



Gas LNG Europe

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## LNG Business Rules

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Avenue des Arts 19  
B – 1210 Brussels

Tel +32 2 209 0500  
Fax +32 2 209 0501

[gte@gte.be](mailto:gte@gte.be)  
[www.gte.be](http://www.gte.be)

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### Scope of the work

In the last few years the gas market has drastically changed due to the new regulatory framework introduced by the Gas Directive 98/30/EC. LNG terminals - built in the past in order to satisfy the specific needs of the main national gas companies – are now part of a dynamic market where new players are coming and the rules to have access to the plants are going to be defined.

Some of the issues addressed by the 2<sup>nd</sup> Internal Gas Market Directive 2003/55/EC on common rules for the internal market in natural gas, adopted in June 2003 and repealing the first Internal Gas Market Directive 98/30/EC, have been taken into account by the GTE LNG Working Group. In particular Article 2 (1, 9, 11, 12, 14), Article 19 and 22 which explicitly address issues related to LNG activities and all the other articles and definitions that are of general application for regulated activities and that shall be applied also to LNG facilities.

GTE LNG Members are discussing about the possibility to share common management procedures for the business rules of LNG re-gasification plants. Aim of this document is to present some of the conclusions and common positions arisen during the discussions of the group. In particular, as far as the provisions established on Chapter VI – “Organisation of access to the system” are concerned, Terminal Operators – represented in the GTE LNG Working Group – agree that the better way to apply Third Party Access to LNG terminals is through published and non discriminatory access conditions driving toward a Regasification Code or published standard regasification conditions.

This position paper is mainly based on evidences arisen from questionnaires developed for internal analysis from GTE and filled in by each Terminal Operator as member of GTE LNG Working Group.

The following sections give evidence of the GTE LNG Members position on some issues regarding areas of analysis identified as of primary interest.



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## **1. Roles and responsibilities**

In order to guarantee the correct and efficient use of the LNG re-gasification plants, it is necessary to clearly define roles and responsibilities of the Terminal Operator, offering some kind of services (see section services), and of the Terminal Users, having access to such services.

### **1.1. Main roles and responsibilities of the Terminal Operator**

Each Terminal Operator shall (according to the 2<sup>nd</sup> Internal Gas Market Directive):

- operate, maintain and develop under economic conditions secure, reliable and efficient LNG re-gasification facilities, with due regard to the environment;
- refrain from discriminating between users or classes of users, particularly in favour of its related undertakings;
- provide to the interconnected transmission system operator sufficient information to ensure that the transport of natural gas may take place in a manner compatible with the secure and efficient operation of the interconnected system;
- provide users with the information they need for efficient access to the system.

The minimum role of a Terminal Operator would involve safety, technical integrity, reliability and efficiency of its plant through:

- the maintenance, operation and development of its plant including sufficient long-term investment planning based among others on contractual commitments, on proper consultation of potential users and, if any, on guidelines by national authorities;
- provision of non-discriminatory access to its plant processing any users' LNG within its system in fulfilment of published re-gasification conditions or Re-gasification Code developed in accordance to the regulatory framework of each country;
- co-operation with the transmission system operator connected to the LNG re-gasification plant to ensure interoperability between the two different systems and the intake of natural gas into the transmission network, entering specific agreements.

Terminal Operator should also:

- assign the re-gasification capacity of the plant on the basis of the principles and priorities defined in the Re-gasification Code or re-gasification access conditions;
- communicate to Terminal Users the maintenance programme;
- define the programme of discharges according to the scheduling procedure;
- perform the unloading activities of the ships, the storage of LNG delivered by the Terminal Users and the LNG re-gasification process;
- develop, in compliance with technical and legislative conditions of each terminal, the plant equipments in order to meet the required adequate technical re-gasification capacity and reliability;
- ensure the long-term capacity of the plant to meet supported demands, based on physical flows, for the re-gasification of LNG, provided that this is technically/economically feasible;
- develop procedures for the acceptance of LNG ships.

The Terminal Operator shall also define the conditions of the offered ancillary services (see section "Services offered by TOs") and shall ensure the respect of such conditions to the Terminal Users.



Terminal Operator is moreover responsible for redelivering the re-gasified LNG within the quality specifications for introduction of gas into the network – as defined in the network codes - providing that the LNG delivered by the Shipper complies with the specifications defined by the Terminal Operator.

## 1.2. Main roles and responsibilities of the Terminal User

Terminal User is a customer of the LNG re-gasification plant and has the duty to sign the relevant Re-gasification Code and/or to enter into contracts with Terminal Operator for services provided by the Terminal Operator itself.

Terminal Users are responsible for delivering LNG to the Terminal Operator and for off-taking the re-gasified flows in accordance with contractual specifications, technical rules, agreed procedures and balancing rules set by the Terminal Operator according to published conditions and/or Re-gasification Codes.

Terminal Users shall, inter alia, be responsible for:

- performing all the necessary activities for capacity booking;
- providing the financial guarantees for the coverage of assignment and service provision obligations;
- respecting the assigned unloading dates (as resulting from the application of the scheduling procedure) and the contractual quantities;
- respecting the quality specifications of LNG delivered to the plant;
- assuring the respect of the safety procedures in use at the plant and the port;
- performing all custom formalities regarding the import of LNG;
- assuring exchange of information between the ship and the terminal as requested by the procedures in use at the terminal;
- developing relevant IT in order to communicate with the terminal;
- providing all data required in the Re-gasification Code and/or in the re-gasification access conditions with the Terminal Operators;
- utilizing ships accepted by the Terminal Operator according to the SAP.

Terminal Users shall also be responsible for delivering the contractual LNG quantities according to the contractual nomination within a certain period. Delivering quantities of LNG on a regular basis must be considered in the rules applied to the scheduling procedure, so assuring security and technical optimization of the plant.

## 2. Capacity determination

### 2.1. Technical capacity determination

GTE LNG Members agree the technical re-gasification capacity of the plant should be defined as the maximum throughput of the LNG terminal expressed in energy per unit time.

The LNG re-gasification plant can be generally split in three main different sections, where the basic services, as hereinafter identified, are processed:

1. unloading;
2. storage (LNG tanks);
3. send out (vaporizers & pumps).

In order to determine the technical capacity of the plant, the Terminal Operator should calculate :



1. the Technical Unloading Capacity (TUC), that could be defined as the quantity of LNG unloaded in a defined period of time according to some reference parameters (i.e. number of slots, size of receivable ships); these data shall be used to identify the “Technical Unloading Capacity range” (maximum/minimum value) depending on the ship size and hazards;
2. the Total Operating Storage Volume (TOSV) of the plant as the sum of operating storage volumes of each tank (meaning the difference between the maximum and minimum quantity of LNG accepted in management of the storage tanks); in case of LNG to re-gasify available in the tanks, this volume cannot be used for the calculation of the technical capacity of the plant;
3. the Send-Out Capacity (SOC) as the capacity of the equipments used for the vaporisation process, in compliance with the maintenance policy adopted by the Terminal Operator.

If some other equipments inside the re-gasification plant can bottleneck the global system, they should be clearly identified and considered in the calculation of the technical re-gasification capacity.

Bottlenecks due to equipments outside the re-gasification plant (i.e. pipeline transmission capacity is not considered).

The technical re-gasification capacity of the plant can be defined as the minimum value among:

- ⇒ Technical Unloading Capacity
- ⇒ Send-Out Capacity
- ⇒ Other equipments capacity (if any).

A proposal for definitions here used and the methodology to calculate the technical re-gasification capacity is published on GTE website.

## 2.2. Commercial capacity determination

One of the main items regarding the business rules applicable to a LNG terminal to be discussed by the GTE LNG Working group is the maximisation of the commercial re-gasification capacity of the plant, making available to the requesting subjects a capacity as close as possible to the technical re-gasification capacity.

Commercial capacity shall be determined taking into account TUC, TSOV, SOC and, if any, other equipments outside and inside the re-gasification plant.

## 3. Services offered by Terminal Operators

### 3.1. Basic services

In accordance with the definition of LNG facility, included in the 2<sup>nd</sup> Internal Gas Market Directive:

*“‘LNG facility’ means a terminal used for liquefaction of natural gas or the importation, offloading and re-gaseification of LNG, and shall include ancillary services and temporary storage necessary for the re-gaseification process and subsequent delivery to the transmission system, but shall not include any part of LNG terminals used for storage”,*

GTE LNG Members agree that the “basic” services that each LNG terminal must provide in order to perform the re-gaseification activity are the following:

- unloading (including quantity and quality measurement);
- operational Storage (according to the definition provided in this document);

- vaporisation.

Basic services shall be provided by each LNG terminal as TPA related services.

### 3.2. Ancillary services

Furthermore the above mentioned definition introduces the concept of ancillary service: while the definition of LNG facility seems to consider as ancillary services only the ones strictly related to the technical activity of the plant, the definition of ancillary service itself here defined has a wider meaning.

In order to clarify which kind of services should be considered as ancillary services, GTE LNG Working Group has developed a study in order to identify which kind of “non basic” services are available in the different terminals represented.

From this study arises that ancillary services can have two different natures: the first is related to the technical activities performed in the plant but not considered into basic services. The second one is related to a set of commercial activities which the TOs can provide to the Terminal Users.

A list of technical ancillary services, resulting from the study of GTE LNG Working Group, has been defined in annex (page 9). It should be noted that all the ancillary services as listed in annex are not available at each LNG terminal.

Commercial ancillary services are difficult to be listed since such services would depend on the level of liberalisation of the business and on the demand of the market. However some examples of commercial ancillary services are provided in annex.

Due to their specificity GTE LNG Members agreed that ancillary services tariffs should be defined separately by each Terminal Operator outside regulated framework.

The remuneration of the assets used to provide services defined as “public interest” (i.e. odorisation in some countries is a law obligation) must be considered into the regulated tariffs even if listed as ancillary services.

## **4. LNG Scheduling procedures – general principles**

The Business Rules for LNG terminals must consider scheduling procedures.

The scheduling of berthing and unloading activities is a key process - made by the Terminal Operators - that affects all parties involved in the LNG chain (LNG terminal, transmission system, Terminal Users and producers): for this reason each Terminal Operator should develop transparent and non discriminatory scheduling procedures.

As a general principle, a same definition of “thermal year” could allow the Terminal Users to optimize the scheduling activity for the LNG quantity to be discharged at European LNG terminals: a common effort should be done in the harmonisation of this definition. In order to allow an efficient intake of gas into the transmission network, the definition of “thermal year” used in the Re-gasification Code or in the re-gasification access conditions of each LNG terminal should fit with the one used for the interconnected transmission system.

The aim of the scheduling procedure is to optimise the use of the terminal, taking into account technical and operational constraints of that terminal. In order to guarantee such a result through a non discriminatory access, the scheduling procedure must establish the methodology to program slots for unloading LNG ships and send out.



The slot allocation process shall necessarily be performed after the assignment of the re-gasification capacity to the Terminal Users according to list of priority defined in the Re-gasification Code or standard re-gasification access conditions; in any case, the proposal of each shipper for a slot allocation must be compliant with the assigned re-gasification capacity.

The scheduling programme requests a clear periodicity: annual, monthly and, if compatible with terminal access rules, weekly. Moreover the timing of the scheduling procedure should be harmonized among the LNG terminals.

Moreover the scheduling procedure has to deal with:

- possibility of delays on scheduling programme;
- costs and damages for Terminal Operators due to lack of LNG (impact on the re-gasification process);
- balancing activities.

## 5. Tariffs - general principles

The 2<sup>nd</sup> Internal Gas Market Directive defines also that:

*“Member States shall ensure the implementation of a system of third party access to [...] LNG facilities based on published tariffs [...], applied objectively and without discrimination between system users. Member States shall ensure that these tariffs [...] shall be approved prior to their entry into force by a regulatory authority [...] and that these tariffs [...] are published prior to their entry into force”.*

Taking into account that the tariff structure to apply in each Member State to LNG facilities depends on the specificity of each country. Some principles regarding the tariff structure which should be considered by the regulatory authority in the definition of tariff structure itself are the following:

- Terminal Operators agree to consider as the best tariff structure a capacity/commodity mix (“ship or pay” provision being an acceptable alternative to the capacity term);
- Long term/short term/spot contracts should have the same tariff structure, but different prices, according to the different rights/duties/priority of each contract;
- Basic services can be sold on a jointly or separated basis and accounted separately - taking into account the specificity of each terminal – applying the above mentioned structure.



### LNG common Glossary

GTE LNG Members agree on the need to identify a “LNG common glossary” (as an ongoing process) trying to harmonize some terms commonly used in the LNG market but often with different meanings: taking in mind the specificity of the re-gasification business in each country, GTE LNG Members have shared a first list of definitions as hereinafter reported:

“Terminal Operator”: means the operator of a LNG terminal, be it a separate entity or an unbundled function of an integrated company, as a natural or legal person who carries out the functions of unloading, operational storage and vaporisation of LNG.

“Terminal User”: means a customer of the LNG re-gasification plant that has the duty to sign the relevant Re-gasification Code and/or relevant contracts with the Terminal Operator for services provided by the Terminal Operator itself.

“SAP”(Ship Approval Procedure): means the procedure for the acceptance of the LNG ships agreed by the GTE LNG Members and published on GTE website;

“Long term contract”: means a contract between Terminal Operator and Re-gasification Terminal User with more than one year duration;

“Short term contract”: means a contract between Terminal Operator and Re-gasification Terminal User with less than or equal to one year duration.

“Spot”: means a window, which was not foreseen into the annual scheduling or otherwise in the monthly programme, made available by the Terminal Operator without negatively affecting the unloading programme of the other shippers.

“Acceptance window”: means the allocated to a Terminal User for the arrival of its vessel at the LNG terminal.

“Slot”: means the time assigned by the Terminal Operator to a Terminal User for the discharge of its cargo at the LNG terminal.

“Transmission System Operator”: means the operator of the transmission system interconnected with the LNG terminal, be it a separate entity or an unbundled transmission function of an integrated company, as a natural or legal person who carries out the functions of gas transportation.

The definition of LNG facility, included in the IGM Gas Directive, introduces a new concept of storage, strictly related to the re-gasification of the LNG discharged by each Terminal User and the intake of re-gasified LNG in the transmission network. GTE LNG Members agree that this concept needs to be clearly defined and they agree with the following formulation to identify this kind of service.

“Operational Storage”: the storage intrinsically associated to transform a discrete quantity of LNG into continuous gas flow within a certain time and that cannot be provided by alternative storage flexibility providers.



**Annex - List of ancillary services**

Technical ancillary services

1. Wobbe index correction
2. Odourisation
3. Additional storage (additional to the “Operational storage”)
4. LNG trucking
5. Ship to Ship loading
6. Tank to Ship loading
7. Tanker cooling down
8. Ship qualification to access the LNG Terminal
9. Liquefied nitrogen loading
10. Nitrogen inerting
11. Bunkering while ship at berth

Commercial ancillary services proposed by LNG terminal operators as a “market facilitator”:

1. Re-gasification capacity trading
2. LNG inventory trading
3. Storage capacity trading
4. Unloading slot trading