terminal Users to exchange Gas In Storage amongst themselves in the LNG Terminal in accordance with AC 3.5.

~~57)~~58) ***Confidential Information*** means the commercial information on Shipper, Another Shipper or Another User, directly or indirectly communicated to Terminal Operator, with the exception of the information generally known to the public, in any other way than by wrongful action of Terminal Operator.

~~58)~~59) ***Confirmed Quantities*** means for a particular Gas Day and for a particular Terminal User, the hourly quantities in accordance with AC 3.5, expressed in kWh.

~~59)~~60) ***Consequential Loss*** means any indirect, incidental or consequential loss or damage incurred by a party and/or a third party, including but not limited to loss of profits, loss or interruption of production and any loss of contract, howsoever the same may arise and be suffered by the other party and/or a third party (including but not limited to, as a result of any claim(s), demand(s) or action(s) made or brought against such party by any third party, the breach of any representation or warranty hereunder, express or implied, whether in contract, tort or otherwise).

~~60)~~61) ***Contract Term*** means the period beginning on the date on which an LNG Agreement enters into force, and ending on the date of termination (howsoever caused) or expiry of same in accordance with the provisions of the LNG Agreement.

~~61)~~62) ***Contract Year*** means a period beginning at 00h00 on 1 January in any calendar year and ending at 24h00 on the following 31 December, it being understood that the first Contract Year shall begin on the Service Start Date and

end at 24h00 on 31 December of the same calendar year and the last Contract Year shall begin at 00h00 on 1 January and end on the Day of termination or expiry of the LNG Agreement.

~~62)~~63) ***Cool Down Services*** means the LNG Redelivery Services or the LNG Transshipment Services, consisting of the delivery by Terminal Operator of Quantities of LNG from the LNG Terminal for the purpose of cooling down the cargo tanks of an LNG Ship in order to meet the specifications as outlined in AC 3.9.

~~63)~~64) ***Cool Down Services Charge*** means the charge payable for the Cool Down Services, in accordance with the Regulated Tariff.

~~64)~~65) ***CREG*** means the "*Commission pour la Régulation de l'Electricité et du Gaz*" as referred to under Article 15/14 of the Gas Act, or any successor commission thereof.

~~65)~~66) ***Credit Amount*** has the meaning given to it in the LNG Agreements.

~~66)~~67) ***Credit Event*** has the meaning given to it in the LNG Agreements.

~~67)~~68) ***Cubic Metre*** or ***m³*** means the volume occupied by a cube each edge of which is one (1) Metre in length.

~~68)~~69) ***Daily Send Out Capacity*** has the meaning given to it in AC 2.1.13.

~~69)~~70) ***Daily Send Out Capacity Price*** means the price for Daily Send Out Capacity in accordance with the Regulated Tariff.

~~70)~~71) ***Daily Storage Capacity*** has the meaning given to it in AC 2.1.14.

~~71)~~72) ***Daily Storage Capacity Price*** means the price for Daily Storage, in accordance with the Regulated Tariff.

~~72)~~73) ***Day*** means a period of twenty-four (24) hours, (or twenty-three (23) or twenty-five (25) as the case may be for daylight saving days) beginning at 00h00 on each day and ending at 24h00 (Belgian time) on the same day.

~~73)~~74) ***Default Allocation Procedure*** means the procedure described in AC 3.1.

~~74)~~75) ***Default Allocation Procedure for Transshipment Berthing Rights*** means the procedure described in AC 3.1.2.2.

~~75)~~76) ***Default Allocated Slots*** means the Slots scheduled for Shipper and the Other Shippers pursuant to the 'Default Allocation Procedure' of AC 3.1.

~~76)~~77) ***Defaulting Party*** means the party in default, as described in the LNG Agreement.

~~77)~~78) ***Delivery Point*** means the point at the LNG Terminal at which the flange coupling of the LNG Terminal's unloading line joins the flange coupling of the LNG manifold on-board the LNG Ship.

~~78)~~79) ***Delivery Point for Transshipment*** means the point at the LNG Terminal at which the flange coupling of the LNG Terminal's unloading line joins the flange coupling of the LNG manifold on-board the LNG Ship.

~~79)~~80) ***Demand*** means the aggregated accepted Bid Quantities of the Valid Bids for a Participant as demanded by Bidders in a given Round and as provided by the Auction Rules.

~~80)~~81) ***Demurrage Rate*** means the amount payable in relation to excess of the Allowed Laytime, at the rate specified in the Regulated Tariffs.

~~81)~~82) ***DES Factor*** means the quantity of boil-off-gas, expressed in kWh, that is generated through the desuperheating operation. DES Factor shall be fixed based upon the prior thermodynamical analysis of the desuperheating operation.

~~82)~~83) ***Dispute*** has the meaning given to it in the LNG Agreements.

~~83)~~84) ***Due Date*** means the latest Day by which an invoice needs to be paid in accordance with the GC of the related LNG Agreement.

~~84)~~85) ***Duration*** means the duration for which LNG Services are offered by Terminal Operator and which will be specified in the Terms and Conditions of an Allocation Window.

~~85)~~86) ***EASEE-gas*** means the '*European Association for the Streamlining of Energy Exchange-gas*', which was created by six (6) founding members in Paris on 14 March 2002 with the aim of supporting the creation of an efficient and effective European gas market through the development and promotion of common business practices that intend to simplify and streamline business processes between the stakeholders.

~~86)~~87) ***East Jetty*** means the easternmost jetty in the LNG Dock at the LNG Terminal with the technical specifications specified in AC 3.1.

~~87)~~88) ***EDIg@s*** or ***Electronic Data Interchange EDIFACT*** means the electronic data interchange protocol, used for the purpose of exchanging data and information.

~~88)~~89) ***Effective Date*** means the date on which an LNG Agreement enters into force.

~~89)~~90) ***Electronic Booking System*** means the part of the Electronic Data Platform provided by the Terminal Operator which allows Terminal User to subscribe LNG Services (on the Primary and Secondary Market) and facilitate LNG commodity related messages exchanges with Another User.

~~90)~~91) ***Electronic Data Platform*** means the internet application offered by Terminal Operator to the Terminal User under AC 4.3 on which Terminal Operator shall give access to both public and private data and its associated Electronic Booking System.

~~91)~~92) ***Emergency*** means any event or circumstance, whether or not qualifying as Force Majeure, which necessitates urgent measures to be taken by Terminal Operator, acting as a Reasonable and Prudent Operator, in order to maintain the integrity of the LNG Terminal or the LNG Ship, respectively.

~~92)~~93) ***Emissions From Processing*** means the emissions of greenhouse gases related to the ~~biomethane~~Renewable Methane liquefaction (Actual Liquefaction or Equivalence Liquefaction) which is added by Terminal Operator on the Certificate of Bio-LNG.

~~93)~~94) ***Entry Point*** means any physical point of the Grid where the Natural Gas can be injected into the Grid.

~~94)~~95) ***Equivalence Liquefaction*** means the ability of Terminal Operator, being certified as Processing Unit – LNG Terminal, to convert Certificates of Biomethane or RFNBO Methane into Certificates of Bio-LNG or RFNBO LNG based on a default Emission From Processing under the applicable Certification Scheme.

~~95)~~96) ***Equivalence Liquefaction Request*** means the Quantity of Biomethane or RFNBO M~~m~~ethane for which Shipper wants to convert Certificates of Biomethane into Certificates of Bio-LNG or RFNBO LNG.

~~96)~~97) ***Equivalence Liquefaction Service*** means the service offered by Terminal Operator for the purposes of converting Certificates of Biomethane or RFNBO Methane of Shipper into Certificates of Bio-LNG or RFNBO LNG based on Equivalence Liquefaction in compliance with the applicable Certification Scheme.

~~97)~~98) ***Escrow Account*** means a bank account opened in an institution having its registered office in Belgium and duly authorized by the National Bank of Belgium, in accordance with the Escrow Account procedure and the following principles:

(i) the bank account shall be opened in the names of both Parties; and,

(ii) any payment from the Escrow Account shall require the signature of both Parties; and,

(iii) any interest accrued on an amount paid on the Escrow Account shall be for the benefit of the Party having paid said amount into the Escrow Account, subject to payment of any bank costs and payment of the interests which are due in accordance with the invoicing provisions of the relevant LNG Agreement.

~~98)~~99) ***€STR*** means the Euro short term rate as defined from time to time by the European Central Bank on its website.

~~99)~~100) ***EURIBOR*** or ***Euro Interbank Offered Rate*** means the rate at which Euro interbank term deposits are offered by one prime bank to another prime bank, as quoted on Moneyline Telerate pages 248-249 and 47860-47866. In the event Moneyline Telerate ceases to quote Euribor rates, the Parties agree to specify another Euribor source that is sponsored by the European Banking Federation (the FBE). If no FBE sponsored source is available, reasonable efforts are to be used by the parties to an LNG Agreement to agree on a different Euribor source.

~~100)~~101) ***Euro*** or ***€*** means the single currency of the Member States of the European Union belonging to the euro zone.

~~101)~~102) ***Event of Default*** has the meaning given to it in the LNG Agreement.

~~102)~~103) ***Expanded Terminal Capacity Phase 1*** means the extension of the LNG Terminal, whereby the West Jetty shall be constructed and commissioned.

~~103)~~104) ***Expanded Terminal Capacity Phase 2*** means the extension of the LNG Terminal, whereby a 5th LNG storage tank and additional compressor and pumps installations shall be constructed and commissioned.

~~104)~~105) ***Extended Force Majeure Date*** has the meaning given to it in the LNG Agreements (as the case may be).

~~105)~~106) ***Fast Loading Rate*** means a nominal loading rate of up to 10,000 m³ LNG/hour for a loading operation from Transshipment Storage into a LNG Ship associated to a Transshipment Berthing Right, the achieving of which is conditional on the LNG ship being equipped with adequate vapour return compressor capacity.

~~106)~~107) ***Final Round*** means, in a multiple round Auction, the last Round that has taken place before the Auction being declared conclusive in accordance with the Auction Rules.

~~107)~~108) ***Financial Bank Guarantee*** means the financial security on first demand a Terminal User may be required to provide in accordance with the provisions of the GC of the related LNG Agreement.

~~108)~~109) ***Flange*** means the point where the LNG Terminal is connected to the Grid.

~~109)~~110) ***Fluxys Belgium SA*** means Fluxys Belgium NV/SA, a company incorporated under the laws of Belgium, having its registered offices at 31 Avenue des Arts in 1040 Brussels, Belgium and registered in the Commercial Register of Brussels under n° HRB 34.991, VAT nr. BE 402.954.628.

~~110)~~111) ***Force Majeure*** or ***Force Majeure Event*** has the meaning given to it in the LNG Agreements.

~~111)~~112) ***Fuel Gas*** means the Natural Gas used by Terminal Operator to operate the LNG Terminal.

~~112)~~113) ***Fuel Gas Consumption*** means the Quantity of Fuel Gas used by the Terminal during the relevant period as measured by Terminal Operator.

~~113)~~114) ***Fuel Gas Quantity*** or ***FGm*** means the Quantity of Fuel Gas expressed in kWh for each Month M, that is equal to one decimal three zero percent (1,30%) of the Natural Gas delivered by Terminal Operator to the Shipper at the Redelivery Point.

~~114)~~115) ***Gas Act*** means the Belgian Gas Law concerning the transportation of gaseous and other substances by pipeline of 12 April 1965, as amended from time to time, or any successor thereof.

~~115)~~116) ***Gas Day*** means the period of twenty-three (23), twenty-four (24) or twenty-five (25) hours, as the case may be, beginning at 06h00 (Belgian time) on each Day and ending at 06h00 (Belgian time) on the following Day and the date of any Gas Day shall be the date of its beginning as herein defined.

~~116)~~117) ***Gas In Storage*** means on any hour of any Day a Quantity of LNG, expressed in energy terms, as calculated in accordance with the LNG Access Code.

~~117)~~118) ***Gas Regulation*** means Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005 (Text with EEA relevance).

~~118)~~119) ***Gassing Up Services*** means the LNG Redelivery Services or the LNG Transshipment Services, consisting of the redelivery by Terminal Operator of quantities of LNG from the LNG Terminal, for the purpose of gassing-up the cargo tanks of an LNG Ship, in order to meet the specifications set out in AC 3.9.

~~119)~~120) ***Gassing Up Services Charge*** means the charge payable for the Gassing Up Services, in accordance with the Regulated Tariff.

~~120)~~121) ***General Conditions*** or ***GC*** means the General Conditions as set out in an LNG Agreement.

~~121)~~122) ***GIIGNL LNG Custody Transfer Handbook*** means the manual related to the procedures and equipment available to and used by the members of GIIGNL ("Groupe International des Importateurs de Gaz naturel Liquéfié – Paris") to determine the energy quantity of LNG transferred between LNG Ships and LNG terminals, as published by GIIGNL.

~~122)~~123) ***Government Authority*** means any of the authorities of a government and any political subdivision or agency or instrumentality whether executive, legislative or judicial thereof.

~~123)~~124) ***Grid*** means the high pressure Natural Gas transmission network in Belgium operated by the Transporter.

~~124)~~125) ***Gross Heating Value*** or ***GHV*** means that quantity of heat expressed in kWh produced by the complete combustion of one (1) normal Cubic Meter of Natural Gas at twenty-five (25) degrees Celsius and at an absolute pressure of one decimal zero one three two five (1.01325) bar with excess air at the same temperature and pressure as the Natural Gas when the products of combustion are cooled to twenty-five (25) degrees Celsius and when the water formed by combustion is condensed to the liquid state and the products of combustion contain the same total mass of water vapour as the Natural Gas and air before combustion.

~~125)~~126) ***High Tide*** means each time when the seawater level reaches a high point in the Port, as published annually by the Port Authority or its successor in the table of tides.

~~126)~~127) ***ICC*** means the International Chamber of Commerce.

~~127)~~128) ***ICC Selection Rules*** means the rules for expertise of the ICC.

~~128)~~129) ***Indicative Berthing Schedule*** or ***IBS*** means the annual schedule of deliveries of Nominated Cargoes of LNG to the LNG Terminal by Shipper and the Other Shippers, as determined in accordance with AC 3.1.

~~129)~~130) ***Indicative Transshipment Berthing Schedule*** or ***ITBS*** means the annual schedule of deliveries or redeliveries of Nominated Cargoes of LNG to the LNG Terminal by Transshipper and the Other Transshippers, as determined in accordance with AC 3.1.

~~130)~~131) ***Jetty*** means the East Jetty or the West Jetty, and ***Jetties*** means the East Jetty and the West Jetty.

~~131)~~132) ***Joule*** or ***J*** means the work done when the point of application of a force of one Newton is displaced a distance of one Metre in the direction of the force.

~~132)~~133) ***kWh*** means a kilowatt hour and equals to three decimal six (3.6) Megajoule.

~~133)~~134) ***Lend Term*** means the period specified in AC 3.1.

~~134)~~135) ***Lending Service*** means the service whereby the Natural Gas is loaned to Shipper and/or an Other Shipper in accordance with AC 3.1.

~~135)~~136) ***Liquefied Natural Gas*** or ***LNG*** means Natural Gas in a liquid state at or near its boiling point and at a pressure of approximately one (1) atmosphere.

~~136)~~137) ***LNG Access Code*** *or* ***AC*** means the document consisting of a standard set of rules and procedures governing regulated access to the LNG Services offered by Terminal Operator to any Terminal User using the LNG Terminal

operated by the Terminal Operator in Zeebrugge, as published by the Terminal Operator in accordance with the Code of Conduct.

~~137)~~138) ***LNG Agreement*** means an agreement with Terminal Operator for the provision of LNG Services at the LNG Terminal.

~~138)~~139) ***LNG Delivery Services*** means the LNG Services consisting of the unloading of an LNG Ship under the LTA at the Delivery Point upon receipt of a Request for LNG Delivery Services.

~~139)~~140) ***LNG Dock*** means the part of the Port indicated as such on the map attached hereto in AC 3.13.

~~140)~~141) ***LNG Redelivery Services*** means the following LNG Services, consisting of the redelivery of LNG by Terminal Operator under the LTA at the Redelivery Point for Loading, upon receipt of a Request for LNG Redelivery Services in accordance with AC 3.9:

a) Loading Services; and/or
b) Cool Down Services; and/or
c) Gassing Up Services.

~~141)~~142) ***LNG Service(s)*** or ***Capacity Services*** means all services provided by the Terminal Operator pursuant to the LNG Access Code and related LNG Agreement with the exception of the Truck Loading Services provided by the Terminal Operator which are governed by the provisions of the LNG Access Code for Truck Loading unless specifically mentioned;

~~142)~~143) ***LNG Services Agreement*** *or* ***LSA*** means the agreement approved by the CREG under which LNG Services, particularly Slots, are subscribed and used by Shipper.

~~143)~~144) ***LNG Ship*** means any LNG ship to be used to deliver LNG to the LNG Terminal or to load LNG from the LNG Terminal and which has been approved by Terminal Operator in accordance with the procedure set out in AC 3.2.

~~144)~~145) ***LNG Terminal*** means the land, facilities and rights belonging to Terminal Operator at Zeebrugge, Belgium, for the berthing of an LNG Ship, the Transfer, storage of LNG and Send Out of regasified LNG into the Grid, together with any expansion or modification thereof.

~~145)~~146) ***LNG Terminalling Agreement*** or ***LTA*** means the agreement approved by the CREG under which LNG Services are subscribed and used by Shipper.

~~146)~~147) ***LNG Terminalling Program*** means LNG terminalling program approved by the CREG and published by the Terminal Operator in accordance with the Code of Conduct.

~~147)~~148) ***LNG Transshipment Agreement*** or ***LTSA*** means the agreement approved by the CREG under which LNG Transshipment Services are subscribed and used by the Transshipper.

~~148)~~149) ***LNG Transshipment Services*** means the following LNG Services, consisting of the delivery of LNG by the Transshipper under the LTSA at the Delivery Point for Transshipment, and the redelivery of LNG by the Terminal Operator at the Redelivery Point for Transshipment:

a) Transshipment Berthing Right;
b) Transshipment Storage
c) Cool Down Services; and
d) Gassing Up Services.

~~149)~~150) ***Loading Rate*** means:

a) for loading LNG Ships through the sixteen (16) inch transfer arms on the East Jetty or twenty (20) inch transfer arms on the West Jetty:
   (i) a nominal rate of 5,200 m³ LNG/hour if the Loading Services are performed from three (3) LNG storage tanks; or,
   (ii) a nominal rate of 4,300 m³ LNG/hour if the Loading Services are performed from two (2) LNG storage tanks; or,
   (iii) a nominal rate of 2,400 m³ LNG/hour if the Loading Services are performed from one (1) LNG storage tank.

b) for loading LNG Ships through the eight (8) inch loading arm on the West Jetty: a maximum rate of 1,500 m³ LNG/hour;

~~150)~~151) ***Loading Services*** means those LNG Redelivery Services consisting of the delivery of LNG by Terminal Operator at the Redelivery Point for Loading, for the purpose of filling the cargo tanks of an LNG Ship provided shipper has an Additional Berthing Right or Stand Alone Berthing Right (or Berthing Right as the case may be).

~~151)~~152) ***Loading Services Charge ABR*** means the charge payable for the Loading Services provided shipper has an Additional Berthing Right (or Berthing Right as the case may be), in accordance with the Regulated Tariff.

~~152)~~153) ***Loading Services Charge SABR*** means the charge payable for the Loading Services provided shipper has a Stand Alone Berthing Right (or Berthing Right as the case may be), in accordance with the Regulated Tariff.

~~153)~~154) ***Loaned Quantities*** means the Quantity of Natural Gas or LNG lent to Shipper and/or Another Shipper pursuant to AC 3.1.

~~154)~~155) ***Long Term Capacities*** has the meaning given to it in AC 2.2.1.

~~155)~~156) ***Long Term Capacities Allocation*** has the meaning given to it in AC 2.2.1.

~~156)~~157) ***Long Term Force Majeure*** has the meaning given to it in the LNG Agreements (as the case may be).

~~157)~~158) ***Long Term Force Majeure Notice*** has the meaning given to it in the LNG Agreements (as the case may be).

~~158)~~159) ***Long Term Planned Maintenance*** has the meaning given to it in AC 3.7.

~~159)~~160) ***Low Inventory Level*** means an aggregated Gas In Storage of Shipper and Other Shippers of 87 000 m³ LNG.

~~160)~~161) ***Long Term Shippers*** has the meaning given to it in AC 2.2.3.2.

~~161)~~162) ***Low Tide*** means each time when the seawater level reaches a low point in the Port, as published annually by the Port Authority or its successor in the table of tides.

~~162)~~163) ***m³ LNG*** means a volume of Liquefied Natural Gas occupying one (1) Cubic Metre.

~~163)~~164) ***m³(n)*** (normal cubic metre) of Natural Gas means the quantity of Natural Gas which at zero (0) degree Celsius and at an absolute pressure of one decimal zero one three two five (1.01325) bar and when free of water vapour occupies the volume of one (1) Cubic Metre.

~~164)~~165) ***Make-Up Capacities*** has the meaning given to it in the LNG Agreements (as the case may be).

~~165)~~166) ***Matched Quantities*** has the meaning given to it in AC 3.5.

~~166)~~167) ***MBTU*** means one (1) million (106) British Thermal Units or BTUs.

~~167)~~168) ***Medium Term Planned Maintenance*** has the meaning given to it in AC 3.7.

~~168)~~169) ***Megajoule*** or ***MJ*** means one million ($10^6$) Joules.

~~169)~~170) ***Metre*** or ***m*** means the distance travelled by light in vacuum during a period of time of 1/299,792,458 of a second (as determined by the "Cahier Général des Poids et Mesures", Paris, 1983).

~~170)~~171) ***Minimum Send Out*** has the meaning given to it in AC 3.1.

~~171)~~172) ***Month*** means a calendar month, starting at 00h00 on the first Day and ending at 24h00 on the last Day of such month.

~~172)~~173) ***Monthly Capacity Charge*** means the Capacity Charge due per Month.

~~173)~~174) ***Natural Gas*** means any hydrocarbon or mixture of hydrocarbons and non-combustible gases which, when extracted from the subsoil of the earth in its natural state separately or together with liquid hydrocarbons, is in gaseous state.

~~174)~~175) ***Nominated Cargo of LNG*** means the estimated Quantity of LNG on board an LNG Ship, when berthing at the LNG Terminal, nominated for delivery at the LNG Terminal.

~~175)~~176) ***Nominated Hourly Delivery*** or ***NHD*** shall mean the energy quantities of Natural Gas for each hour of the Gas Day which will be delivered at the Flange or the CTP, expressed in kWh, in accordance with AC 3.5.

~~176)~~177) ***Nominated Hourly Redelivery*** or ***NHR*** shall mean the energy quantities of Natural Gas for each hour of the Gas Day which will be delivered at the POR, expressed in kWh, in accordance with AC 3.5.

~~177)~~178) ***Nominated Volume of LNG*** means the Quantity of LNG nominated by Shipper for LNG Redelivery Services, in accordance with AC 3.9.

~~178)~~179) ***Nomination of LNG Ship Procedures*** means the procedures for the nomination and approval of an LNG Ship, as set out in AC 3.2.

~~179)~~180) ***Non-Nominated Send Out Capacities*** or ***Non-Nominated Send Out Rights*** shall mean those Send Out Capacities and additional Send Out entitlements against which Shipper and/or Other Shippers and/or Other Users have not submitted any Terminal Nominations, in accordance with AC 3.5.

~~180)~~181) ***Non-Nominated Services*** or ***NNS*** is the LNG Service offered by Terminal Operator whereby Shipper and/or Other NNS Shippers may make Terminal Nominations against the Non-Nominated Send Out Rights, subject to the provisions AC 3.5.

~~181)~~182) ***Notice of Readiness*** or ***NOR*** means a notice of readiness given by the master of the LNG Ship upon arrival at the Pilot Boarding Station, in accordance with AC 3.1.

~~182)~~183) ***Notice Of Readiness To Load*** or ***NORTL*** means a notice of readiness to load given by the master of the LNG Ship to Terminal Operator's representative pursuant upon establishing a safe ship-shore interface at the berth, in accordance with AC 3.1.

~~183)~~184) ***Notice of Readiness To Unload*** or ***NORTU*** means a notice of readiness to unload given by the master of the LNG Ship to Terminal Operator's representative upon establishing a safe ship-shore interface at the berth, in accordance with AC 3.1.

~~184)~~185) ***Offer*** means the LNG Services offered during an Auction Window as defined in the relevant TCAW.

~~185)~~186) ***Off-Specification LNG*** means LNG which does not comply with the Specification as set out in AC 3.3**.**

~~186)~~187) ***Off-Specification Natural Gas*** means Natural Gas which does not comply with the Specification as set out in AC 3.3.

~~187)~~188) ***Operating Rules*** means the rules for the operation of the LNG Terminal, as set out in AC 3.1.

~~188)~~189) ***Opening Time*** or ***Round opening Time*** means time when a Round is opened for submitting Bids.

~~189)~~190) ***Other NNS Shipper*** or ***Another NNS Shipper*** means any person other than Shipper, who is party to an agreement for the provision of Non-Nominated Services with Terminal Operator.

~~190)~~191) ***Other Shipper*** or ***Another Shipper*** means any person other than Shipper, who is party to a LNG Agreement with Terminal Operator for a minimum of one (1) Slot and/or one (1) Berthing Right and/or one (1) Additional Berthing Right and/or one (1) Stand Alone Berthing Right and/or has Send Out Capacity at the Terminal.

~~191)~~192) ***Other Transshipper*** or ***Another Transhipper*** means any person other than Transhipper, who is party to a LNG Agreement with Terminal Operator for a minimum of one (1) Transshipment Berthing Right and/or one (1) Transshipment Storage

~~192)~~193) ***Other User*** or ***Another User*** means any person other than Shipper or Another Shipper who is party to an LNG Agreement.

~~193)~~194) ***Participant(s)*** means a Party being registered as a participant by Terminal Operator for an Allocation Window in accordance with the provisions set out AC 2.2.1.2.

~~194)~~195) ***Party*** means the Terminal Operator and the Shipper or Transshipper as identified in the LNG Agreement when individually designated.

~~195)~~196) ***Parties*** means the Terminal Operator and the Shipper or Transshipper as identified in the LNG Agreement when collectively designated.

~~196)~~197) ***Pilot*** means a duly experienced professional person with recognised industry qualifications in Belgium whose role is to board the LNG Ship and assist the master of the LNG Ship with respect to the safe navigations, berthing and unberthing of the LNG Ship from the Pilot Boarding Station to the berth at the LNG Terminal within the LNG Dock and from the berth at the LNG Terminal to the Pilot Boarding Station.

~~197)~~198) ***Pilot Boarding Station*** or ***PBS of the Port*** means the location notified by the competent maritime authorities of the Port where the LNG Ship should take the Pilot on board which as of the Effective Date is one mile East of "AZ" buoy (Pos. 51°21'18"N – 02°36' 94"E) or such other point notified by the relevant maritime authorities from time to time.

~~198)~~199) ***Port*** means the sea port located at Zeebrugge, Belgium where the LNG Terminal is located.

~~199)~~200) ***Port Authority*** means the port authority at the Port, known as the "*Maatschappij van de Brugse Zeevaartinrichtingen NV*" or "*MBZ*", or any successor thereof.

~~200)~~201) ***Power of Attorney*** means the authorization granted by a Participant to its Bidders in order to submit Bids through the Auction Website as provided for in the TCAW.

~~201)~~202) ***Primary Market*** means the market of LNG Services traded directly by the Terminal Operator.

~~202)~~203) ***Price Step(s)*** means the price step to be set by Terminal Operator applicable for a certain Round and cycle during an Auction Window as provided for in the Auction Rules (for the first cycle "Major Price Step" and the for the second cycle "Minor Price Step") in accordance with the Auction Rules.

~~203)~~204) ***Processed Quantities*** shall mean the accepted quantities by a TSO or a Terminal Operator from Shipper, Other Shipper or Other User for delivery and/or offtake at the Flange and/or the Commodity Transfer Point, that may have been adjusted by the said TSO or Terminal Operator taking into account e.g. physical calculations, and/or capacity constraints, and/or balancing obligations, if any, as set out in AC 3.5.

~~204)~~205) ***Processing Unit*** means a facility where materials are physically or chemically transformed considering the mass balance principle applicable under the Certification Scheme.

~~205)~~206) ***Processing Unit – Liquefaction Plant*** means a Processing Unit from which the certification is based on the requirements of liquefaction plant (physical liquefaction) determined by the Certification Scheme.

~~206)~~207) ***Processing Unit – LNG Terminal*** means a Processing Unit from which the certification is based on the technical requirements for LNG Terminal determined by the Certification Scheme.

~~207)~~208) ***Quality Adjustment*** has the meaning given to it in AC 3.8.

~~208)~~209) ***Quality Adjustment Services*** has the meaning given to it in AC 3.8.

~~209)~~210) ***Quantity*** means the quantity of Natural Gas, LNG or, Fuel Gas, as applicable, expressed in energy terms (kWh), on a Gross Heating Value basis.

~~210)~~211) ***Quarter*** means the period of three (3) consecutive Months (from 01/01 to 31/03; from 01/04 to 30/06; from 01/07 to 30/09; from 01/10 to 31/12), where quarter Q is the present quarter, quarter Q-1 is the previous quarter and quarter Q+1 is the following quarter.

~~211)~~212) ***Reasonable and Prudent Operator*** means a person seeking to perform its contractual obligations in compliance with all applicable laws and regulations 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 and conditions.

~~212)~~213) ***Recondenser*** means the recondensers at the LNG Terminal where Natural Gas is reliquified to LNG.

~~213)~~214) ***Recondenser Liquefaction Service*** means the service offered by Terminal Operator for the purposes of converting Certificates of Biomethane or RFNBO Methane of Shipper into Certificates of Bio-LNG or RFNBO LNG based on Actual Liquefaction in compliance with the applicable Certification Scheme.

~~214)~~215) ***Recondenser Quantity*** means the Quantity of Natural Gas from the Recondensers over a defined period, in line with the applicable Certification Scheme.

~~215)~~216) ***Redelivery Metering Facility Operator*** or ***RMFO*** means the operator which pursuant to an agreement with Terminal Operator operates, maintains and calibrates the metering and quality monitoring equipment at the metering facilities used to measure the Natural Gas, expressed in quantities of energy, delivered at the Redelivery Point.

~~216)~~217) ***Redelivery Point*** shall mean the point where the flange coupling of the LNG Terminal joins the flange coupling of the Grid.

~~217)~~218) ***Redelivery Point for Loading*** means the point at the LNG Terminal at which the flange coupling of the LNG Terminal's loading line joins the flange coupling of the LNG manifold on-board the LNG Ship.

~~218)~~219) ***Redelivery Point for Transshipment*** means the point at the LNG Terminal at which the flange coupling of the LNG Terminal's loading line joins the flange coupling of the LNG manifold on-board the LNG Ship.

~~219)~~220) ***Redelivery Point for Truck Loading*** means the point at the LNG Terminal at which the flange coupling of the LNG Terminal's loading line joins the flange coupling of the trailer.

~~220)~~221) ***Reduced Service Days*** has the meaning given to it in AC 3.7.

~~221)~~222) ***Registration Documents*** means mean all documents necessary for an Applicant to apply for registration to become a Participant to an Allocation Window.

~~222)~~223) ***Registration Evaluation*** means the registration evaluation process performed by Terminal Operator using the Registration Documents submitted by the Applicant to decide if such Applicant may or may not become a Participant with its designated Bidders in accordance with the TCAW.

224) ***Regulated Tariff*** means the tariff applicable for the provision of the LNG Services or any portion thereof, as approved by the CREG. ***Request for LNG Delivery*** Services means the notice to be sent by Shipper to Terminal Operator, as provided in AC 3.1.4.

~~223)~~225) ***Renewable M~~m~~ethane*** means Biomethane or RFNBO M~~m~~ethane

~~224)~~226) ***Request for LNG Redelivery Services*** means the notice to be sent by Shipper to Terminal Operator, as provided in AC 3.9.

~~225)~~227) ***Request for Ship Approval*** has the meaning given to it in AC 3.2.

~~226)~~228) ***Reserve Price*** means the start price set by Terminal Operator at the beginning of an Auction Window as provided for in the Auction Rules.

~~227)~~229) ***Residual Storage*** has the meaning given to it in AC 2.1.10.

230) ***Reverse Nomination*** has the meaning given to it in AC 3.5

231) ***RFNBO Methane*** means methane eligible as renewable fuel of non-biological origin as defined by the Certification Scheme

~~228)~~232) ***RFNBO LNG*** means LNG eligible as renewable fuel of non-biological origin as defined by the Certification Scheme

~~229)~~233) ***Rolling Berthing Schedule*** or ***RBS*** means the schedule provided for in AC 3.1.

~~230)~~234) ***Rolling Transshipment Berthing Schedule*** or ***RTBS*** means the schedule provided for in AC 3.1.

~~231)~~235) ***Round*** means a round of the Auction, evolving as described in the price evolution rules as provided for in the Auction Rules.

~~232)~~236) ***Round Price*** means the price set by Terminal Operator for a specific Round.

~~233)~~237) ***Scheduled Additional Berthing Right*** means an Additional Berthing Right which has been allocated and scheduled in accordance with the RBS and such schedule shall refer to a specific Tide per such Additional Berthing Right.

~~234)~~238) ***Scheduled Berthing Right*** means a Berthing Right which has been allocated and scheduled in accordance with the RBS and such schedule shall refer to a specific High Tide per such Berthing Right.

~~235)~~239) ***Scheduled Slot*** means a Subscribed Slot which has been allocated and scheduled in accordance with the RBS and such schedule shall refer to a specific High Tide per such Subscribed Slot.

~~236)~~240) ***Scheduled Stand Alone Berthing Right*** means a Stand Alone Berthing Right which has been allocated and scheduled in accordance with the RBS and such schedule shall refer to a specific Tide per such Stand Alone Berthing Right.

~~237)~~241) ***Scheduled Transshipment Berthing Right*** means a Transshipment Berthing Right which has been allocated and scheduled in accordance with the RTBS and such schedule shall refer to a specific Low Tide per such Subscribed Transshipment Berthing Right.

~~238)~~242) ***Secondary Market*** means all transactions of LNG Services elsewhere than on the Primary Market.

~~239)~~243) ***Secondary Market Platform (SMP)*** means the web application provided by the Terminal Operator for the trading of LNG Services between Terminal Users on the Secondary Market in accordance with the provisions of AC 2.3.

~~240)~~244) ***Segment 1*** means the part of the Grid from the LNG Terminal to and including OKS (Oostkerkestraat).

~~241)~~245) ***Send Out*** (and its derivative terms) means the capacity to regasify LNG and to inject the Natural Gas into the Grid at the Redelivery Point.

~~242)~~246) ***Send Out Capacity*** means the sum of the Basic Send Out Capacity, the Additional Send Out Capacity, the Stand Alone Send Out Capacity and the Daily Send Out Capacity.

~~243)~~247) ***Send Out Nomination*** has the meaning given to it in AC 3.5.

~~244)~~248) ***Services Confirmation Form*** means the form (as published on the Terminal Operator's website) duly completed by Terminal User and accepted by Terminal Operator, in accordance with the LNG Access Code.

~~245)~~249) ***Services Confirmation Form for Contracting*** or ***SCFC*** means the form in AC 4.1.

~~246)~~250) ***Services Confirmation Form for Assignments*** or ***SCFA*** means the form in AC 4.1.

~~247)~~251) ***Services Confirmation Form for Assignments by Terminal Operator*** or ***SCFATO*** means the form in AC 4.1.

~~248)~~252) ***Service End Date*** means the date specified in the relevant Services Confirmation Form for the end of the Service Term.

~~249)~~253) ***Services Request Form*** means the form (as published on the Terminal Operator's website) which the Terminal User shall use to request for LNG Services in accordance with the LNG Access Code.

~~250)~~254) ***Services Request Form for Contracting*** or ***SRFC*** means the form in AC 4.1.

~~251)~~255) ***Services Request Form for Assignments*** or ***SRFA*** means the form in AC 4.1.

~~252)~~256) ***Services Request Form for Assignments by Terminal Operator*** or ***SRFATO*** means the form in AC 4.1.

~~253)~~257) ***Service Start Date*** means the date specified in the Services Confirmation Form for the start of the Service Term.

~~254)~~258) ***Service Term*** means the number of Years specified in the relevant Services Confirmation Form.

~~255)~~259) ***Ship Approval Procedure*** has the meaning given to it in AC 3.2.

~~256)~~260) ***Shipper*** has the meaning given to it in the LNG Agreement.

~~257)~~261) ***Ship-to-Ship Transfer Rate*** means the nominal rate of up to 14,000 m³ LNG/hour during the unloading of an LNG Ship at one Jetty into another LNG Ship at the other Jetty, the achieving of which is conditional on the receiving LNG ship being equipped with adequate vapour return compressor capacity.

~~258)~~262) ***Ship-to-Ship Transshipment*** is a transshipment operation making use of two Transshipment Berthing Rights, where LNG is unloaded from one LNG Ship at one Jetty and simultaneously loaded into another LNG Ship at the other Jetty.

~~259)~~263) ***Shipper's Client*** means the entity to which the Natural Gas is transferred and/or delivered upon delivery by Terminal Operator to Shipper at the Redelivery Point, the Redelivery Point for Loading or the Redelivery Point for Truck Loading which, for the avoidance of doubt, may be Shipper.

~~260)~~264) ***Shipper's LNG*** means LNG delivered by or on behalf and in the name of Shipper at the Delivery Point.

~~261)~~265) ***Ship/Shore Safety and Security Procedure*** has the meaning given to it in AC 3.2.

~~262)~~266) ***Short Term Capacities*** has the meaning given to it in AC 2.2.2.

~~263)~~267) ***Short Term Capacities Allocation*** has the meaning given to it in AC 2.2.2.

~~264)~~268) ***Short Term Planned Maintenance*** has the meaning given to it in AC 3.7.

~~265)~~269) ***Slot*** means an entitlement pursuant to a LNG Agreement to berth an LNG Ship at the LNG Terminal in relation to a High Tide as allowed under the nautical rules applicable at the Port and to unload, store and regasify its cargo of LNG in accordance with the LNG Access Code.

~~266)~~270) ***Specification*** means the specifications set out in AC 3.3.

~~267)~~271) ***Specification for the Delivery Point*** means the Specification for the Delivery Point set out in AC 3.3.

~~268)~~272) ***Specification for the Redelivery Point*** means the Specification for the Redelivery Point set out in AC 3.3.

~~269)~~273) ***Specification for the Redelivery Point for Loading*** means the Specification for the Redelivery Point for Loading set out in AC 3.3.

~~270)~~274) ***Specification for the Redelivery Point for Transshipment*** means the Specification for the Redelivery Point for Transshipment as set out in AC.3.3.

~~271)~~275) ***Stand Alone LNG Berthing Right*** means the right to berth a LNG Ship at the East Jetty or at the West Jetty for the purpose of the provision of LNG Redelivery Services or LNG Delivery Services at the LNG Terminal in connection with a Tide, as allowed under the nautical rules applicable at the Port, in accordance with the LNG Access Code.

~~272)~~276) ***Stand Alone Send Out Capacity*** has the meaning given to it in AC 2.1.12.

~~273)~~277) ***Storage Capacity*** means the storage capacity to which Shipper is entitled, being the sum of the Basic Storage, the Additional Storage, the Residual Storage and any Daily Storage Capacity subscribed to by Shipper.

~~274)~~278) ***Subscribed Additional Berthing Right*** means an Additional Berthing Right contracted under an LTA, the number of Subscribed Additional Berthing Rights per Contract Year being specified in the Services Confirmation Form.

~~275)~~279) ***Subscribed Slot*** means a Slot subscribed by Shipper or Other Shipper, the number of Slots per Contract Year being subscribed in the Services Confirmation Form whereby each Subscribed Slot shall be allocated a package of concurrent entitlements to a Berthing Right, Basic Storage and Basic Send Out Capacity.

~~276)~~280) ***Subscribed Stand Alone Berthing Right*** means a Stand Alone Berthing Right contracted under an LTA, the number of Subscribed Stand

Alone Berthing Rights per Contract Year being specified in the Services Confirmation Form.

~~277)~~281) ***Subscribed Slot Price*** means the price for a Subscribed Slot, as specified in the Regulated Tariffs.

~~278)~~282) ***Subscribed Transshipment Berthing Right*** means a Transhipment Berthing Right subscribed by Transshipper or Other Transshipper, the number of Transshipment Berthing Rights per Contract Year being subscribed in the Services Confirmation Form

~~279)~~283) ***Subscribed Transshipment Berthing Right Price*** means the price for a Subscribed Transshipment Berthing Right, as specified in the Regulated Tariffs.

~~280)~~284) ***Subscribed Transshipment Storage*** means a Transhipment Storage subscribed by Transshipper or Other Transshipper per Contract Year being subscribed in the Services Confirmation Form

~~281)~~285) ***Subscribed Transshipment Storage Price*** means the price for a Subscribed Transshipment Storage, as specified in the Regulated Tariffs.

~~282)~~286) ***Subscription Window*** means the window for requesting LNG Services in accordance with the provisions set out both in the LNG Access Code and the terms and conditions for such window.

~~283)~~287) ***Tank*** means, when used in AC 3.5, a notional point, representing the Gas In Storage account of the Terminal User, which is downstream of the Delivery Point.

~~284)~~288) ***Tariff*** means the tariff to be invoiced to the Terminal Users conform the respective Allocation Windows – i.e. for an Subscription Window this is equal to the Regulated Tariff, for an Auction Window this is equal to either (i) the Cleared Price or (ii) the sum of the Regulated Tariff and the Cleared Price of the corresponding Auction Window, as specified in the corresponding TCAW. For a combination of a Subscription Window and an Auction, this is equal to the sum of the Regulated Tariff and the Cleared Price. For the sake of clarity, in this last case, the Cleared Price shall be equal to zero if capacity is allocated before requiring to use an Auction Form.

~~285)~~289) ***Terminal Nominations*** or ***Nominations*** means requests by Terminal Users to Terminal Operator to have quantities of Natural Gas, expressed in kWh, transmitted in accordance with AC 3.5.

~~286)~~290) ***Terminal Operator*** has the meaning given to it in the LNG Agreements.

~~287)~~291) ***Terminal Operator's Constraint Notice*** means the notice issued by Terminal Operator in accordance with AC 3.5, and the Edig@s Notice type for such notice will be "NOMRES".

~~288)~~292) ***Terminal Operator's Daily Transport Notice*** or **TDT** means the notice issued by Terminal Operator in accordance with AC 3.5, and the Edig@s Notice type for such notice will be "NOMRES".

~~289)~~293) ***Terminal User*** shall mean Shipper, Other Shipper, Another Shipper, Other User, Another User, Transshipper, Other Transshipper or Another Transshipper.

~~290)~~294) ***Terminal User's Counterparty*** means the entity to which Terminal User delivers the Natural Gas upon redelivery by Terminal Operator to Shipper at the POR under AC 3.5, which, for the avoidance of doubt, may be Shipper's Client.

~~291)~~295) ***Terms and Conditions*** or ***TCSW*** or ***TCAW*** means the specific terms and conditions applicable to a specific Allocation Window (Subscription Window "TCSW" or Auction Window "TCAW") and/or offered LNG Services, including related services (as the case may be).

~~292)~~296) ***Tide*** means each time when the seawater level reaches a high or a low point in the Port, as published annually by the Port Authority or its successor in the table of tides.

~~293)~~297) ***Total Basic Send Out Capacity*** means the total Send Out capacity, allocated as Basic Send Out Capacity, of Shipper and the Other Shippers.

~~294)~~298) ***Transfer*** (and its derivative terms) shall mean the unloading of the Nominated Cargo of LNG or the redelivery of the Nominated Volume of LNG as the case may be.

~~295)~~299) ***Transmission Redelivery Point*** has the meaning given to it in AC 3.8.

~~296)~~300) ***Transmission Services Agreement*** means a transmission services agreement entered into by Shipper's Client for the transmission of Natural Gas as from the Redelivery Point.

~~297)~~301) ***Transporter*** or ***Transmission System Operator*** or ***TSO*** means any company operating the Grid connected to the LNG Terminal.

~~298)~~302) ***Transshipment Berthing Right*** means the right to have an LNG Ship accepted by Terminal Operator and to berth and to unload, or alternatively, to load an LNG Ship, and as the case may be, have Gassing Up and/or Cool Down services performed, at the LNG Terminal in connection with a Low Tide, as allowed under the nautical rules applicable at the Port, and in accordance with this LNG Access Code.

~~299)~~303) ***Transshipment Boil-Off-Gas*** or ***TBOG*** means the total quantity of natural gas generated through the boil-off of LNG during the provision of LNG Transshipment Services - all aspects of such services being taken into account and as determined pursuant to AC 3.1.6.2.2. This natural gas includes vaporized LNG due to heat ingress into the process, possible LNG required to desuperheat the gas at the inlet of compressors and possible LNG required for quality adjustment

~~300)~~304) ***Transshipment Boil-Off-Gas Facility Operator*** or ***TBOGFO*** means the person which shall offtake the TBOG, expressed in quantities of energy, delivered at the Redelivery Point.

~~301)~~305) ***Transshipment Electricity Factor HP*** means the conversion factor representing the fixed amount of electricity expressed in kWh consumed by Terminal Operator per unit of TBOG expressed in kWh for each type of operation as set out under AC 3.1.6.2.2 (i) to (iv), otherwise zero (0).

~~302)~~306) ***Transshipment Electricity Factor LP*** means the conversion factor representing the fixed amount of electricity expressed in kWh consumed by Terminal Operator per unit of boil-off-gas expressed in kWh returing towards the LNG Ship at the Delivery Point for Transshipment for each type of operation as set out under 3.1.6.2.2 (ii) and (iv), otherwise zero (0).

~~303)~~307) ***Transshipment Electricity Factor P*** means the conversion factor representing the fixed amount of electricity expressed in kWh consumed by Terminal Operator per Quantity of LNG loaded into the LNG Ship at the Redelivery Point for Transshipment for each operation as set out under 3.1.6.2.2 (iii) and (iv), otherwise zero (0).

~~304)~~308) ***Transshipment Storage*** means a quantity of storage capacity at the LNG Terminal equal to maximally 180.000 Cubic Metres of LNG that can be used to unload, load and store LNG in the framework of LNG Transshipment Services.

~~305)~~309) ***Transshipper*** has the meaning given to it in the LNG Transshipment Agreement (LTSA).

~~306)~~310) ***Truck Loading (Service)*** means the service consisting of the loading of an LNG Truck by Terminal Operator at the LNG Terminal in accordance with the provisions of the LNG Access Code for Truck Loading.

~~307)~~311) ***TSA Nominations*** means nominations made by Shipper's Client under the Transmission Services Agreement.

~~308)~~312) ***Unexpanded Terminal Capacity*** means the capacity of the LNG Terminal before the commissioning of the Expanded Terminal Capacity.

~~309)~~313) ***Unplanned Maintenance*** has the meaning given to it in AC 3.7.

~~310)~~314) ***User's Daily Transmission Notice*** or ***SDT*** means the notice issued by Terminal User to Terminal Operator in accordance with AC 3.5, and the Edig@s Notice type for such SDT will be "NOMINT".

~~311)~~315) ***Valid Bid*** means the latest Bid of a Participant submitted by one of its Bidder(s) for a Round, which has been validated by Terminal Operator in accordance with the provisions set out in AC 2.2.1.2.

~~312)~~316) ***Very Low Inventory Level*** means an aggregated Gas In Storage of Shipper and Other Shippers of 64 000 m³ LNG.

~~313)~~317) ***West Jetty*** means the westernmost jetty (once constructed and commissioned) in the LNG Dock at the LNG Terminal with the technical specifications specified in AC 3.1.

~~314)~~318) ***Window*** means, in relation to a Scheduled Slot, a time period consisting of three (3) consecutive High Tides, starting on the first High Tide thereof, which first High Tide is the High Tide specifically referred to for such Scheduled Slot in the RBS. In relation to a Scheduled Additional Berthing Right or a Scheduled Stand Alone Berthing Right, it means a time period containing three consecutive High Tides, respectively Low Tides, starting on the first Tide thereof which first Tide is the Tide specifically referred to in the RBS.

~~315)~~319) ***Wobbe Number*** has the meaning given to it in the LNG Access Code.

~~316)~~320) ***Year*** means a period of twelve (12) consecutive Months.

~~317)~~321) ***Zeebrugge Hub*** means the marketplace for Natural Gas at the physical entry point to the Fluxys transmission system in Zeebrugge, connected to Interconnector Zeebrugge Terminal, Zeepipe Terminal and the Zeebrugge LNG Terminal.

~~318)~~322) ***Zig Day Ahead*** means the Zeebrugge Day-Ahead Flow Date price, as published by Platts, expressed in €/MWh.