

# OPEN SEASON SECOND CAPACITY ENHANCEMENT OF THE ZEEBRUGGE LNG TERMINAL

**BINDING PHASE:** OFFER DESCRIPTION  
03 FEBRUARY 2011





## **CONTENTS**

1. THE PROJECT	7
2. SERVICES OFFER	13
3. REGULATION AND TARIFF	16
4. ALLOCATION PROCESS	19
5. CREDITWORTHINESS	19
6. INDICATIVE TIMETABLE	20
7. DISCLAIMER	20

**ATTACHMENT 1:** NON BINDING CAPACITY FORM

**ATTACHMENT 2:** CONFIDENTIALITY AGREEMENT

## EXECUTIVE SUMMARY

In December 2007 Fluxys LNG launched a market consultation (the '**Open Season**') to assess the interest for additional terminalling capacity at the Zeebrugge LNG Terminal. In response, multiple shippers active in the LNG business have marked their non-binding interest for a variety of services: discharging LNGRV ships, loading and unloading LNG ships of different types and sizes, additional flexibility and throughput capacity.

Starting from this spectrum of demand Fluxys LNG outlined a capacity enhancement project (the '**Project**'), including following facilities:

- a second jetty for berthing of LNG ships with a capacity from approximately 3 500 m<sup>3</sup> LNG up to 217 000 m<sup>3</sup> LNG,
- one additional storage tank with a capacity of 160 000 m<sup>3</sup> LNG,
- send-out capacity of 450 000 m<sup>3</sup>(n)/h.

The preliminary studies for the Project are co-financed by the European Union (Trans European Energy Networks – TEN-E)\*.

It is expected that additional berthing capacity would be available in the course of 2014 and additional storage and send-out capacity in the course of 2016.

Fluxys LNG now wishes to close the non-binding phase of its Open Season and enter into the Binding Phase, during which we offer the following services:

- slots equal to a capacity of 2-3 bcm per year,
- additional storage flexibility up to 90 000 m<sup>3</sup> LNG and additional send-out capacity,
- loading of LNG carriers (of various sizes) and/or ship-to-ship transfers.

All services are offered in a transparent and non-discriminatory manner and at highly competitive, regulated tariffs.

---

\* The sole responsibility of this publication lies with the author.

The European Union is not responsible for any use that may be made of the information contained therein.

The Project represents a highly attractive opportunity for companies active in the LNG sector to secure access to terminalling capacity on a long-term basis with an experienced capacity provider in the strategically located Zeebrugge area. As it goes, the LNG terminal is not only a gateway for supplying LNG into expanding markets across a major part of Continental Europe and in the United Kingdom but also a flexibility tool.

The Zeebrugge LNG terminal has the advantage of offering optimum destination flexibility: the additional LNG volumes can either be traded on the Zeebrugge Hub, delivered into the Belgian market, or redelivered at the border for onward transmission throughout North-Western Europe:

- onward delivery throughout North-Western Europe via the East/West transmission route providing access to the UK, the Netherlands and Germany and which recently has increased in capacity,
- onward delivery throughout North-Western Europe via the North/South transmission route providing access to France and Southern Europe and which is to increase in capacity following a recently closed market consultation (indicative timing 1 December 2013),
- by using ZEE Platform Service, terminal users can exchange gas between the LNG Terminal, the Interconnector Terminal, the Zeepipe Terminal, and the Zeebrugge Hub without any capacity limitations and at a very attractive tariff.

By means of this Binding Phase of the Open Season, Fluxys LNG invites bona fide expressions of interest through the submission of a binding capacity request. The commitment process and indicative timetable is described in more detail in section 6 below.

Interested companies that did not participate in the non-binding phase can still submit a non-binding capacity request ("Non-Binding Capacity Form" – Attachment 1 to be filled out and signed) but will first be required to execute the Confidentiality Agreement (Attachment 2 to be filled out and signed) **by 11 March** at the latest.

## FLUXYS LNG

The LNG Terminal is owned and operated by Fluxys LNG, a subsidiary of Fluxys SA. The Zeebrugge LNG Terminal facilities provide for loading and unloading LNG ships. LNG is stored in storage tanks and can be regasified and sent-out into the Fluxys transmission grid or loaded back onto LNG ships. Fluxys LNG also offers the service of loading LNG trucks at its Zeebrugge LNG Terminal.

Fluxys SA is the owner and operator of the Belgian natural gas transmission network comprising more than 3900 kilometres of pipeline and of the natural gas storage facility in Loenhout. Fluxys SA's majority shareholder is Fluxys G (89.97%), the remainder of shares being listed on the First Market of Euronext Brussels and the Belgian State holding 1 golden share.

## FLUXYS G

- As a transmission infrastructure company operating on the North-Western European natural gas market, Fluxys G wishes to enhance security of supply and the functioning of the market by promoting cross-border natural gas flows and transfers in that region,
- In Belgium, Fluxys G builds and operates infrastructure for natural gas transmission, natural gas storage and liquefied natural gas terminalling. Fluxys and Fluxys LNG are for that purpose appointed independent system operators by the Belgian government. As their activities are of general economic interest, both companies aim to set competitive tariffs and continuously strive to reinforce the role of the Fluxys grid as a natural gas crossroads with a view to safeguarding security of supply and improving the functioning of the market,
- To foster the integration of the North-Western European natural gas market, Fluxys G develops a profitable set of stakes in and industrial partnerships with companies in the business of natural gas transmission and storage, LNG terminalling and facilitating spot markets,
- Safety, efficiency, sustainability and profitability are at the centre of Fluxys G's approach.

# 1. THE PROJECT

## THE EXISTING LNG TERMINAL

In operation since 1987, the LNG Terminal is located in the outer port of Zeebrugge on a site of some 30 hectares. It comprises efficient reception facilities, four state-of-the-art LNG storage tanks, vaporisation and send-out facilities for injection of regasified gas into the high-pressure gas network and related facilities. The LNG Terminal can handle almost all different types of LNG carriers from 7 500 m<sup>3</sup> LNG up to Q-flex vessels with a capacity of up to **217 000 m<sup>3</sup> LNG**. Currently the acceptance procedure for Q-Max vessels is ongoing. It is expected that such vessels can berth and unload before the end of 2011.

More than seventy different LNG carriers have in aggregate unloaded more than 1 200 LNG cargoes at the LNG Terminal. Its jetty consists of four LNG 16" unloading arms and one vapour return arm, with an unloading capacity of up to 14 000 m<sup>3</sup> LNG/hour. Three of the existing storage tanks have a workable capacity of 80 000 m<sup>3</sup> LNG each, while the fourth LNG storage tank has a workable capacity of 140 000 m<sup>3</sup> LNG. The firm send-out capacity of the LNG Terminal amounts to 1 700 000 m<sup>3</sup>(n) per hour. The vaporizers installed are submerged combustion vaporizers (SCV): hot water heated by

submerged combustion gas burners is used to vaporize LNG in a stainless steel tube heat exchanger. Most of the vaporizers also have another independent heat source: a Combined Heat & Power unit. This configuration enables to significantly decrease fuel gas consumption by the submerged combustion burners in the regasification units.

In 2009, Fluxys LNG decided to build an Open Rack Vaporizer (ORV). ORVs heat LNG using heat from seawater and their use will lead to a further significant reduction in fuel gas consumption. Within the framework of the Project, Fluxys LNG intends to use additional ORV capacity for the increase of the send-out.



The LNG Terminal is located in a sheltered area, meaning that during berthing and unloading there are no sea water currents. In addition, the construction of the dockyard has reduced the height of the waves to a minimum and the port authority guarantees a depth of 13 m clearance for ships at low tide in the dock. The LNG infrastructure at Zeebrugge has currently an annual throughput capacity of 9 billion m<sup>3</sup>(n) of natural gas. Following an open season conducted in 2003, all this primary capacity was allocated to 3 terminal users on a long-term ship-or-pay basis: Qatar Terminal Limited/ Zeebrugge LNG Trading Company Limited (QTL/ZLNG), Suez LNG Trading and Distrigas.

Currently, all capacities at the LNG Terminal are commercialized by means of **unloading slots**. Under such slots, terminal users are allowed to:

- arrive and berth their LNG vessel within a window of approximately 24 hours and unload within approximately 24 hours,
- use a basic storage capacity of 140 000 m<sup>3</sup> LNG, linearly decreasing over approximately 10 days,
- use a basic send-out capacity of approximately 360 000 m<sup>3</sup>(n)/h during the abovementioned 10 days.

Moreover, additional (flexibility) storage and send-out capacities are available.

## THE PROJECT

The Project will potentially include the construction of following facilities:

- a second berthing jetty allowing ships from approximately 3 500 m<sup>3</sup> LNG up to a capacity of 217 000 m<sup>3</sup> LNG,
- 1 additional LNG storage tank with a capacity of 160 000 m<sup>3</sup> LNG,
- additional regasification capacity of approximately 450 000 m<sup>3</sup>(n)/h.

The preliminary studies for the Project are co-financed by the European Union (Trans European Energy Networks – TEN-E)\*.

The Project will increase the throughput capacity of the LNG terminal by 2-3 bcm/year. No downstream investments from the LNG terminal to the grid are required to provide the additional take away capacity in the Zeebrugge area.

Companies interested in becoming users of the Zeebrugge LNG Terminal's second capacity enhancement will be required to enter into a binding agreement with Fluxys LNG and to subscribe for capacity and services at the LNG Terminal on a ship-or-pay basis.

---

\* The sole responsibility of this publication lies with the author.

The European Union is not responsible for any use that may be made of the information contained therein.



## A STRATEGIC LOCATION

As Europe's reliance on gas imports increases, the role of LNG has become increasingly important. Because of its characteristics, LNG represents a key part of any diversified gas portfolio, serving base load, spot and peak requirements.

The Zeebrugge area is considered to be one of the most important natural gas landing points in the EU27. Connecting to a variety of pipe gas and LNG sources, the Zeebrugge area has an overall throughput capacity of about 48 bcm/y.

This corresponds with roughly 10% of the border capacity needed to supply the EU27.

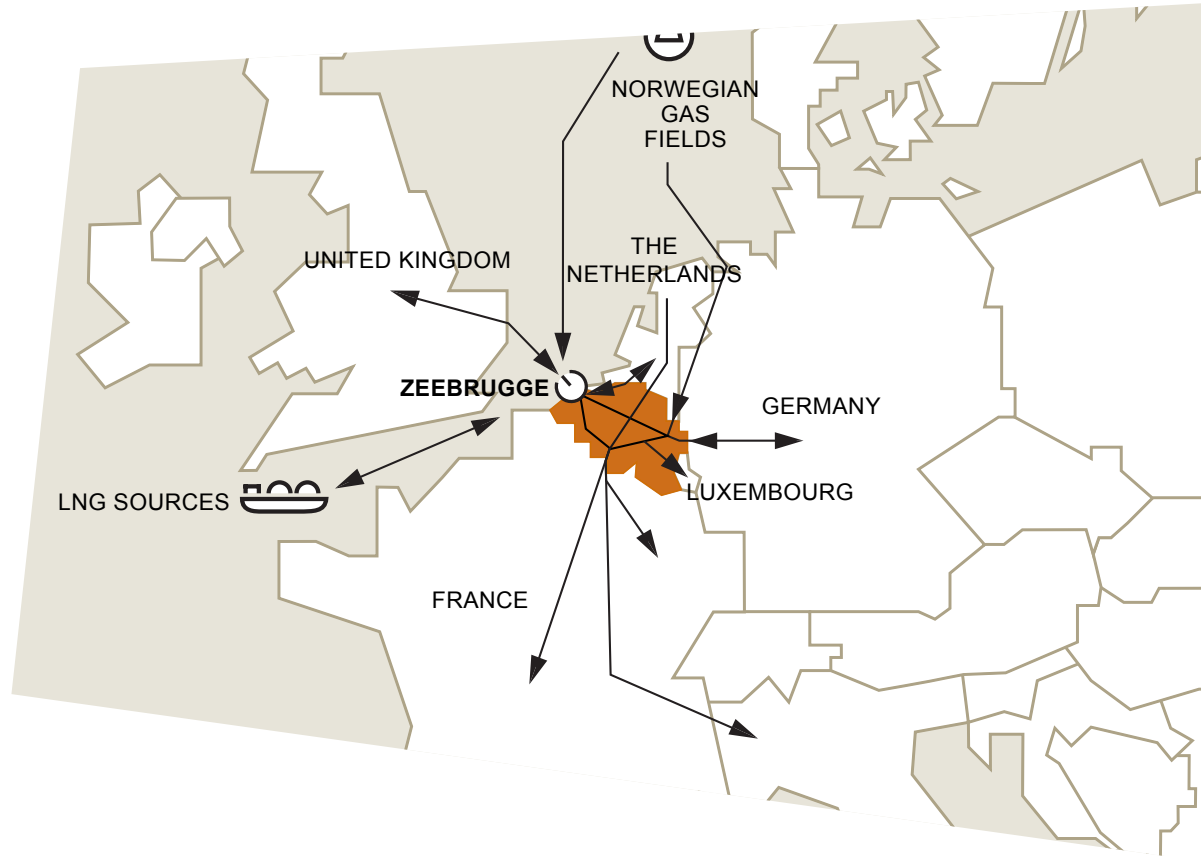


## OPTIMUM DESTINATION FLEXIBILITY

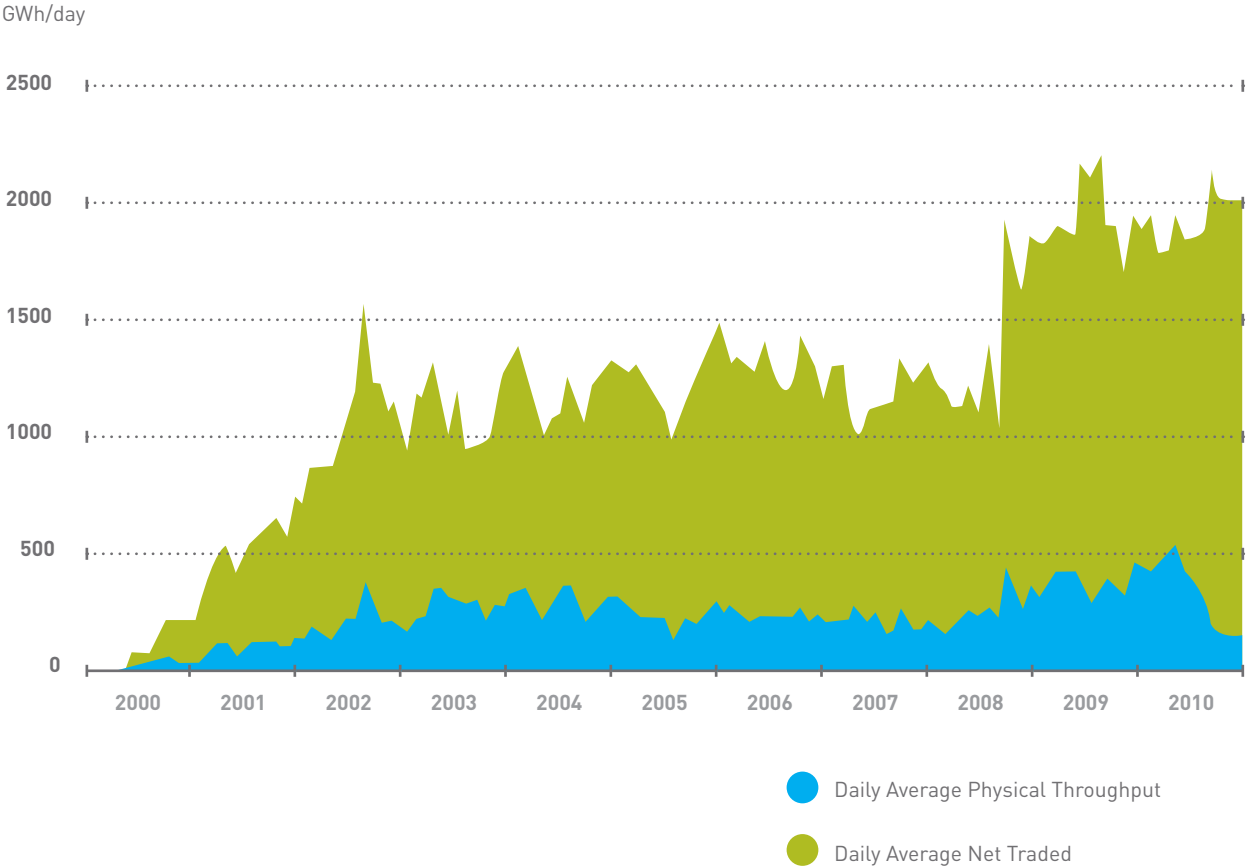
The Zeebrugge LNG terminal has the advantage of offering optimum destination flexibility: the additional LNG volumes can either be traded on the Zeebrugge Hub, delivered into the Belgian market, or redelivered at the border for onward transmission throughout North-Western Europe:

- onward delivery throughout North-Western Europe via the East/West transmission route providing access to the UK, the Netherlands and Germany and which recently has increased in capacity,
- onward delivery throughout North-Western Europe via the North/South transmission route providing access to France and Southern Europe and which is to increase in capacity following a recently closed market consultation (indicative timing 1 December 2013),
- trading on the Zeebrugge Hub, with a trading community of 75 members showing a balanced mix of physical and financial traders and an annual net traded volume of 62 bcm (2010), the Zeebrugge Hub (operated by Huberator SA, a Fluxys G company) is one of the leading spot gas markets in Continental Europe,
- delivery into the Belgian market with an annual consumption of approximately 19 bcm (2010),
- using the ZEE Platform Service, terminal users can exchange gas between the LNG Terminal, the Interconnector Terminal, the Zeepipe Terminal and the Zeebrugge Hub without any capacity limitation and at a very attractive tariff,
- through the LNG truck loading service, the Zeebrugge LNG Terminal also offers the opportunity to transport LNG by road as a particularly useful alternative for supplying natural gas to industrial sites in Europe where no pipeline supplies are available.

Accordingly, Fluxys can offer a fully integrated transmission service to terminal users.



The Zeebrugge Hub (operated by Huberator SA, a Fluxys G company), one of the leading spot gas markets in Continental Europe. In 2010, 75 members were active on the Zeebrugge Hub, trading 62 billion cubic metres of natural gas, corresponding to 3.4 times the annual consumption on the Belgian market.



## **2. SERVICES OFFER**

Within the framework of this Binding Phase, all products and services are commercialised in accordance with the currently applicable regulation.

The current commercial model, implemented in the context of the first capacity enhancement of the Zeebrugge LNG Terminal, consists of 110 slots per year made available at one jetty on a long-term basis. In function of the interest expressed hereunder, the commercial model will be optimized within the framework of the new code of conduct (Cfr. section 3) in order to provide the services offered.

### **1. PRODUCTS**

Within the framework of this binding phase, Fluxys LNG offers different products in order to provide a flexible service to new users of the Zeebrugge LNG terminal and to optimize the existing services available to the current terminal users. Each of the products can be contracted and used stand-alone, but combining different products can create major advantages for terminal users, such as a rateable send-out, unloading larger LNG carriers, ship-to-ship transfers, ...

The products related to the construction of the new storage tank will indicatively be available in the course of 2016 (products 1 to 3). Loading of ships (product 4) will be offered when the second jetty becomes operational, indicatively in the course of 2014.

#### **Product 1: Unloading Slots**

Product 1 offers terminal users the opportunity to subscribe to combined capacities for berthing different types of LNG carriers, unload and regasify LNG:

- unloading slots offered within the framework of this Open Season will be similar to the existing unloading slots, as described above,
- at the second jetty to be built, approximately up to 40 unloading slots are offered to the market, representing an annual throughput of approximately 3 bcm/year,
- the unloading slots can be subscribed for a period of at least 10 years up to a maximum of 20 years and with a minimum of 12 slots per year (approximately 1 bcm/year).

### **Product 2: Additional Storage**

Product 2 offers terminal users the opportunity to subscribe to additional storage capacity:

- additional storage, used in combination with unloading slots, allows terminal users to unload LNG carriers of more than 140 000 m<sup>3</sup> LNG or can serve to secure rateable send-out,
- in total, up to 90 000 m<sup>3</sup> LNG storage will be offered as additional storage. Additional storage capacities can be subscribed for periods up to a maximum of 20 years.

### **Product 3: Additional Send-out**

Product 3 offers terminal users the opportunity to subscribe to additional send-out capacity:

- additional send-out, used in combination with unloading slots, allows terminal users to regasify unloaded LNG at higher flow rate,
- approximately 100 000 m<sup>3</sup>(n)/h additional send-out capacity will be offered to the market. Extra infrastructure can be constructed upon long-term demand,
- additional send-out can be subscribed for periods up to a maximum of 20 years.

### **Product 4: LNG Loading Slots for LNG ships**

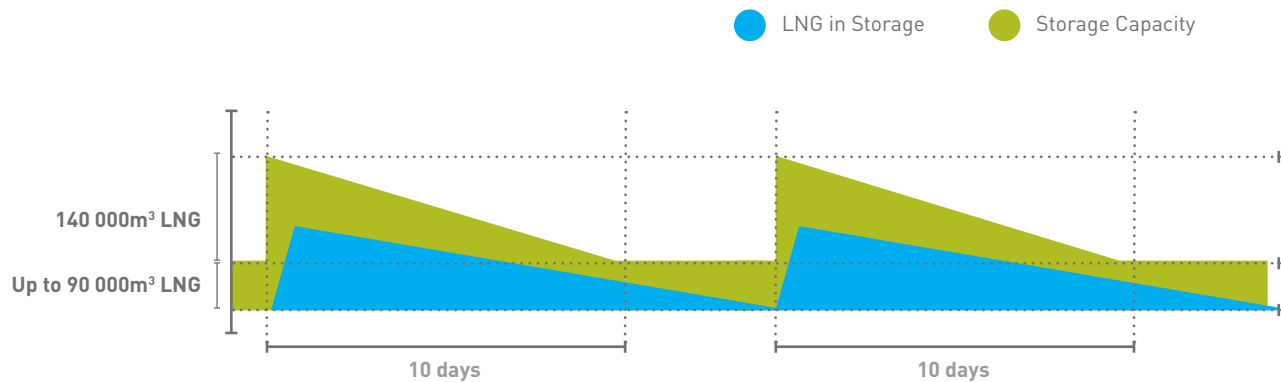
Product 4 offers terminal users the opportunity to subscribe to combined berthing rights and LNG loading capacity:

- LNG ships from approximately 3 500 m<sup>3</sup> LNG up to a capacity of 217 000 m<sup>3</sup> LNG will be accepted for loading at the second jetty to be built,
- LNG loading slots can be subscribed for periods up to a maximum of 20 years.

## 2. SERVICES

### Rateable Send-out

Current users of the Zeebrugge LNG terminal and parties subscribing to unloading slots (**product 1**) within the framework of the second capacity enhancement can optimize the use of their capacity in the LNG terminal by subscribing additional storage (**product 2**). Combining the rights of both products allows terminal users to have a rateable send-out, even with a limited amount of slots per month. For terminal users wishing to benefit optimally from price variations at the Zeebrugge Hub or wishing to have downstream flexibility, Fluxys LNG allows to vary their send-out profile on an hourly basis. By using the Zeeplatform Service, terminal users have unlimited access to the Zeebrugge Hub at very limited costs.



### Unloading of Q-flex & Q-max vessels

To unload carriers of more than 140 000 m<sup>3</sup> LNG, like for example Q-flex or Q-Max vessels, terminal users can combine unloading slots. Terminal users can also combine additional storage and/or additional send-out with one or more unloading slots to optimize the unloading, buffering and regasification of such LNG carriers.

### Loading of LNG carriers

Loading of LNG carriers can be performed by either using loading slots (**product 4**), or by using unloading slots in combination with LNG loading capacity, which can be reserved separately on a short-term basis.

### Ship-to-ship transfer

An LNG carrier can be loaded directly from another LNG carrier berthed at the other jetty. To perform such a ship-to-ship transfer, unloading and loading services have to be combined.

### **3. REGULATION AND TARIFF**

The marketing of LNG capacities is regulated by EU Directive 2009/73, previously EU Directive 2003/55, which provides for a regime of regulated tariffs and third party access.

The EU Directive is to be enacted into Belgian national law in the existing Gas Act of 1965. The regulated system is designed to guarantee all shippers access to the Zeebrugge LNG terminal at regulated tariffs and conditions, and on a non-discriminatory and transparent basis. In order to develop additional capacities, all necessary arrangements will be made to fully incorporate these into the applicable operational- and commercial model and services, and capacity contracts and access conditions will be submitted for approval to the Belgian federal regulatory authority for electricity and gas (CREG). Discussions with CREG in this respect are already ongoing. Tariffs for the Project will be determined in line with applicable regulation for the existing infrastructure.

#### **NEW CODE OF CONDUCT**

On 23 December 2010, a Royal Decree on the code of conduct was published establishing the rules for access to the transmission grid, storage facilities and LNG installations, replacing the previous code of conduct of 2003. As the new code of conduct is now in force, Fluxys LNG will develop a new access guide and submit it to CREG for approval.

For long term bookings hereunder, Fluxys LNG will establish regulated long-term standard contracts within the framework of this open season related to the Zeebrugge LNG Terminal and submit said standard contracts to CREG for approval.

#### **SPECIFIC REGULATED TARIFF REGIME**

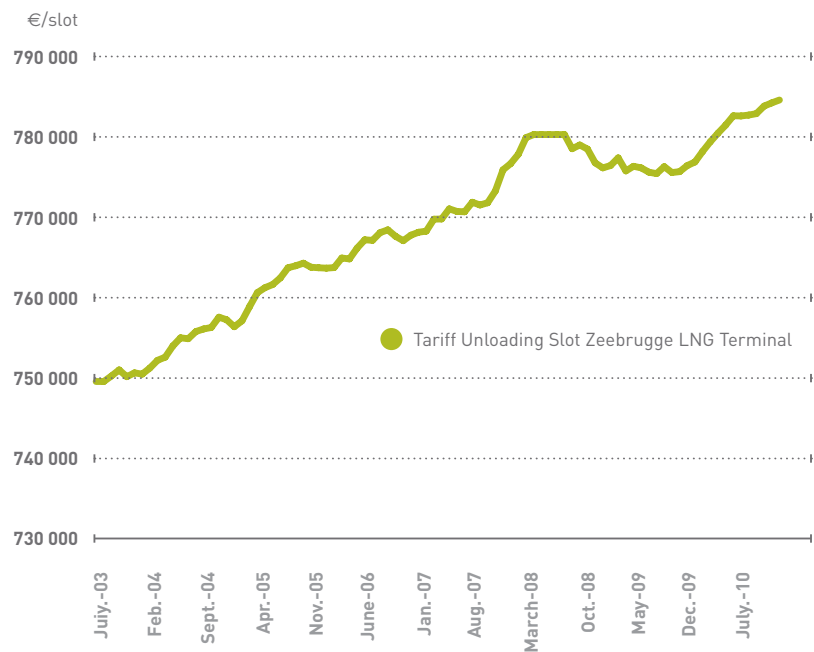
New investments with national or European importance can benefit from a specific regulated regime (Royal Decree on long term tariffs for special projects dd 8th June 2007) which offers the possibility for long-term agreements, corresponding long-term tariffs and an adequate return on investment:

- all existing capacities at the Zeebrugge LNG terminal benefit from this specific regulated regime, whereby tariffs are established for a 20-year period until 2027,
- subject to CREG approval, Fluxys has the intention to apply the same tariff regime for the proposed services during the Binding Phase of this Open Season.

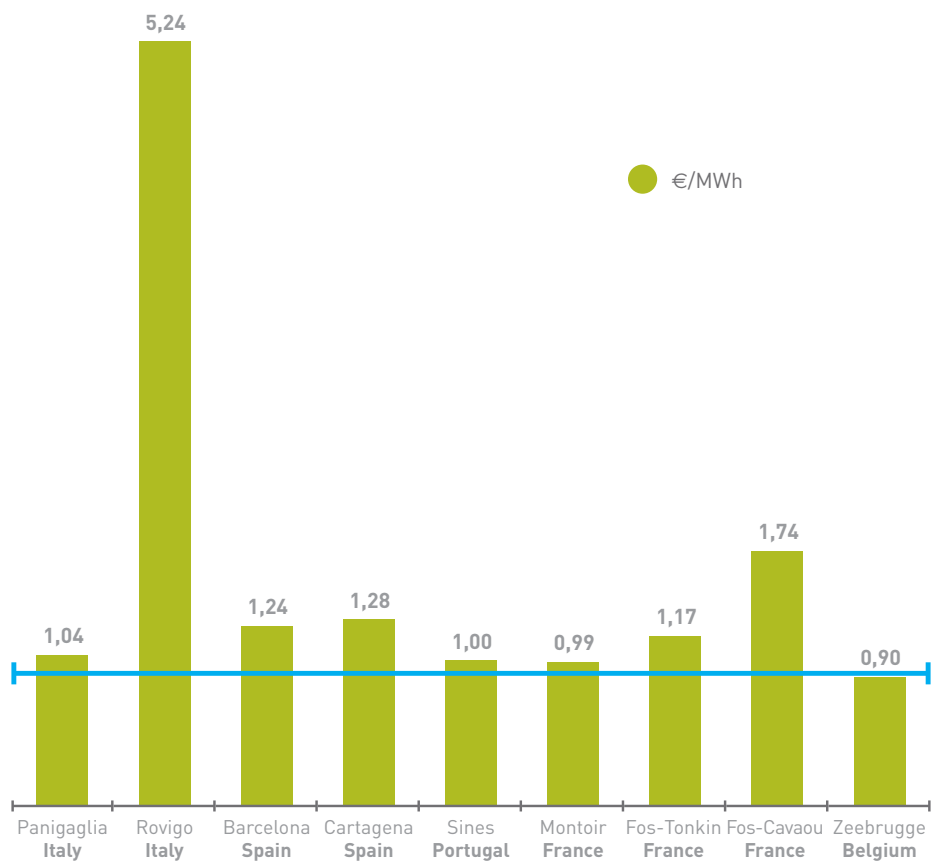


ATTRACTIVE TARIFFS WITH LONG-TERM VISIBILITY

Long-term tariff visibility is a major advantage for parties interested in using the Zeebrugge LNG Terminal. In addition, the current tariff for unloading LNG carriers is amongst the lowest tariffs at regulated terminals in Europe. Indexed at 35 % of the Belgian consumer price index, the slot price since 2003 has increased a mere 5%. The slot tariff includes the services to berth an LNG vessel within a window of approximately 24 hours and unload the ship within approximately 24 hours, to use a basic storage capacity of 140 000 m³ LNG, linearly decreasing over approximately 10 days, and to use a basic send-out capacity of approximately 360 000 m³(n)/h during the abovementioned 10 days.



Source : Fluxys, February 2011



Source : Fluxys, November 2010

## **4. ALLOCATION PROCESS**

Fluxys LNG will inform interested parties about the detailed allocation rules to be applied together with the contractual documentation, expected by the end of March 2011. Priority will be given to terminal users requesting throughput capacity for the longest term.

## **5. CREDITWORTHINESS**

Fluxys LNG may request from interested parties to subscribe to long-term commitments in order to underpin the necessary investments. It would then be required from the interested parties to demonstrate sufficient financial standing to underwrite these commitments under the applicable agreements to be entered into with Fluxys LNG.

Indeed, the interested parties may be requested to provide Fluxys LNG with financial guarantees to cover their commitments in respect of the capacity requested under the Binding Phase of this Open Season.

Fluxys LNG will inform interested parties about the detailed creditworthiness requirements together with the contractual documentation, expected by the end of March 2011.

## 6. INDICATIVE TIMETABLE

### 3 February 2011

Launch of Binding Phase.

### 11 March 2011

Deadline for parties that **have participated in** the Non-Binding Phase to confirm their interest based on the products and services as described herein.

Deadline for parties interested in the Binding Phase and **not having participated in** the Non-Binding Phase to submit their Confidentiality Agreement and Non Binding Capacity Form.

### End March 2011

Distribution of contractual documentation to participating companies.

### 30 June 2011

Participating companies to submit their Binding Capacity Form.

## **7. DISCLAIMER**

This document (the 'Offer Description') sets forth certain information regarding the new loading and unloading capacities, and related services which Fluxys LNG might create to increase the LNG throughput and loading possibilities through a second capacity enhancement of the Zeebrugge LNG Terminal.

The Offer Description is publicly disclosed to the market for information purposes only and without any commitment whatsoever from Fluxys LNG so as to offer a product, capacity, any service and/or develop any infrastructure. Any and all interested parties, in their capacity as professional operators, shall be responsible for seeking to obtain the accurate and relevant information needed for their own assessment and decision to respond to the invitation to subscribe contained in this Offer Description.

Fluxys LNG hereby disclaims all responsibility for changes to the implementation of the development as presented in the Offer Description. Such changes may result from amongst others financial and regulatory constraints defined by the competent regulatory authority or Fluxys LNG's board of directors.

Additionally, the information contained in this Offer Description is for indicative purposes only and should not be considered to give rise to any contractual relationship between Fluxys LNG (or any of its affiliated entities) and any interested party.

## POINT OF CONTACT

Any request for additional information or questions in relation to the Project and/or this Service Offer should be addressed to:

### **Fluxys LNG**

Commercial Department

For the attention of Mr. Pieterjan Renier

Guimard Street, 4

1040 BRUSSELS

BELGIUM

phone: +32 (0)2 282 74 33

e-mail: [info.lng@fluxys.com](mailto:info.lng@fluxys.com)



Fluxys LNG SA - Registered office

Rue Guimard 4 - B-1040 Brussels - [www.fluxys.com](http://www.fluxys.com)

VAT BE 0426.047.853 - RLP Brussels - D/2011/9484/1

February 2011

Responsible publisher: Bérénice Crabs - Avenue des Arts 31

B-1040 Brussels

Photography : Emmanuel Manderlier, Patrick Henderyckx

Graphic design : bbs-gc