CEER Status Review and evaluation of access regimes at LNG terminals in the EU

C12-LNG-15-03
12 March 2013

Council of European Energy Regulators ASBL
28 rue le Titien, 1000 Bruxelles
Arrondissement judiciaire de Bruxelles
RPM 0861.035.445

INFORMATION PAGE

Abstract

This document (C12-LNG-15-03) presents an assessment of access conditions to LNG terminals in Europe, taking into account recent developments in the EU gas market. Based on data provided by NRAs, CEER analysed the rules in place, the level of capacity utilisation, spot contracting, secondary market functioning and the application of congestion management procedures at LNG terminals over the past three years.

This document complements the ERGEG study[1] published in 2011 on congestion management procedures and anti-hoarding mechanisms at European LNG terminals.

Target Audience

European Commission, energy suppliers, traders, gas customers, gas industry, consumer representative groups, network operators, Member States, academics and other interested parties.

Keywords

LNG, LNG terminal, spot cargo, regasification, LNG storage

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[1] "ERGEG 2011 study on congestion management procedures and anti-hoarding mechanisms in the European LNG terminals", April 2011, Ref. E10-LNG-11-03b, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/Tab/E10-LNG-11-03b_CMP%20in%20LNG_%2012_Apr_2011.pdf

Related Documents

CEER documents

- "ERGEG 2011 study on congestion management procedures and anti-hoarding mechanisms in the European LNG terminals", April 2011, Ref. E10-LNG-11-03b, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/Tab/E10-LNG-11-03b_CMP%20in%20LNG_%2012_Apr_2011.pdf
- "Monitoring the implementation of GGPLNG", June 2009, Ref. E09-LNG-07-03, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/2009/E09-LNG-07-03_GGP%20LNG%20Monitoring_03-June-09_0.pdf
- "Guidelines for Good Third Party Access Practice for LNG System Operators (GGPLNG)", May 2008, Ref. E08-LNG-06-03", http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/GGPLNG/CD

External documents

- The LNG Transparency Template, March 2012, http://www.gie.eu/index.php/maps-data/gle-transparency-template
- 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, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0036:0054:EN:PDF
- Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0094:0136:en:PDF
- XV Madrid Forum, Nov 2008, http://ec.europa.eu/energy/gas_electricity/forum_gas_madrid_en.htm

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EXECUTIVE SUMMARY

Objective and scope of the report

CEER has long promoted fair competition and market access in Europe's electricity and gas sectors. Transparent and fair rules for the use of and access to Liquefied Natural Gas (LNG) terminals in Europe are important to promote a competitive gas market in Europe, all the more so as we seek to increase Europe's security of supply in gas, though diversification of our energy sources and routes.

Understanding how LNG terminals are operating and to what degree their capacity is being used (and made available on the market) is an important test of whether competition is developing and what measures are yet needed to reduce any remaining barriers for different sources of gas to access Europe's markets.

This CEER Status Review provides an assessment of the rules in place, the level of capacity utilisation, spot contracting, secondary market functioning and application of Congestion Management Procedures (CMPs) at individual European LNG terminals. It focuses on market evolution and utilisation relevant to European LNG terminals over the past three years (2009-2011). The report covers those Member States which have LNG terminals, with the exception of Poland where a terminal is currently under construction[2]. In addition, Lithuania has provided the relevant national data and explained that its first LNG terminal is planned to begin operating at the end of 2014.

Key findings

Overall, the European LNG market is considered as a consolidated market, i.e. a market that has not presented significant variations in the period analysed taking into account the current European gas context. That being said, positive developments can be noted, both in terms of the role of LNG generally in Europe's gas sector and of the promotion of competition and trading of capacity at LNG terminals.

Analysis of data collected shows that the share of LNG in total gas supplies has been on the rise. In the countries analysed for the period 2009-2011, LNG's share increased from 28% to 30%. In addition, Europe's regasification and storage capacity of LNG has increased, with new terminals coming on line and several under construction. Although it is worth noting that the average rate of LNG terminal utilisation in Europe was 68%, 75% and 67% in 2009, 2010 and 2011, respectively. Furthermore, in terminals where 90% or more of their regasification capacity was contracted (or "booked"), the average capacity utilisation was 58% over the three year period. For terminals where less than 90% of regasification capacity was contracted, the average used capacity was 76%. Meanwhile, the number of active shippers at the terminals has either slightly increased or slightly decreased in the different Member States.

[2] An LNG terminal in Poland is under construction. It is planned to start operating in 2014. Poland's data was not available, however we include also given its inclusion in the previous Study: "ERGEG 2011 study on congestion management procedures and anti-hoarding mechanisms in the European LNG terminals," April 2011, Ref. E10-LNG-11-03b

The data also shows that unused capacity was released to the market (at those terminals that are almost fully booked). Released capacity was in practice contracted by shippers at only two terminals in 2010, suggesting that generally there was no contractual congestion. Following the same pattern, the secondary capacity market is active in Belgium, France and the United Kingdom, where capacity at LNG terminals is (almost) fully contracted.

From a European perspective, there is capacity available to contract, either on the primary market or through the application of CMPs whereby previously contracted capacity is brought back to the market.

This Status Review reveals that all terminals have properly functioning CMP provisions, even though the capacity released is not often subscribed to by other shippers. A secondary market is also available in some terminals and has been used in a few of them (those that are most contracted). This could be a good indicator: as one can expect, in terminals with available capacity all operations are concentrated in the primary market, whereas CMP and secondary markets are working better in more contractually congested facilities. This use of CMPs and secondary markets is one concrete way of working to achieve Europe's final objective of enhancing competition and achieving a single gas market at European level.

Conclusions and Recommendations

CEER recommends continuing to monitor the LNG market focusing on several areas where regulations and procedures can be improved or further harmonised, for instance as regards transparency of information (which is an important tool for encouraging new entrants in a market) and coherence of market rules. As outlined in the CEER 2013 Work Programme[3], European energy regulators plan to focus on monitoring the LNG transparency requirements and consistency of European LNG provisions with future network codes (in particular, balancing, Capacity Allocation Management (CAM) and CMP).

[3] "CEER 2013 Work Programme", 3 September 2012, Ref. C12-WPDC-22-06, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/Work_Programmes/2012

1. Introduction

1.1. Background

European energy regulators have dedicated significant resources over the past years to understanding and improving how LNG terminals operate in Europe, with the aim of promoting competition and security of supply. In 2008, ERGEG published Guidelines for Good Third Party Access Practice for LNG System Operators (GGPLNG)[4]. Subsequently, regulators undertook to assess progress, to recommend further improvements and to incorporate these findings in regulators' efforts to harmonise capacity allocation, congestion management procedures and other market tools to promote a competitive, transparent and non-discriminatory gas market in Europe.

ERGEG studies in 2009[5] and 2011[6] (the latter supported by a public consultation), found that differences persisted in the level and format of information available at LNG terminals across Europe, possibly hindering the access of small players or players willing to unload spot cargos at LNG terminals. As a result, regulators recommended that a common template be developed that each LNG system operator (LSO). In the course of 2011, CEER and GLE collaborated to develop a tool to further promote transparent access to the European LNG terminals: "The LNG Template". The Transparency Template[7] launched at the March 2012 Madrid Forum serves to facilitate the spread of information on existing requirements and access conditions to LNG terminals.

More specifically, the 2011 ERGEG study concluded that users were generally satisfied with the CMP rules applied, although there were several areas where regulations and procedures could be improved or further harmonised. Annex 3 provides an update of the descriptions of national measures described originally in the 2011 study. Regulators took account of the CMP issues identified for LNG in regulatory discussions within CEER on a Gas Target Model[8] and in their work on market rules in ACER on related framework guidelines and network codes.

[4] "Guidelines for Good Third Party Access Practice for LNG System Operators (GGPLNG)", Ref. E08-LNG-06-03, 7 May 2008, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/GGPLNG/CD

[5] "Monitoring the implementation of GGPLNG", Ref. E09-LNG-07-03, 3 June 2009, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/2009/E09-LNG-07-03_GGP%20LNG%20Monitoring_03-June-09_0.pdf

[6] "ERGEG 2011 study on congestion management procedures & anti-hoarding mechanisms in the European LNG terminals", Ref. E10-LNG-11-03b, 12 April 2011, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/Tab/E10-LNG-11-03b_CMP%20in%20LNG_%2012_Apr_2011.pdf

[7] http://www.gie.eu/index.php/maps-data/gle-transparency-template

[8] The Gas Target Model was developed following 2 rounds of public consultation and 5 public workshops and was published in December 2011, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/Gas_Target_Model/CD

In 2012, CEER undertook yet another review of access conditions at LNG terminals, taking into account recent developments in the EU market. With the support of a questionnaire submitted to its members (see Annex 4), CEER gathered information on the rules in place, the level of capacity utilisation, spot contracting, secondary market functioning and application of CMPs at individual European LNG terminals. Responses were received from 8 NRAs, covering all Member States where LNG terminals exist, with the exception of Poland, where a terminal is currently under construction. In addition, Lithuania has provided the relevant national data and explained that its first LNG terminal is planned to begin operating at the end of 2014.

The present report provides the results of this latest review (complementing ERGEG's 2011 study) with updated information and more quantitative elements. Furthermore, this CEER Status Review focuses on market evolution and utilisation relevant to the European LNG terminals over the past three years (2009-2011).

All the terms used in this document are used as defined in ERGEG Guidelines for Good Third Party Access Practice for LNG System Operators[9] and Regulation (EC) No 715/2009[10].

1.2. Recap of key market aspects of LNG terminals

LNG terminals play an increasingly important role in Europe's gas markets, providing an additional source for gas in a highly import-dependent region. Indeed, LNG supplies can help by contributing to security of supply and diversification; providing more flexibility to the system; and allowing for greater competition both in the upstream and downstream gas market.

The way in which the overall capacity at an LNG terminal is managed is therefore crucial to ensuring market participants have access to regasification, storage and spot contracting.

Generally speaking, regasification and storage capacity at LNG terminals must be contracted (or "booked"). This capacity can then be used or "released" from initial bookings to be sold to market participants. This can be done in a secondary market or through CMPs.

Hoarding capacity (rather than selling it on market) can disorder competition. EU legislation makes LNG facilities subject to a regulated Third Party Access regime and their owners are required to open and share access with any third party granted with access rights, under transparent and non-discriminatory conditions. Furthermore, for terminals which have received specific exemption to these requirements, additional measures require them to make available to others any non-used capacity.

The aim of making capacity available to the market, which is included in the European regulatory framework for LNG infrastructure in the 3rd Package[11], gives an essential role to secondary markets and anti-hoarding mechanisms (which may differ from one terminal to another), and pursues the final objective of enhancing competition and achieving a single market at European level.

[9] See Footnote 4.

[10] "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", http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0036:0054:en:PDF

[11] http://ec.europa.eu/energy/gas_electricity/legislation/legislation_en.htm

1.3. Customer perspective

Europe depends on imports for much of its gas needs, some of which reaches us in the form of LNG. This form of gas is a growing part of our energy mix in Europe, and helps: 1) to ensure we have the amount of gas we need for consumption; and 2) to diversify our sources of gas so as to reduce dependence on any one provider (security of supply). It also promotes price-based competition (by virtue of having more competing sources of gas) which should ultimately translate in clearer prices for customers.

Each LNG terminal can accommodate a certain capacity of LNG for regasification and storage. Therefore, gas supplies that are processed via these terminals must be contracted (or "booked") with the LNG terminal's system operator (LSO). EU legislation requires these terminals to be 'accessible' to third parties, that is to say to shippers or other gas companies which are not associated to the company operating the LNG terminal. Regulators therefore monitor how competition - including non-discrimination, transparency of information, contracting and trading mechanisms - is functioning at LNG terminals.

While LNG infrastructure development is of key importance to secure gas supplies and to facilitate the development of competition for the benefit of end-customers, effective utilisation of LNG terminals also needs to be ensured to enhance competition and improve quality of service, in order to avoid inefficient infrastructure, since investments are generally passed on to consumers through their energy bills.

The main goals of this work are to inform stakeholders of the situation over the past three years (2009 - 2011); to show the compliance of LNG operators; and to continue working on areas where regulations and procedures can be improved or further harmonised.

2. Main aspects of access regulation for LNG terminals

In Europe, there are 19 LNG facilities (Table 1) located in 9 Member States. 14 of these are subject to a regulated Third Party Access regime and their owners are required to open and share access with any third party granted access rights, under transparent and non-discriminatory conditions.

As regards the 5 other LNG terminals, the European legal framework also offers the possibility, for new large-scale gas infrastructure or for significant increase of capacity in existing infrastructure (such as LNG facilities) to obtain an exemption from Third Party Access requirements according to pre-defined conditions (Article 36 of Directive 2009/73/EC[12]). This exemption has been granted to these 5 terminals. Nevertheless, the implementation of a secondary market and anti-hoarding mechanisms is often a pre-condition for such an exemption, compelling the primary shippers to make unused capacity available to others. Thus, in an exempted terminal the owner is free to negotiate contracts directly with primary shippers, but the terminal's anti-hoarding mechanisms, which are monitored by regulators, must be sufficiently transparent and enable secondary shippers to gain access to capacity when it is not used.

[12] "Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC", http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0094:0136:en:PDF

The aim of making capacity available to the market, which is included in the European regulatory framework for LNG infrastructure, give an essential role to secondary markets and anti-hoarding mechanisms (which may differ from one terminal to another), in line with the final objective of enhancing competition and achieving a single gas market at European level.

Table 1: Number of European LNG terminals in Europe

Member State	Number of LNG terminals
Belgium	1
France	3
Greece	1
Italy	2
Poland	1
Portugal	1
Spain	6
The Netherlands	1
United Kingdom	3
TOTAL	19

2.1. Congestion at LNG terminals

Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks[13] defines congestion management as:

"Congestion management means management of the capacity portfolio of the transmission system operator with a view to optimal and maximum use of the technical capacity and the timely detection of future congestion and saturation points".

In general terms, congestion could be classified as contractual or physical congestion, according to the definitions given by Regulation (EC) No 715/2009:

*"**Physical congestion** means a situation where the level of demand for actual deliveries exceeds the technical capacity at some point in time".*

[13] "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", http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0036:0054:EN:PDF

*"**Contractual congestion** means a situation where the level of firm capacity demand exceeds the technical capacity".*

In practice, physical congestion occurs when the capacity is fully booked, it is being used and any additional demand cannot be accommodated. The only way to avoid such congestion would be to anticipate it, but once it occurs the only way to accommodate the additional requests would be to invest in additional capacity.

On the other hand, contractual congestion occurs when the capacity is fully booked, but a proportion of it remains unused and there is still demand for capacity. This congestion can occur either in the long-term, when booked capacity remains constantly unused for long periods, or in the short-term, when part of the booked capacity is occasionally not nominated.

In the latter case, effective CMPs (such as Use-It-Or-Lose-It (UIOLO) or secondary trading) have to be implemented in order to facilitate efficient use of capacity and to avoid potential capacity hoarding.

3. LNG terminals

3.1. Country figures: demand, role of LNG

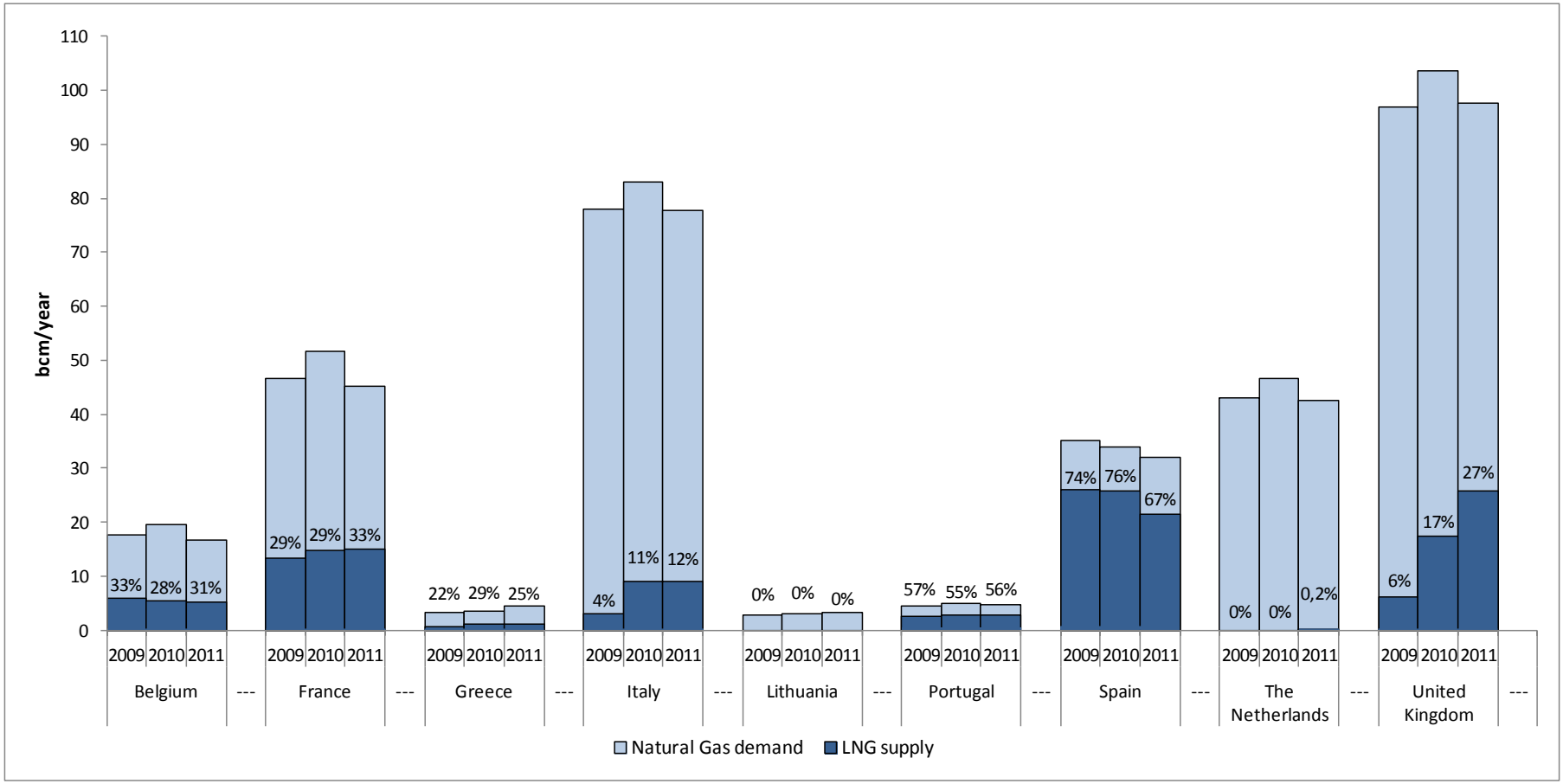
The role played by LNG demand in Europe differs from one country to another, depending mostly on supply characteristics, geographical situation, capacity of the LNG import terminal, level of gas demand and downstream market development.

Figure 1 shows the evolution of European natural gas demand, by country, as well as the share of LNG supplying this demand.

The average proportion of LNG in the supply of natural gas in Europe has increased from 28% to 30% in the period 2009-2011.

Natural gas demand decreased in 2011 in all countries studied. However, the level of LNG demand has not changed significantly, except for Spain, where it has decreased, and the United Kingdom, where it has increased.

Figure 1: Natural gas demand. Rate LNG/natural gas supplies



3.2. Main characteristics of LNG terminals

LNG terminals provide regasification facilities to convert the LNG which arrives by ship into its gaseous form, in order to be transported by land via pipelines. The “emission capacity” refers the rate at which LNG can be converted back to its gaseous form. LNG can also be stored on site at a terminal until such a time when it is needed. Terminals will have differing capacity available for this storage.

Figures 2 and 3 show that Spain’s LNG terminals account for the highest capacity for both regasification and storage, followed by the United Kingdom and France.

Figure 2 also illustrates that since 2009 regasification capacity in European LNG terminals has either remained steady or increased. In the United Kingdom, the emission capacity has increased at its terminals by 119% since 2009. The changes in French capacity are linked to the opening of the Fos Cavou terminal in 2010. Furthermore, in the Netherlands its Gate terminal has been in operation since September 2011.

As regards storage capacity, the situation mirrors that of regasification capacity. Spanish terminals accounted for 45% in 2009 and 40% in 2011 of total storage in Europe (due to capacity increases in both France and the United Kingdom). The United Kingdom increased its level of storage capacity by 66% over the past three years.

Figure 2: Regasification capacity at LNG terminals

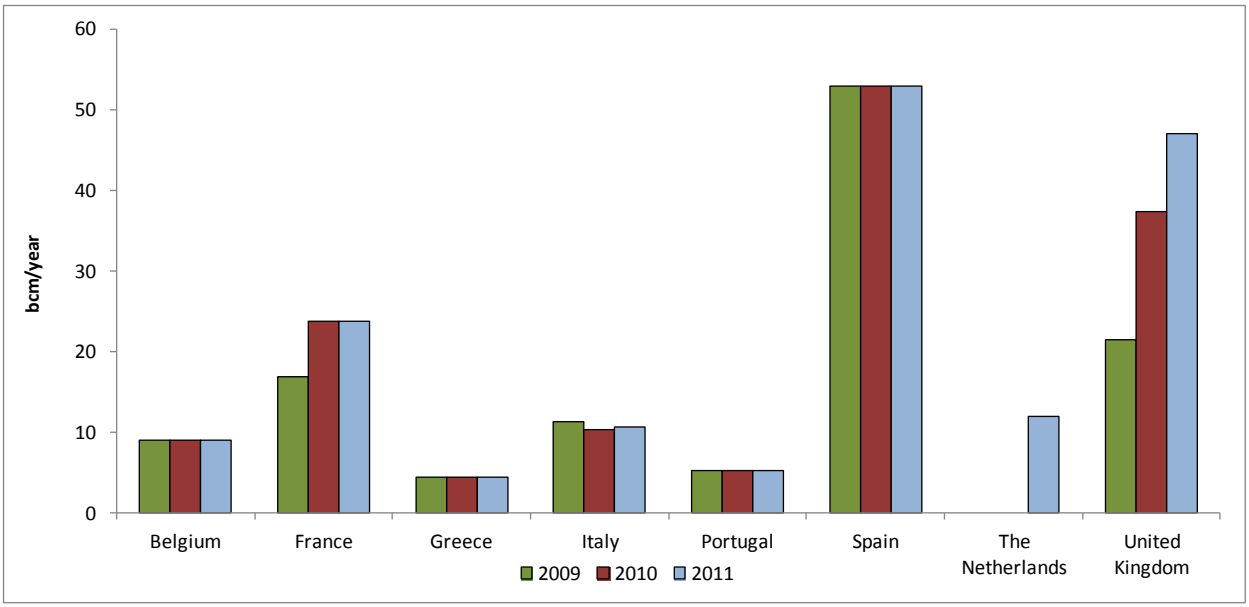
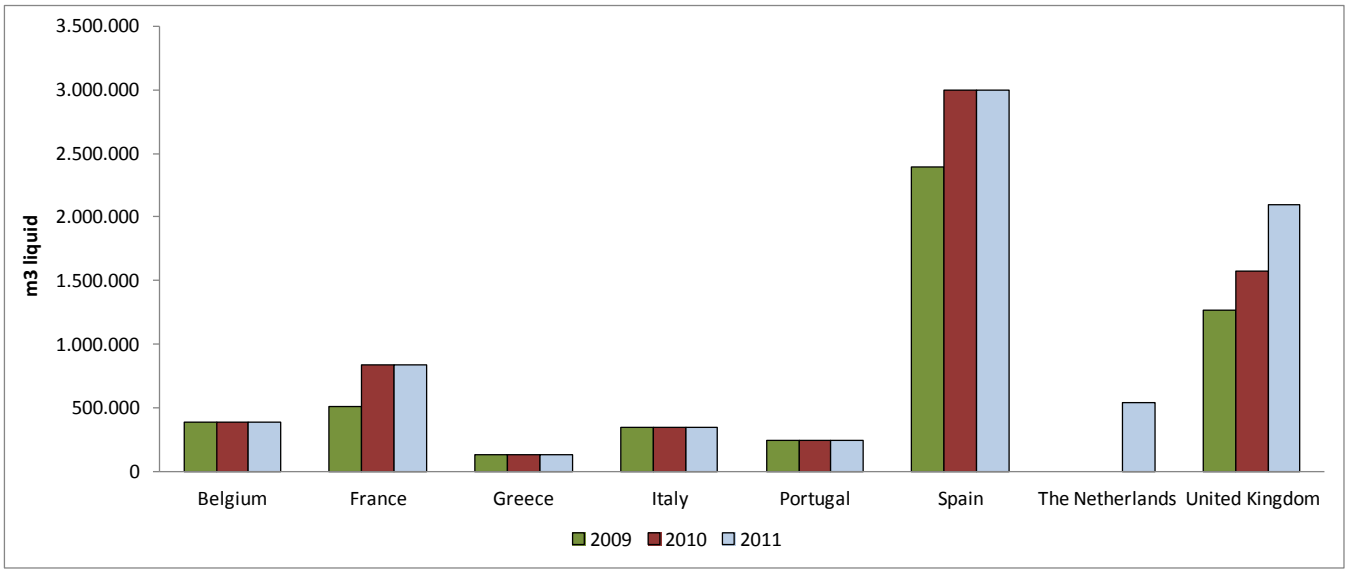


Figure 3: Storage capacity at LNG terminals



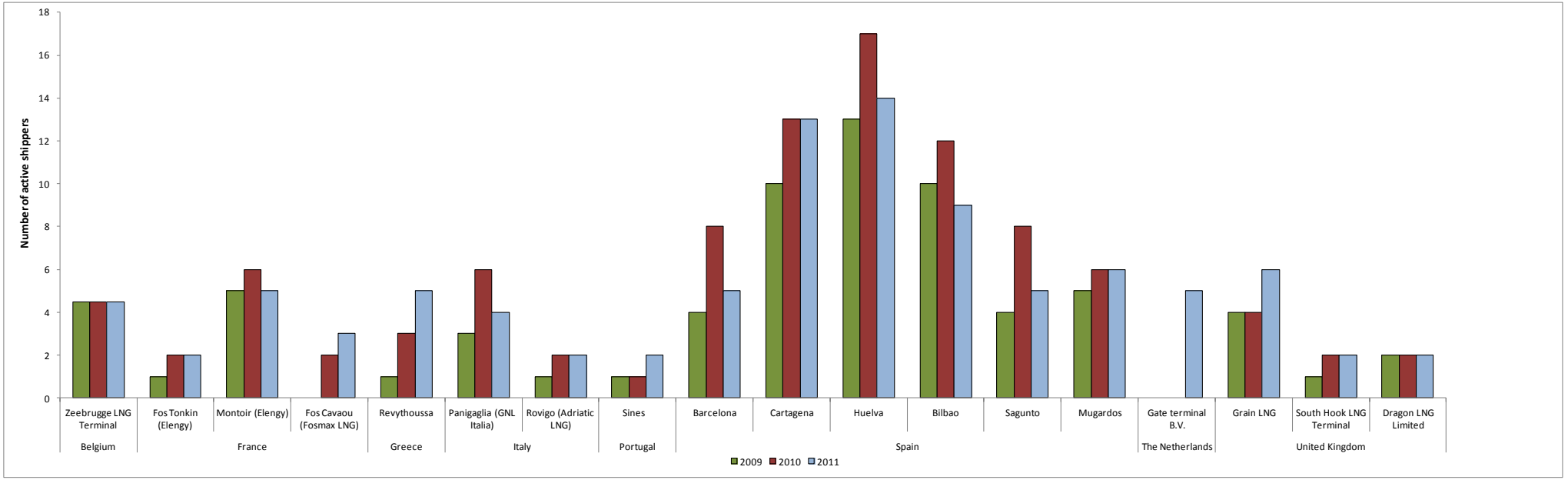
3.3. Market evolution in LNG terminals

According to data reported by NRAs, the number of shippers that access the terminals has levelled out over the three year period analysed (2009-2011). Figure 4 shows number of active shippers at 18 European terminals.

The comparative analysis per country reveals that in France, Italy, Portugal, Spain, Greece, the Netherlands and the United Kingdom the number of active shippers has increased since 2009.

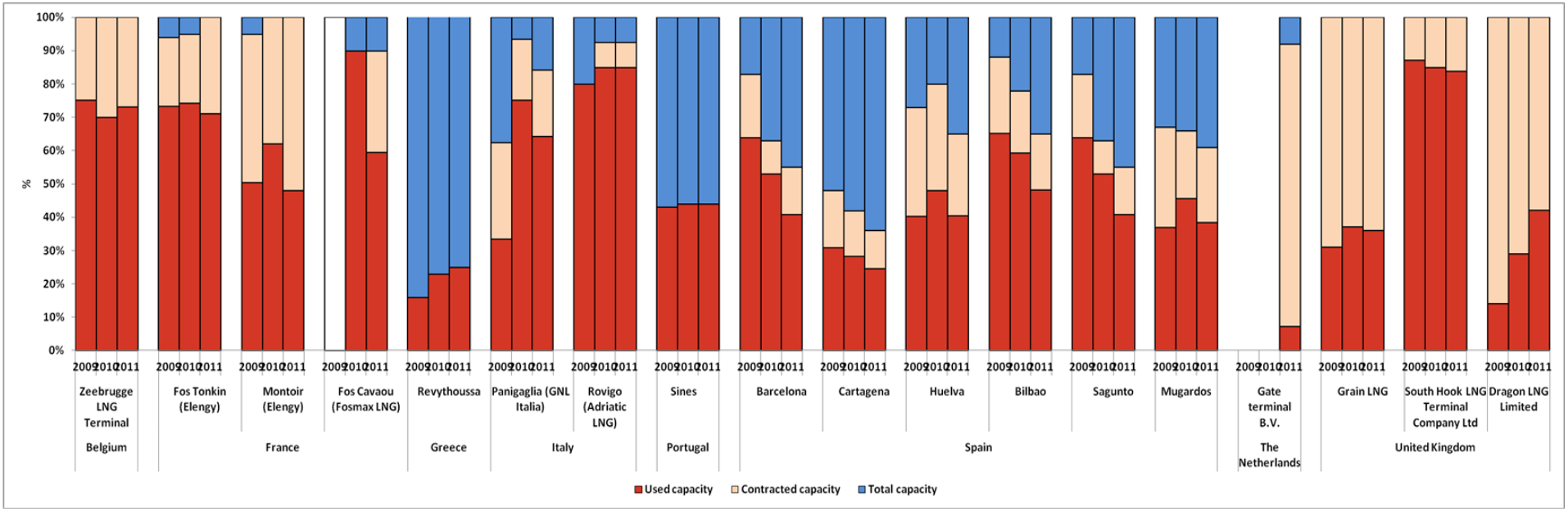
In some countries, such as Italy and Spain, the number of users increased in 2010 compared to 2009. Nevertheless, the figures decreased in 2011 in both countries. This does not necessarily mean that the number of shippers has been reduced in the country; in a country with more than one terminal, this could be explained by the fact that users focus their services in fewer terminals. Note that an active shipper is considered to be a shipper who has booked capacity at the terminal**.**

Figure 4: Number of active shippers at individual LNG terminals in 2009-2011



(*) Belgium: number of active shippers ranges between 3 and 6.

Figure 5: Regasification capacity at LNG terminals, % contracted and % used in 2009-2011



3.4. Infrastructure services and ratios evolution

Figure 5 shows used, contracted and total regasification capacity at 18 LNG terminals between 2009 and 2011.

The average regasification capacity contracted was roughly 80% over the past three years (77%, 78% and 76% in 2009, 2010 and 2011 respectively).

The lowest contracted capacity terminals are located in Spain, Portugal and Italy. In contrast, regasification capacity is fully contracted at Belgian and the British terminals.

The average rate of LNG terminal utilisation in Europe (of total contracted capacity) was 68% in 2009, 75% in 2010 and 67% in 2011.

In terminals where 90% or more of their regasification capacity was contracted (or "booked"), the average capacity utilisation was 58% over the three year period. For terminals where less than 90% of regasification capacity was contracted, the average used capacity was 76%.

One explanation for this could be that in terminals where users or potential users anticipate that there is going to be sufficient available capacity in the future, they tend to accommodate their contracted capacity up to actual needs, contracting more capacity on a short-term basis.

3.5. Status and evolution of CMP application

As shown in Table 2, for the Member States assessed, a significant amount of capacity was returned to the market with the application of CMP mechanisms. Nonetheless, results show that released capacity was in practice contracted only in two terminals in 2010, suggesting that the needs of market players were already covered.

Table 2: Available and contracted capacity through the application of CMP at LNG terminals in France, Italy and the United Kingdom

Country	LNG terminal	Year	Amount of capacity made available through the application of CMP executions *(GWh)*	Amount of capacity contracted on the basis of the application of CMPs *(GWh)*	Specific CMP applied (ex ante/ ex post UIOLI, penalties etc…) and relevant background information
France	Fos Tonkin & Montoir (Elengy)	2010	29,400	4,600	The increase of capacity made available in 2011 compared to 2010 partly reflects the fact that Fos Cavaou has been fully operational since November 2010 only. Not including Fos Cavaou, the data for 2010 would be of 54 200GWh
	Fos Tonkin & Montoir (Elengy) & Fos Cavaou (Fosmax LNG)	2011	80,700	0	
Italy	Panigaglia (GNL Italia)	2009	10,528	0	The CMPs applied are those foreseen in the ERGEG document Ref. E10-LNG-11-03b: Ex-Ante UIOLI and Ex-post UIOLI Data from Italy provided in m3 liquid. Conversion factor: 6,87MWh/m3
		2010	11,260	0	
		2011	3,432	0	
	Rovigo (Adriatic LNG)	2009	0	0	These mecanisms are related to release of slots/capacity according to ALNG Regasification Code
		2010	6,972	975	
		2011	6,651	0	

Country	LNG terminal	Year	Amount of capacity made available through the application of CMP executions *(GWh)*	Amount of capacity contracted on the basis of the application of CMPs *(GWh)*	Specific CMP applied (ex ante/ ex post UIOLI, penalties etc…) and relevant background information
United Kingdom	Grain LNG and South Hook LNG Terminal	2009	12,332	0	
		2010	29,214	0	
		2011	44,987	0	

Note: this table shows LNG terminals where amount of capacity available through CMP application is not 0.

3.5.1 Capacity request denials

Based on the data gathered by NRAs, European LNG terminals have not denied access to capacity in the last three years. However, in the Greek LNG terminal, respectively for 2010 and 2011, four and six capacity requests were denied due to lack of available storage capacity.

3.6. Functioning of secondary capacity markets

The secondary capacity market[14] is operated differently in each country. Across the period of study, four countries had operations on the secondary market: Belgium, France, Spain and the United Kingdom. Figure 6 illustrates the number of active agents in those four countries.

The data on capacity transferred/contracted in these four countries is available in different units and conditions. Consequently, it is difficult to undertake a comparative analysis (see Table 3).

The Belgian NRA notes that in the framework of the second code of conduct, new regulatory documents (access code, standard LNG terminaling agreements and terminaling programme) were developed by the Terminal Operator and were approved by CREG on 15 November 2012. So far, primary capacity holders must offer the unused capacity to the market by placing it on the bulletin board. In the new access code, the use of CMP will be developed in order to include an Electronic Data Platform.

In Spain, the bulletin board on secondary capacity market was implemented on the technical system manager's website in February 2010, with data available from then onwards. Gas is bought and sold in the terminal as a way to exchange capacity storage rights.

In the United Kingdom, at Grain LNG terminal, secondary trading took place mostly through the bilateral trading of cargoes between Grain LNG's primary customers and upstream sellers, allowing third party cargoes to access the United Kingdom, often with customers competing to acquire cargoes. Many of these are reported in the trade press but customers do not provide this information to the terminal. In addition, individual secondary capacity products are offered across all 3 phases of capacity[15] by Grain's primary customers on a bilateral basis; shippers offer a firm bundled product. This is backed by Grain's UIOLI product which is offered via a bulletin board.

[14] Secondary capacity markets in Member States are described in detail in ERGEG's 2011 study (Ref. E10-LNG-11-03b).

[15] The three phases refer to the release of LNG import capacity since the Grain terminal became operational in 2005. Grain LNG Phase 1 – Operational since 4 July 2005. Annual capacity of 3.3m tonnes of LNG (4.4bcm/yr of gas); Grain LNG Phase 2 – Operational since December 2008. Additional annual capacity of 6.5m tonnes of LNG (8.7bcm/yr of gas); Grain LNG Phase 3 – Operational since December 2010. Additional annual capacity of 5m tonnes of LNG (20bcm/yr) - taking aggregate terminal capacity to ~20 bcm/yr.

Apart from the shippers active in the capacity secondary market, there are numerous upstream counterparties, as active agents. Master regasification framework agreements at the South Hook LNG terminal have been signed with 5 counterparties. For Dragon LNG terminal, capacity data has not been provided.

By way of contrast, in Italy, the regasification codes provide rules for capacity release by users. No secondary market platform has been implemented at this stage. In Portugal, there are no capacity rights available to trade on a secondary market.

Figure 6: Number of users of secondary capacity markets in Belgium, France, Spain and the United Kingdom

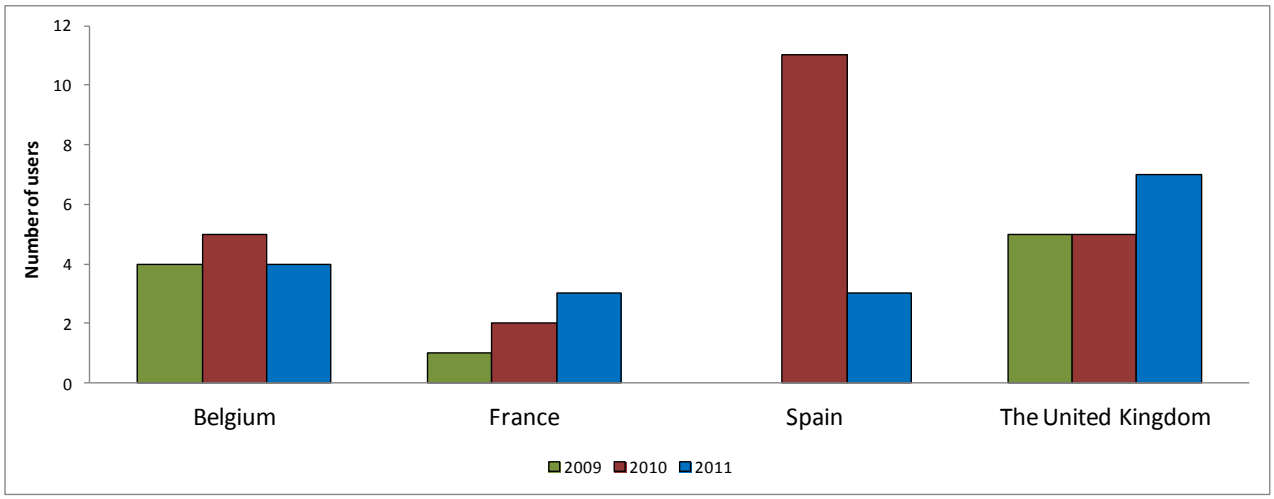


Table 3: Amount of capacity contracted in the secondary capacity market and access to short-term capacity for spot cargoes in Belgium, France, Spain and the United Kingdom

Country	Terminal Name	Year	Amount of capacity transferred/contracted in the Secondary Market	Comments
Belgium	Zeebrugge	2009	5 Entire Slots/4 Berthing rights/1 Storage rights	
		2010	3 Entire Slots/ 3 Berthing rights	
		2011	4 Entire Slots/ 3 Berthing rights	
France	All	2009	0	TWh/12 unloadings over one year
	All	2010	11.2	
	All	2011	11.2	
Spain	All	2009	---	GWh/d (regasification capacity)
	All	2010	---	
	All	2011	15	
United Kingdom	All	2009	240	GWh
	All	2010	27,707	
	All	2011	22,481	

In the period analysed, countries where spot cargoes[16] have been unloaded are Belgium, France, Italy and the United Kingdom. The number of transactions fluctuates from 1 to 7 per year.

In 2011, no spot cargoes were booked in the secondary market. However, in previous years, there were shippers who contracted regasification capacity or slots in the secondary market or coming from CMP applications (see Table 4).

Table 4: Main spot cargo unloading indicators in Belgium, France, Greece, Italy and the United Kingdom

Country	Year	Number of operations performed	Aggregated volumes (m3 LNG)	Spot cargoes origin (15)	Comments
Belgium	2009	3	210,000	100% from secondary market	Percentage obtained by dividing the total of short term operations performed in a given year by the number of short term operations performed on the secondary market in that given year
	2010	7	980,000	116% from secondary market	
	2011	7	980,000	100% from secondary market	
France	2009	0	na	na	Volumen figure provided in TWh. Conversion factor: 6,87MWh/m3
	2010	4	669,577	100% obtained by CMP application	
	2011	0	na	na	
Greece	2009	---		na	
	2010	14	666,667	100% from primary market	
	2011	14	700,000	100% from primary market	
Italy	2009	5	366,354	100% from primary market	A secondary platform is not implemented
	2010	5	467,004	69 % from primary market / 31 % by other CMP application	
	2011	2	193,989	100% from primary market	
United Kingdom	2009	---	na	na	Shannon LNG
	2010	1	206,000	na	
	2011	---	na	na	

[16] Spot cargoes are considered those cargoes contracted by acquiring capacity on a short-term basis (i.e. less than a month).

NRAs did not report any changes in the rules for spot cargo unloading based on descriptions provided in the ERGEG 2011 study.

In Portugal, all capacity allocated on a monthly schedule is binding. If a shipper surrenders a slot booked they must pay a penalty. Spot cargoes are accepted depending on LNG terminal availability and the LSO should make an effort to fulfil any shipper's request. In cases, where a shipper surrenders a slot at short notice (less than a month), the LSO should facilitate access to other shippers who have shown interest in those specific slots. Due to the three minus one rule[17], for the Sines LNG terminal, short term forecasts (slots) were not made publicly available. The acceptance of spot cargoes at Sines LNG terminal depends on the same pre-conditions as any other service in that infrastructure, including a utilisation contract and a compatibility assessment of the ship with the LNG terminal.

In Spain, it has been noted that apart from the LSOs, the technical system manager has an active role in determining the availability of slots, which can depend on many variables, such as the level of LNG stored in the tanks, the size of the ships and variations in weather conditions.

In the Netherlands, it is possible to acquire capacity via the secondary market or the commercialisation of unused capacity for spot cargo unloading.

[17] Three minus one rule establishes that the LNG system operator is not obliged to publish information on capacity contracted if less than three users are using the services offered.

4. Conclusions

The data provided by NRAs has been analysed to understand the status of capacity (under)utilisation, spot contracting, secondary markets and application of CMPs at European LNG terminals. The results show that:

- Since 2009, regasification and storage capacity at European LNG terminals have continued to increase. Two new terminals began operating in France (Fos Cavaou in 2010) and the Netherlands (Gate in 2011). Additional regasification capacity was also developed at the existing United Kingdom terminals. Overall storage capacity has increased in Spain, the United Kingdom, France and the Netherlands.

- The share of LNG in total gas supplies in countries analysed increased in the period 2009-2011 from 28% to 30%.

- While natural gas demand has decreased during the last year in all countries studied, the level of LNG supplies has not changed, except in Spain, where it has decreased, and the United Kingdom, where it has increased. Also, the share of LNG supplying national demand has remained practically constant, except for Spain (decreasing) and the United Kingdom (increasing).

- The number of active shippers at the terminals has either slightly increased or slightly decreased in the different Member States. No major trend can be identified on this aspect, although we note that there is activity and competition (several shippers per site).

- The average rate of LNG terminal utilisation in Europe is 68%, 75% and 67% in 2009, 2010 and 2011, respectively.

- In terminals where 90% or more of their regasification capacity was contracted (or “booked”), the average capacity utilisation was 58% over the three year period. For terminals where less than 90% of regasification capacity was contracted, the average used capacity was 76%.

- No denial of access to capacity was reported for the last three years, except at the Greek LNG terminal where capacity requests were denied due to lack of storage capacity.

- It appears from the data collected that unused capacity was released to the market (in those terminals that were almost fully booked). Released capacity was effectively contracted by shippers in only two terminals in 2010, suggesting that there was no contractual congestion.

- Following the same pattern, a secondary capacity market is active in Belgium, France and the United Kingdom, where capacity at LNG terminals is (almost) fully contracted.

- All terminals have properly functioning CMP provisions, even though the capacity released is not often subscribed to by other shippers.

In conclusion, the European LNG market is considered as a consolidated market (i.e. a market that has not presented significant variations in the period analysed) in the current European gas context. There have been no significant changes regarding the number of shippers that access the terminals in the analysed period. That being said, positive developments can be noted, both in terms of the role of LNG generally in Europe's gas sector and of the promotion of competition and trading of capacity at LNG terminals.

From a European perspective, there is available capacity to contract, either on the primary market or through the application of CMP whereby capacity is brought back to the market.

In some terminals, all capacity is fully booked. As an example, French (Montoir) and some of the United Kingdom's (Grain LNG and Dragon LNG) terminals have a low rate of capacity use in contrast to being highly contracted. In Italy and Spain, terminals have medium rate of capacity utilisation, which could be explained by the amount of technical capacity in relation to market size.

This Status Review reveals that all terminals have properly functioning CMP provisions, even though the capacity released is not often subscribed to by other shippers. A secondary market is also available in some terminals and has been used in a few of them (those that are most contracted). This could be a good indicator: as one can expect, in terminals with capacity available all operations are concentrated in the primary market, whereas CMP and secondary market work better in more congested facilities.

As a result of this assessment, CEER recommends continuing to monitor the LNG market focusing on several areas where regulations and procedures can be improved or further harmonised, for instance as regards transparency of information (which is an important tool for encouraging new entrants in a market) and coherence of market rules. As outlined in the CEER 2013 Work Programme, European energy regulators plan to focus on monitoring the LNG transparency requirements and consistency of European LNG provisions with future Network Codes (in particular, balancing, Capacity Allocation Management (CAM) and CMP).

Annex 1 – CEER

The Council of European Energy Regulators (CEER) is the voice of Europe's national regulators of electricity and gas at EU and international level. Through CEER, a not-for-profit association, the national regulators cooperate and exchange best practice. A key objective of CEER is to facilitate the creation of a single, competitive, efficient and sustainable EU internal energy market that works in the public interest.

CEER works closely with (and supports) the Agency for the Cooperation of Energy Regulators (ACER). ACER, which has its seat in Ljubljana, is an EU Agency with its own staff and resources. CEER, based in Brussels, deals with many complementary (and not overlapping) issues to ACER's work such as international issues, smart grids, sustainability and customer issues.

The work of CEER is structured according to a number of working groups and task forces, composed of staff members of the national energy regulatory authorities, and supported by the CEER Secretariat.

This report was prepared by the LNG Task Force of CEER's Gas Working Group.

Annex 2 – List of abbreviations

Term	Definition
ACER	Agency for the Cooperation of Energy Regulators
CAM	Capacity Allocation Mechanism
CEER	Council of European Energy Regulators
CMPs	Congestion Management Procedures
EBB	Electronic Bulletin Board
FCFS	First Come First Served
GGPLNG	Guidelines for Good Third Party Access Practice for LNG System Operators
GLE	Gas LNG Europe
GWG	Gas Working Group
LSO	LNG System Operator
NRA	National Regulatory Authority
OSP	Open Season Procedure
TPA	Third Party Access
TSO	Transmission System Operator
UIOLI	Use-It-Or- Lose-It
UIOSI	Use-It-Or-Sell-It

ANNEX 3 - CAM and CMP applied in LNG terminals

CMPs and anti-hoarding clauses are characterised by a considerable variety of specific provisions. These are mainly UIOLI, with either ex ante or ex post effect, applying over unused slots or unused regasification capacity.

The CMPs, as well as the CAM applied at European LNG terminals, and rules for spot cargo unloading were described previously by the regulators when the 2011 ERGEG Study[18] was undertaken.

Information provided in the 2011 ERGEG Study has been updated by NRAs for the present report. A summary containing updated information has been elaborated and shown below in the following table.

Please note that in Member States where changes have occurred since the publication of the ERGEG 2011 Study an indication is provided in the left-hand column of the table.

[18] "ERGEG 2011 study on congestion management procedures and anti-hoarding mechanisms in the European LNG terminals", April 2011, Ref. E10-LNG-11-03b, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/Tab/E10-LNG-11-03b_CMP%20in%20LNG_%2012_Apr_2011.pdf

Member State	CAM	CMPs	Rules for spot cargos unloading
Belgium (Zeebrugge – TPA regime) *CHANGES SINCE 2011 ERGEG STUDY*	All capacity sold long-term via open season procedures Remaining capacity sold short-term via First Come First Served (FCFS) rule.	**Secondary market** Primary holder must place back on the market the unused capacity at a price less than or equal to the regulated tariff (code of conduct). **Ex-ante UIOSI** Fluxys LNG automatically receives a mandate to market a slot whose user has not been confirmed 2 months before the service start date, on behalf of the holder and at regulated price. ⇨ The notice period is 2 months **Ex-post UIOLI** Record of use of the capacity established by the LSO. Primary holder will lose its capacity if, at the same time: i) part of the contracted capacity is underutilized ii) there is a contractual congestion at the terminal iii) the primary holder refuses to sell this capacity on secondary market at the regulated tariff or a lower price; iv) the primary holder is unable to justify its behaviour.	If capacity is fully booked, it is only possible to acquire capacity via the secondary market or the commercialisation of unused capacity by the LSO. In some occasions, the LSO has also marketed additional capacity (slots) on the primary market.
France (Montoir, Fos Tonkin and Fos Cavaou – TPA regime)	Primary allocation of capacity through open season procedures. Existing capacity allocated on a FCFS basis for long term (above 1 year) and short term contracts (below 1 year)	**Secondary market** The right is given to the primary holder to offer its unused capacity on the secondary market by entering into bilateral deals. No obligation. **Ex-ante UIOLI** An annual tentative schedule is established. On the 20th of month M, shippers inform the LSO of the slots requested for their M+1	Shippers can plan spot cargoes after the 25th of month M when the scheduling for month M shows available slots.

		scheduling. On the 25th of month M, the LSO sets the monthly binding programme and publishes the booked and available slots for M+1 on its website. ⇨ Depending on the exact berthing date, the notice period can go from 5 to 36 days. **Penalty for late cancelation** The LSO can apply a penalty set at 50% of the regasification cost of the cancelled delivery if the cancellation is notified three days or less before the scheduled date. Income generated by this option is transferred to the users of the terminal, as a deduction from the regasification charges. Alternatively, the primary shipper can be required to compensate (in gas or financially) the shipper(s) whose emissions have been reduced as a consequence. **Ex-post UIOLI** In case of congestion (programme for M+1 includes no available slot), any cancellation without notice to the LSO will be formally noted and the regulator informed. In this case, the regulator may, on a case-by-case basis, require the shipper to release part of its booked capacity.	
Greece (Revithoussa-TPA regime)	Capacity allocated on a FCFS basis.	**Secondary market** Remarketing of gasification capacity rights and LNG stored in tanks. Not active yet. **Ex ante UIOLI** An annual tentative schedule is established. 28 days before the start of month M, shippers submit their monthly programme for the next	Any interested party may submit an application for a *spot* basic service at any time. Shippers requesting spot services must have signed a standard contract with the Transmission System Operator (TSO) at least three days prior to the unloading of the cargo.

		three months. 10 days before the start of month M, the LSO sets the monthly schedule for months M to M+2. The schedule for month M is binding. ⇨ Depending on the exact berthing date, the notice period can go from 10 to 41 days **Ex-ante UIOLI for regasification capacity** In case a shipper has reversed regasification capacity but no LNG storage capacity and has not scheduled any new deliveries over a certain period of time, the LSO proceeds with the short-term release of the shipper's booked regasification capacity to all interested parties. **Penalty** **For late cancellation:** if a shipper requests the cancellation of a cargo scheduled for Month M after the publication of the LNG terminal (10th M-1) monthly schedule, he is charged a cancellation penalty **for exceeding the allocated storage**.	
Italy (Panigaglia – TPA regime, Rovigo – 80% exempted) *CHANGES SINCE 2011 ERGEG STUDY*	Regulated access: Capacity allocated through yearly Open Season Procedure (OSPs) for the next years and monthly OSPs for capacity within-year.	**Ex-ante UIOLI** In M-1, users submit the unloading schedule for M to M+2. The schedule (dates of berthing and LNG volumes) is binding for month M and M+1 (only volumes. If LNG volumes scheduled for the month M and M+1 are lower than the shippers' capacity rights, the LSO has to offer the non-nominated capacity to the market. ⇨ Depending on the exact berthing date, the notice period can go from 4 days to	LSOs have to offer all the capacity of the terminal that is available each month, after taking into account the unloading schedule defined at the end of the previous month, after considering possible capacity freed up because of the cancellation of cargoes, delays or advances.

		66 days **Penalty** Shippers are levied with charges in case programme mismatch exceeds a defined tolerance, in order to provide incentives to provide schedules as accurately as possible. **Ex-post UIOLI** Refers to the annual use of the capacity granted for contracts longer than one year. If the shipper fails to deliver at least 90% of the LNG contracted volumes, he is then obliged to give back the amount of unused capacity to the LSO, who offers it on the market. If not sold, it goes back to the primary holder.	
The Netherlands (Gate terminal –TPA exemption) *CHANGES SINCE 2011 ERGEG STUDY*	Primary allocation of the capacity through an open season procedure. Primary capacity is still available.	**Secondary market** The right is given to the primary capacity holder to offer its unused capacity/slots on the secondary market by using the Electronic Bulletin Board (EBB). **Ex-ante UIOLI** Unused capacity has to be notified to the LSO by the shippers 30 days before the ship's arrival. Unused slots have to be offered on the secondary market 30 days before the slot date. ⇨ Notice period of 30 days	It is possible to acquire capacity via the secondary market or the commercialisation of unused capacity.
Poland (Swinoujscie – TPA regime)	Primary allocation of the capacity through an open season procedure. Remaining capacity allocated through open subscription periods.	**Secondary market** Users entitled to sell their unused capacity on the secondary market. LSO publishes on its website a bulletin board including secondary market offers. **Ex post UIOLI**	Possibility to apply for a berthing slot to the LSO in order to contract regasification capacity on a spot basis.

		Regular analysis of send-out capacity used to prevent capacity hoarding. LSO releases unused capacity.	
Portugal (Sines- TPA regime)	Capacity allocated through annual OSPs with the use of an auction mechanism in case demand exceeds offer.	**Secondary market** Capacity rights not available for secondary trading **Ex ante UIOLI** On the 12th of month M-1, users submit their monthly schedules for M, M+1 and M+2. The unloading schedule is confirmed by the LSO on the 20th of month M-1 and is binding for month M. ⇨ Depending on the exact berthing date, the notice period can go from 10 to 33 days. **Penalty** If a shipper does not use the slot allocated in a monthly schedule, he must pay a penalty corresponding to the sum of unload tariff and storage tariff related to the capacity and the number of days that were booked. **Capacity surrender** If a shipper surrenders a slot at short notice (less than a month), the LSO should facilitate access to other shippers who have previously expressed interest.	Spot cargoes accepted by the LSO depending on the terminal's availability.
Spain (Barcelona, Cartagena, Huelva, Bilbao, Sagunto,	Capacity allocated on a FCFS basis, with about 25% of capacity reserved for Short term bookings.	**Secondary markets** Available but not very active. Bulletin board available on the LSO's website. **Ex ante UIOLI**	Possibility to apply for a berthing slot to the LSO in order to contract regasification capacity on a spot basis.

Mugardos – TPA regime)		An annual tentative schedule is established. On the 20th of month M-1, shippers submit their monthly schedule for M, M+1 and M+2. The programme is binding for the next month and a half. ⇨ Depending on the exact berthing date, the notice period can go from 10 to 56 days **Ex-post UIOLI** **Automatic UIOLI:** if during the 6 first months of a contract, the shipper does not use (during at least 1 month) 80% of his regasification capacity, this capacity is automatically and proportionally reduced and a penalty is applied. This penalty represents a portion of the financial guarantee required from terminal users when signing any capacity contract. After one year of fine utilisation, the bank deposit is reimbursed. **For systematic underutilisation**: only in situation of congestion and on the basis of a new shippers' request, UIOLI is applied when a primary holder does not use 80% of the reserved capacity (during at least 1 month of the year). If this happens, the primary shippers lose the fraction of the unused capacity asked for by the new applicant.	
The United Kindom (Isle of Grain, Dragon LNG, South Hook – TPA exemptions)	Primary allocation of capacity through open season procedures (except for South Hook)	**Secondary market** Primary holders have the right to offer their unused capacity on the secondary market **Ex ante UIOSI** Any available capacity has to be sold by auctions on the secondary market.	In order to bid for a berthing slot in the secondary market, parties may need to prequalify with the terminal operator.

		⇨ Notice periods vary from 7 to 10 days before the berthing date. NB: Anti-hoarding arrangements defined by project sponsors and primary shippers for each terminal. NRA investigation on a case-by-case basis, where any concern is raised.	

ANNEX 4 – Questionnaire sent to NRAs on the evaluation of the efficiency indicators and actual market functioning

CEER Status Review on the Evaluation of Access Regimes at LNG Terminals in the EU:
Efficiency Indicators and Actual Market Functioning

According to the *CEER 2012 Work Programme* the indicators fulfilling should be completed by the Q2 of 2012 and the comparative report should be finished by Q4 2012.

Template to be fulfilled by each Regulator per Country:
(Regulators to complete the questionnaires from available historical data)

1. Country figures:

Country:	2009	2010	2011
Total natural gas demand *(bcm/year)*			
Share of LNG on total gas demand *(%)*			
Number of LNG terminals in the country			

2. Main aspects of LNG terminals access regulation:

Please outline any change on the CAM and CMP applied, over the described in the 2011 ERGEG study.

3. Terminal´s Functioning:

(Please complete following information per independent LNG terminal in the country)

Terminal Name	

3.1 Nominal Capacities

	2009	2010	2011
Storage capacity *(m^3)*			
Emission capacity *(bcm/year)*			

Emission capacity *(m^3/h)*			
Number of active shippers in the terminal owning capacity rights			
Number of new shippers in comparison to the previous year			

3.2 Contracted Capacities:

(Each regulator will fill the following tables according to their contracting services)

3.2.1. Downloading capacities contracted

	2009	2010	2011
Total contracted capacity *(% of contracted capacity/nominal capacity slots)*			

3.2.2. Storage capacities contracted

	2009	2010	2011
Total contracted capacity *(% of contracted capacity/storage nominal capacity)*			

3.2.3. Regasification capacities contracted

	2009	2010	2011
Total contracted capacity *(% of contracted capacity/emission nominal capacity)*			

3.3 Used Capacities:

	2009	2010	2011
Total contracted capacity used *(% of used capacity/ total contracted capacity)*			

3.4 CMP and anti-hoarding measures application:

3.4.1 Capacity requests denials

	2009	2010	2011
Number of capacity request denials during the year			
Reasons of the denials			

3.4.2. CMP applications

	2009	2010	2011
Amount of capacity made available through the application of CMP executions			
Amount of capacity contracted on the basis of the application of CMPs.			

Please refer to the specific CMP applied (ex ante/ ex post UIOLI, penalties etc…) and provide any relevant background information on the application of the CMPs in 2009, 2010 and 2011:

4. Secondary Market functioning

Please make any change deemed necessary to the accompanying document describing the functioning of secondary markets, based on the 2011 ERGEG study. Please include any additional information on the access mechanism (electronic platform, bulletin board, etc.) and the offered services affected (regasification, LNG storage, ships unloading slots, etc.)

Please, refer main Secondary Market functioning indicators:

	2009	2010	2011
Number of active agents			
Number of operations performed			
Amount of capacity transferred/contracted in			

the Secondary Market. Indicate units as preferred (i.e regasification capacity in GWh, slots…)			

Please outline any change on the Secondary Market functioning, over the described in the 2011 ERGEG study.

5. Access to short-term capacity for spot cargoes

Please make any change deemed necessary to the accompanying document describing the rules for spot cargoes unloading based on the 2011 ERGEG study.

Please, refer main spot cargoes* downloading indicators:

	2009	2010	2011
number of operations performed			
Aggregated volumes			
% of number of spot cargoes operations obtained as primary capacity vs. % of number of spot cargoes obtained in the secondary market or by other CMP application			

*Spot cargoes are considered those cargoes contracted and diverted by acquiring capacity on a short term basis (i.e. less than a month)

Please add any comment or background information on the development of spot cargoes unloading in the years 2009, 2010 and 2011:
