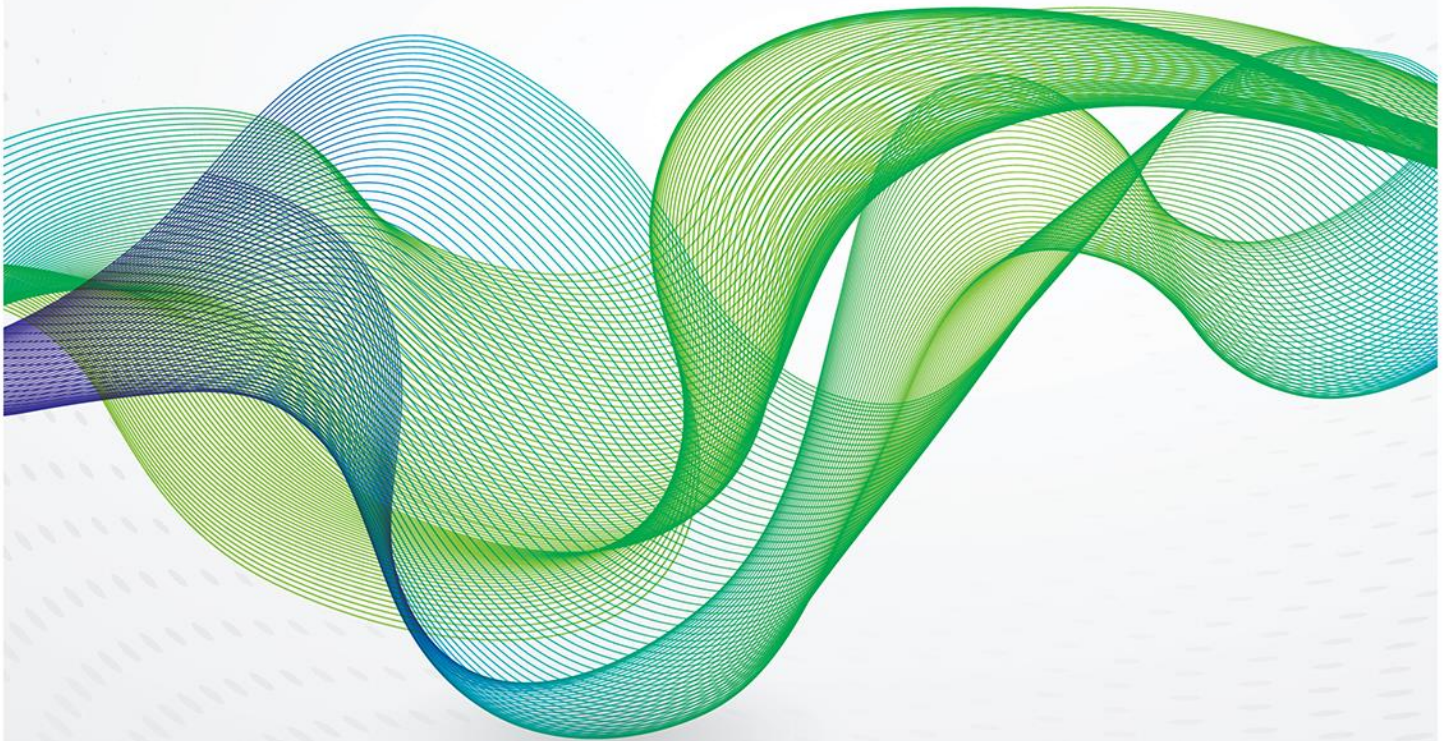




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# **‘Finding a home’ for global LNG in Europe: understanding the complexity of access rules for EU import terminals**





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## Preface

The importance and relevance of LNG for European gas balances has increased substantially in the late 2010s after several years of relatively low import levels and under-utilised regasification capacity. For some this was simply a question of the most efficient means to acquire competitive gas supplies through existing infrastructure, while others built new regasification terminals for supply diversification and security. In 2019, European LNG imports increased by more than 40% compared with the previous year and the main question for exporters had changed from whether the EU would be willing and able to compete with (principally) Asian countries for global supply, to whether they would be able to find a home for their cargoes in an over-supplied market. As the EU is the only major gas market with third party access to LNG terminals, this means that exporters can always place a cargo for which no other market can be accessed unless the owner of the terminal or the buyer agrees. The global LNG supply surplus – generally known as ‘the glut’ – looks set to remain for up to 3 years and, given the large number of final investment decisions for new projects already announced in 2019 with more in prospect for 2020, could continue for longer. This is a major reason why we have seen major LNG exporters buying the entire primary capacity of European regasification terminals for a 15-year period (on average), raising the question of the availability of capacity in specific locations for those who do not have such contractual arrangements.

This situation makes it increasingly important for all European gas stakeholders to understand the regulation of third party access to LNG terminals. The access regime is complex and varies significantly depending on whether the terminal is regulated or exempted from TPA. As such it is somewhat akin to the regime for pipelines which Katja Yafimava dealt with in a previous publication.<sup>1</sup> The detail of the regimes for different terminals, set out in this study, will be important for suppliers needing to understand the rules for buying capacity for different time periods. Together with Katja’s previous paper, these studies provide a complete picture of the regulation of access to EU gas infrastructure.

Professor Jonathan Stern  
Oxford, January 2020

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<sup>1</sup> Building New Gas Transportation Infrastructure in the EU – what are the rules of the game? OIES Paper NG 134 (2018).

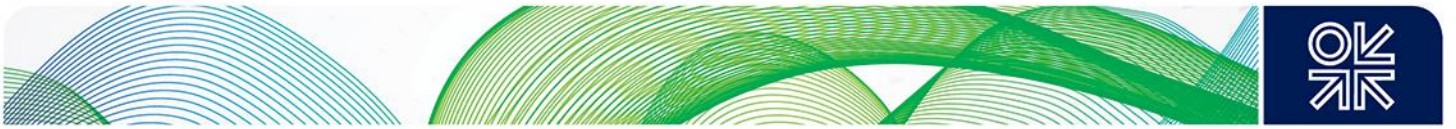


## Acknowledgements

This paper, which explores regulatory aspects of EU LNG import terminals, complements my previous work on EU pipeline gas regulation. Researching and writing the paper has been a challenge because the complexity of the topic required me to painstakingly distill specific LNG-related provisions from the EU acquis, understand their implementation by various import terminals, and analyse multiple exemptions. I was privileged to count on support and advice from Professor Jonathan Stern, the founder of, and a Distinguished Research Fellow on, the OIES Natural Gas Research Programme, to whom I am extremely grateful for the time he spent on reading and commenting on this paper. I am also grateful to Dr James Henderson, Director of the Programme who has read and commented on the paper as well as to my other OIES colleagues, in particular Mr David Ledesma, Mr Mike Fulwood, Dr Anouk Honoré and Mr Howard Rogers for answering my LNG-related questions. Many others outside the OIES have been very helpful in clarifying various complex issues thus making this paper more accurate – I thank all of them. Special thanks go to Mr John Elkins for his excellent editing, to Mr Darren Lingard for creation of the map, and to Kate Teasdale for her administrative support. Responsibility for all the views expressed and all the conclusions reached is solely mine.

## Glossary / Acronyms

ACER	– Agency for the Cooperation of Energy Regulators
ARERA	– Autorità di Regolazione per Energia Reti e Ambiente
BBL	– Balgzand-Bacton Line
CA	– confidentiality agreement
CAM	– capacity allocation mechanism
CEER	– Council of European Energy Regulators
CRE	– Commission de Régulation de l'Energie
CREG	– Commission de Régulation de l'Electricité et du Gaz
EU	– European Union
EC	– European Commission
ERSE	– Entidade Reguladora dos Serviços Energéticos
FCFS	– first come, first served
FSRU	– floating storage and regasification unit
FSU	– floating storage unit
GTC	– general terms and conditions
GB	– Great Britain
GGPLNG	– Guidelines for Good Third Party Access Practice for LNG System Operators
ITO	– independent transmission operator
ISO	– independent system operator
LNG	– liquefied natural gas
LSO	– LNG system operator
NBP	– National Balancing Point
NC	– Network Code
NCECP	– National Commission for Energy Control and Prices
NRA	– national regulatory authority
OFGEM	– Office of the Gas and Electricity Markets
OLT	– offshore LNG Toscana
OS	– open season
OU	– ownership unbundling
SCM	– secondary capacity mechanism
SHB	– South Hook Bundle
STC	– special terms and conditions
TA	– throughout agreement
TAA	– terminal access agreement
TAC	– terminal access code



ToP – Take or Pay

TIRG – Italian consolidated law on the adoption of guidelines for free access to the LNG service

TSO – transmission system operator

TPA – third party access

UNECE – United Nations Economic Commission for Europe

UIOLI – use-it-or-lose-it

URE – Urząd Regulacji Energetyki

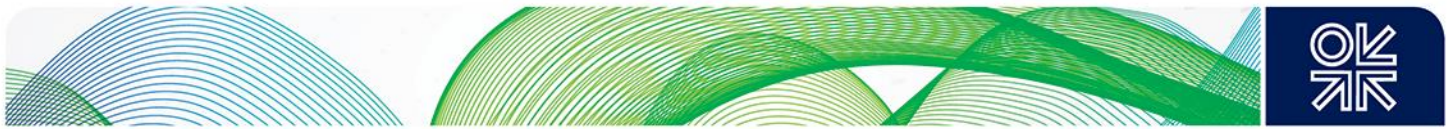


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## Executive Summary

A previous OIES paper by this author – ‘Building New Gas Transportation Infrastructure in the EU – what are the rules of the game?’<sup>2</sup> – concluded that due to the complexity and the lack of clarity associated with the EU regulatory framework for incremental (new) pipeline capacity, very few major new gas pipelines will be built in the EU in the future as it will be much easier for those wishing to bring additional gas to Europe to do so via LNG import terminals.<sup>3</sup> This new OIES paper – ‘Finding a Home’ for Global LNG in Europe: understanding the complexity of access rules for EU import terminals’ – analyses the EU regulatory rules governing LNG import terminals (regulated and exempted), focusing on TPA rules, use-it-or-lose-it (UIOLI) provisions, and tariffs.

## Changes in Market Conditions

Going into the 2020s, LNG sellers are operating in an increasingly oversupplied global market, thus facing a problem of whether and where they will be able to ‘find a home’ for their cargoes. Given that the EU is the only liquid gas market with regulated third party access (TPA) to LNG import terminals, the sellers will always be able to place a cargo in the EU for which no other market can be accessed unless the owner/buyer agrees. OIES modelling suggests that Europe may need ~80 bcma of LNG imports in the 2020s, and – as there is likely to be surplus LNG – it could also absorb another 40-50 bcma, although that would come under severe competitive pressure from pipeline gas.

The LNG sellers’ interest in the European market has been confirmed by their increased booking of EU terminal capacity on a long term basis as reflected by Zeebrugge and Montoir-de-Bretagne bookings in late 2019, with primary capacity being sold through 2044 and 2035 respectively. With only a handful of other EU terminals offering primary capacity on a long term basis and with the majority of their capacity already booked long term – on average, capacity bookings at EU import terminals expire in the 2030s – market interest in long term capacity bookings could lead to a spike in demand for remaining capacity. Even if only a few sellers not prepared to accept the risk of not being able to place their cargoes in the EU market are interested in long term bookings, with other sellers being satisfied with short term bookings, *all* sellers will need to know and understand the TPA rules for EU LNG import terminals.

## The Existing Framework: Third Gas Directives and Gas Regulation 715

No dedicated LNG-specific EU regulation exists, and various LNG-related provisions can only be found in and distilled from the Third Gas Directive (and the Second Gas Directive prior to its repeal from 3 March 2011) and Gas Regulation 715. The Third Gas Directive has mandated regulated TPA to LNG import terminals based on published tariffs whereas tariffs (or their methodologies) must be approved by the national regulatory authority (NRA) prior to their entry into force. Gas Regulation 715 has introduced more specific provisions in respect of TPA, capacity allocation mechanisms, congestion management procedures, trading of capacity rights, and transparency requirements.

Although regulatory treatment awarded by the Third Gas Directive and Regulation 715 to LNG import terminals is more specific than that awarded by the Second Gas Directive, it has left a significant degree of discretion to the regulated terminal operators in respect of capacity allocation mechanisms, UIOLI procedures, and tariffs, enabling the operators to choose different ways of complying with the Directive and the Regulation provisions, or apply for an exemption.

The lack of dedicated LNG-specific EU regulation and the general nature of the Third Gas Directive and Gas Regulation 715 LNG-related provisions have resulted in a situation where the LNG import terminals in the EU are governed by a patchwork of terminal codes developed by their operators, the NRA guidance, and the exemptions, thus making it extremely difficult for an LNG seller to understand the rules.

The Third Gas Directive and especially Gas Regulation 715 – which introduced significant transparency requirements in respect of capacity allocation and tariffs – significantly strengthened the EU regulatory regime in respect of LNG import terminals, compared to the Second Gas Directive, under which the

<sup>2</sup> Yafimava (2018).

<sup>3</sup> Apart from TAP, EUGAL/Nord Stream 2, the Baltic Pipe, and possibly also the pipelines needed for connecting the second string of Turkish Stream with European markets.





majority of exemptions were granted. This has raised a question of their impact on the level-playing field between exempted and regulated terminals, as regulated terminals must comply with Gas Regulation 715 whereas exempted terminals are (but only to a degree) shielded insofar as such compliance is in conflict with their exemptions and/or capacity contracts signed prior to the Regulation becoming applicable. Comparing the regulatory treatment of exempted terminals (prescribed by the NRAs and the EC as part of the exemptions) with the regulatory treatment of non-exempted terminals (prescribed by the Third Gas Directive and Gas Regulation 715) would appear to suggest that the former operate under more favourable conditions, although there could be a different interpretation for individual terminals.

### **Exempted and Regulated Terminals**

Most of the 25 large-scale LNG terminals in the EU operate under a regulated framework but six - the Isle of Grain (Grain 1, 2, 3 and 4), South Hook and Dragon in the UK, Gate in the Netherlands, Adriatic LNG in Italy, and Dunkerque in France – have received exemptions from TPA. The terminals which have been exempted from the TPA and tariffs requirements under the Second Gas Directive – under which the majority of exemptions were granted – have been able to determine their capacity allocation mechanisms, UIOLI procedures, and tariffs themselves, whereas the terminals exempted under the Third Gas Directive – only one exemption to date – have been obliged to apply capacity allocation mechanisms developed by the NRAs.

Our analysis of the exemptions granted to six EU LNG import terminals demonstrates that more recent decisions tended to impose conditions on exempted terminals similar to those that are contained in Gas Regulation 715. It is possible that some changes, particularly in respect of increasing transparency of UIOLI arrangements and tariffs, could be made in the future. However, ensuring a level playing field between regulated and exempted terminals might prove to be a legally difficult balancing act, as it would have to be done without violating the principles of contractual certainty and legitimate investor expectations associated with the already exempted terminals.

### **Conclusions**

This paper concludes that the development of a dedicated stand-alone LNG-specific regulatory framework at the EU level, which could build on and bring together the LNG-related provisions of the Third Gas Directive and Gas Regulation 715, differing terminal codes and exemptions, would establish a level playing field and simplify the sellers' task of accessing the terminals. Further legislative initiatives on the part of the EC to amend the regulatory framework for LNG import terminals cannot be ruled out, as well as further actions by NRAs in respect of already granted (and new) exemptions. These could take the form of either developing a new LNG Network Code, amending the existing Capacity Allocation Mechanisms (CAM) Network Code (which does not apply to LNG terminals at present), and/or amending the existing exemption decisions.



## Introduction

The EU views LNG imports – and thus import terminals – as a provider of security of supply and resilience, additional to that provided by pipeline gas – as evidenced by the EU Energy Security Strategy and the LNG and Storage Strategy. The EU is set to attract a significant proportion of the steep increase in global LNG supply expected in the early 2020s. Going into the 2020s, LNG sellers are operating in an increasingly oversupplied global market, thus facing a problem of whether and where they will be able to ‘find a home’ for their cargoes. Given that the EU is the only liquid gas market with regulated third party access (TPA) to LNG import terminals, the sellers will always be able to place a cargo in the EU for which no other market can be accessed unless the owner/buyer agrees. This makes it imperative for the sellers to know and understand the TPA rules for EU LNG import terminals and for the EU to ensure there are no undue regulatory barriers preventing LNG sellers from accessing the terminals – the issues which are being explored by the EC in a forthcoming study.<sup>4</sup>

This OIES paper – which is separate from and unrelated to the EC study – examines the existing regulatory framework applicable to LNG import terminals in the EU, with a view to concluding whether it is adequate and how it might be adapted to ensure removal of any actual, and prevention of any potential, undue regulatory barriers for global LNG accessing the European market.

There are 25 large-scale LNG import terminals in the EU with total regasification capacity of 158.3 mtpa (215.1 bcma),<sup>5</sup> enabling LNG to meet ~45% of EU gas demand (at least in theory).<sup>6</sup> During 2012-17 the average level of utilisation of these terminals was very low at just ~20% but has since increased strongly, reflecting an increased availability of competitively priced global LNG.<sup>7</sup> In 2018 EU member states imported 58 bcm of LNG thus suggesting an increase in the average terminal utilisation rate to 27%.<sup>8</sup> In 2019 EU LNG imports reached a record-high volume of 104.4 bcm<sup>9</sup> thus driving the average terminal utilisation rate to 48%, and this *could* increase further in the early 2020s.

The majority of the LNG import terminals – Zeebrugge in Belgium, Fos Cavaou, Fos Tonkin, and Montoir-de-Bretagne in France, Revithoussa in Greece, Panigaglia and Toscana in Italy, Klaipeda in Lithuania, Delimara in Malta, Świnoujście in Poland, Sines in Portugal, as well as all seven terminals in Spain – operate under a regulated regime. This regime has been established by the Third Gas Directive<sup>10</sup> and Gas Regulation 715 (and, prior to being repealed from 3 March 2011, by the Second Gas Directive).

This paper analyses the Third Gas Directive and Gas Regulation 715, with a view to bringing together all their provisions relevant for LNG import terminals. These provisions include the requirement for LNG terminal operators to provide regulated TPA to terminals, based on published tariffs (or their methodologies) which must be applied without discrimination between users, as well as the requirement to publish and implement the non-discriminatory capacity allocation mechanisms and use-it-or-lose-it (UIOLI) procedures. The paper also compares the Third Gas Directive and Gas Regulation 715 on one hand, and the Second Gas Directive on the other, to demonstrate that the former has significantly strengthened the regulatory regime for LNG terminals, especially in respect of capacity allocation, tariffs, and transparency requirements. The paper also makes note of several LNG-related provisions present in Capacity Allocation Mechanisms (CAM) and Tariffs Network Codes.

The paper analyses the ways in which regulated LNG terminal operators have chosen to comply with the existing regulation in different ways. It shows that, given the high degree of discretion provided by the Third Gas Directive and Gas Regulation 715 to terminal operators in respect of designing capacity allocation mechanisms and defining tariffs (methodologies), significant differences exist between terminals in respect of capacity allocation rules and tariffs (methodologies). The paper also acknowledges the fact that terminals have adapted to changing LNG market conditions by increasing

<sup>4</sup> ‘From the latest Madrid Forum to the next Gas Package’, an interview with the director of DG ENER, Klaus-Dieter Borchardt, Florence School of Regulation, 9 January 2019.

<sup>5</sup> No LNG import terminals exist or are planned in non-EU countries in Europe, except in Turkey, which is not included in this total.

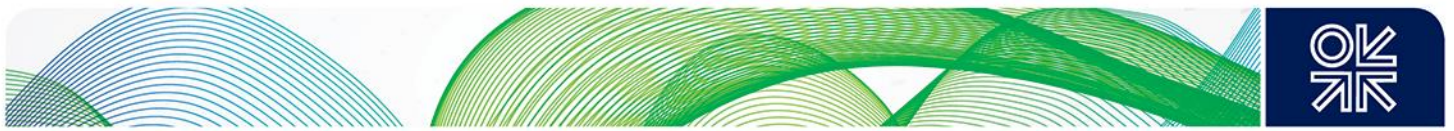
<sup>6</sup> In practice, the share would inevitably be lower due to infrastructure constraints and lack of interconnections.

<sup>7</sup> CEER (2019).

<sup>8</sup> Platts LNG Service.

<sup>9</sup> Ibid.

<sup>10</sup> The original Third Gas Directive was amended in 2019, with amendment entering into force in May 2019.



flexibility for users in respect of capacity allocation mechanisms, for example by introducing open seasons and auctions where only 'first come, first served' (FCFS) mechanisms were previously applied.

The paper proceeds further with a brief overview of actual and potential regulatory barriers, as identified by the CEER and the EC in their recent studies, which also questioned the existence of a level playing field between regulated terminals. The paper also raises a question whether the terminal operators' specific choices on achieving compliance with the existing regulation, which resulted in significant differences between capacity allocation mechanisms and tariffs applied across terminals, might have contributed towards such questioning being legitimate.

Although the majority of EU LNG import terminals are regulated, there are six terminals – Isle of Grain, South Hook, and Dragon in the UK, Gate in the Netherlands, Adriatic LNG in Italy, and Dunkerque in France – that are exempted. Since 3 March 2011, when the Second Gas Directive was repealed by the Third Gas Directive, the exemption regime has been governed by Art. 36 of the Third Gas Directive instead of Art. 22 of the Second Gas Directive. As the majority of exempted terminals were built prior to the Third Gas Directive's entry into force, they have been exempted under provisions of the Second Gas Directive.<sup>11</sup> The paper overviews the exemption regime stipulated by Art. 36 of the Third Gas Directive, while acknowledging not only its continuity but also an increased strictness compared to the exemption regime under Art. 22 of the Second Gas Directive. One of the major differences between the two regimes is that the Second Gas Directive did not oblige the NRAs to decide on the rules and mechanisms for management and allocation of capacity, thus leaving it at their discretion whether to do so. The Third Gas Directive has obliged the NRAs to develop a set of legally binding procedures governing capacity allocation and management of new capacity as part of an exemption, although as noted earlier, it has not prescribed any specific rules.

Although the exempted terminals constitute a minority in terms of the number of terminals – only six out of twenty five – their capacity constitutes a significant proportion (37%) of total EU terminal send out capacity. Therefore, it is important to understand how this capacity is allocated and charged for. To do so, the paper provides a detailed analysis of the exemptions under which each of the exempted terminals have operated, specifically focusing on capacity allocation mechanisms and tariffs (methodologies).

Having analysed and compared the regulatory treatment of regulated and exempted EU LNG import terminals, the paper raises a question of whether there is a level playing field between these two groups, as regulated terminals must comply with the Third Gas Directive and Gas Regulation 715 whereas exempted terminals are (to a degree) shielded through their exemptions. The paper stops short of a definitive answer but argues that the exempted terminals (particularly those that have been granted exemptions under the Second Gas Directive) appear to operate under more favourable conditions.

In conclusion, the paper suggests how the existing regulatory framework could be revised to ensure a level playing field between regulated and exempted terminals as well as between regulated terminals. It also notes that implementing such revision is likely to be a legally difficult balancing act as any such revision must not violate the principles of contractual certainty and legitimate investor expectations in respect of all terminals.

The paper is structured in four sections following this introduction. Section 1 overviews and analyses the existing LNG import terminals in the EU, including their location, ownership, capacity, services provided and tariffs charged. Section 2 analyses the regulatory framework for LNG import terminals, focusing on the Third Gas Directive and Gas Regulation 715. Section 3 overviews and analyses the regulatory treatment of LNG import terminals, focusing on fully regulated terminals; it also overviews and analyses the main regulatory barriers. Section 4 overviews and analyses the regulatory treatment of exempted LNG import terminals, with summaries provided for each terminal. The paper ends with the conclusions.

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<sup>11</sup> The only terminal where an exemption was granted under the Third Gas Directive was the fourth phase of the Isle of Grain (Grain 4) terminal in the UK.



## 1. LNG import terminals in the EU: overview

### 1.1 EU LNG import terminals: location, ownership, and capacity

This paper focuses on terminals located in the EU as only these are subject to EU regulation. By the end of 2018, there were 25 large-scale LNG import terminals with total nominal capacity of 158.3 mtpa (215.1 bcma<sup>12</sup>) located in the EU (Fig. 1).<sup>13</sup>

These terminals are located in the following EU member states: Belgium (Zeebrugge), France (Dunkerque, Fos Cavaou, Fos Tonkin, Montoire-de-Bretagne), Greece (Revithoussa), Italy (Toscana, Panigaglia, Adriatic LNG (Rovigo)), Lithuania (Klaipeda), Malta (Delimara), the Netherlands (Gate), Poland (Świnoujście), Portugal (Sines), Spain (Barcelona, Bilbao, Cartagena, El Musel, Huelva, Mugarodos, Sagunto),<sup>14</sup> and the UK (Isle of Grain, South Hook, and Dragon) (Table 1).

Spain has the largest LNG import capacity in the EU – 50.6 mtpa (68.6 bcma), followed by the UK – 35.3 mtpa (52.1 bcma), France – 25.3 mtpa (34.5 bcma), Italy – 10.9 mtpa (14.8 bcma), the Netherlands – 8.8 mtpa (12 bcma), Belgium – 6.6 mtpa (9 bcma), Portugal – 5.6 mtpa (7.6 bcma), Greece – 5.1 mtpa (6.9 bcma), Poland – 3.7 mtpa (5 bcma), Lithuania – 2.9 mtpa (3.9 bcma), Malta – 0.5 mtpa (0.7 bcma).

The majority of EU LNG import terminals are land-based; a few existing (Toscana and Adriatic LNG terminals in Italy, Klaipeda in Lithuania) and under construction (Tenerife and Gran Canaria in Spain) terminals are floating storage and regasification units (FSRUs), whereas a Maltese receiving terminal consists of a floating storage unit (FSU) and onshore regasification facilities.

Several existing import terminals considered expansions before or by 2020, such as Revithoussa to 8.25 bcma and Gate to 16 bcma by 2018, Zeebrugge to 12 bcma by 2019, Fos Cavou to 16.5 bcma by 2020 – but none of these plans have materialised; planned expansion of Isle of Grain to 27.5 by 2020 has been deferred to 2025. Some of these expansions might take place in the future, with the terminals located in north west Europe being more likely candidates. Several other terminals have considered expansions before or by the mid-2020s, such as Panigaglia to 8 bcma and Świnoujście to 7.5 by 2022, several Spanish terminals, including El Musel to 8.8 bcma by 2021 and Mugarodos by 7.2 bcma by 2023, as well as Montoir-de-Bretagne. Some of these expansions (such as Świnoujście) are more likely to take place than others (such as El Musel, which has been mothballed altogether).

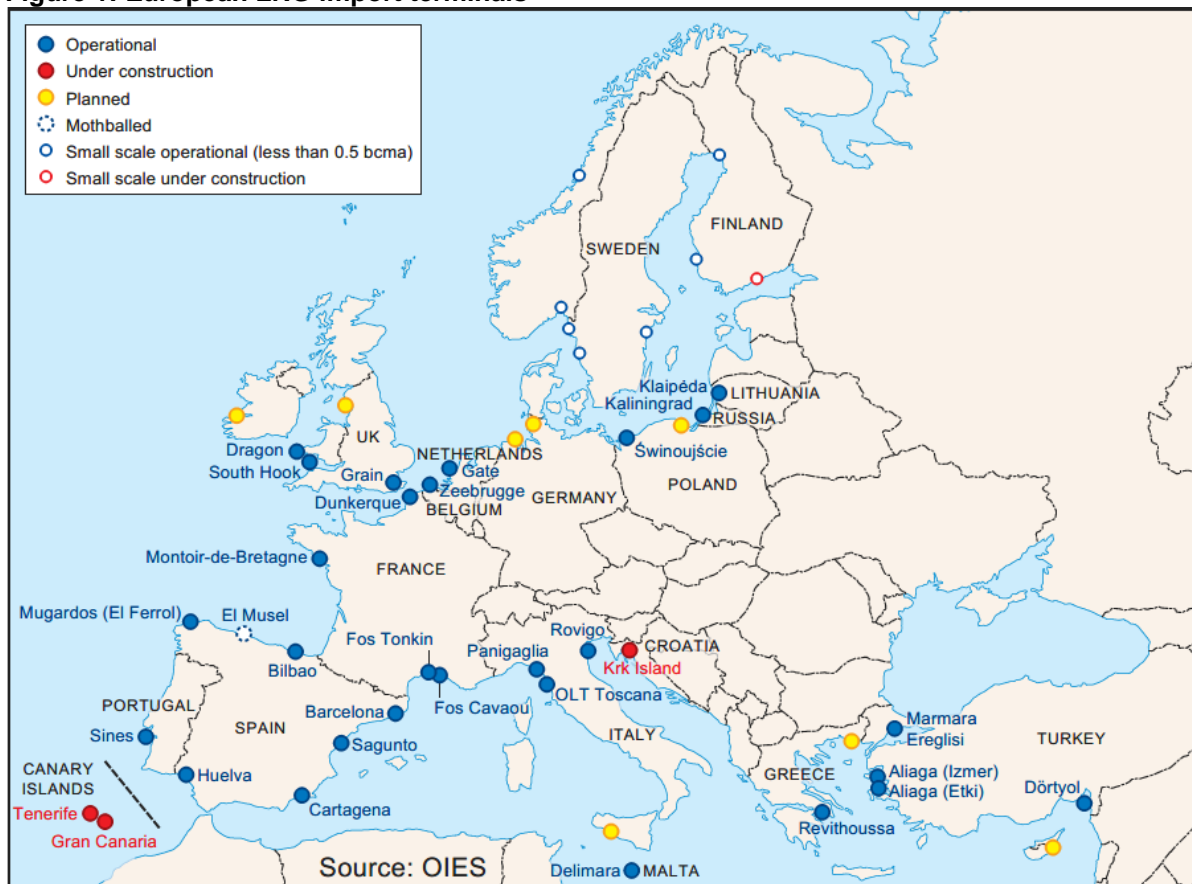
Also a significant number of new terminals are under consideration or planning, such as the Krk terminal in Croatia, the Gdansk FSRU in Poland, the Alexandroupolis FSRU in Greece, and Brunsbuettel and Wilhelmshaven LNG terminals in Germany.

<sup>12</sup> To convert from mtpa to bcma multiply by 1.36, see BP, Approximate conversion factors – statistical review of world energy, p. 2.

<sup>13</sup> GIIGNL Annual Report 2019. This paper focuses on large-scale LNG receiving terminals only. There is a number of small-scale LNG import terminals in Europe, including in Sweden and Norway, which are not analysed in this paper. Terminals with a capacity less than 0.5 bcma are not considered in this paper.

<sup>14</sup> Several additional terminals are under construction in Spain (Tenerife and Gran Canaria).

Figure 1: European LNG import terminals



Source: OIES

Table 1: European LNG import terminals: ownership, operatorship, and capacity

Country	Name	Capacity		Owner	Operator	Regulation	Start of operation
		mtpa	bcma				
Belgium	Zeebrugge	6.6	9	Fluxys LNG	Fluxys LNG	Regulated	1987
France	Dunkerque LNG	9.6	13.1	Dunkerque LNG (60.75% owned by a consortium of gas infrastructure group Fluxys, AXA Investment Managers – Real Assets, and Crédit Agricole Assurances, and 39.25% owned by a consortium of Korean investors led by IPM Group in cooperation with Samsung Asset Management)	Dunkerque LNG	Exempted	2016
	Fos Cavaou	6.1	8.3	Fosmax LNG (Elengy 72.5%, Total 27.5%)	Elengy	Regulated	2010
	Fos Tonkin	2.2	3	Elengy	Elengy	Regulated	1972
	Montoir-de-Bretagne	7.4	10.1	Elengy	Elengy	Regulated	1980
Greece	Revithoussa	5.1	6.9	DESFA		Regulated	2000
Italy	Toscana FSRU (offshore)	2.8	3.8	SNAM 49.07%, First State Investments 48.24%, Golar 2,69%	OLT – offshore LNG Toscana	Regulated	2013
	Panigaglia (La Spezia)	2.5	3.4	GNL Italia (100% SNAM subsidiary)	GNL Italia	Regulated	1971
	Adriatic LNG (Rovigo) (offshore)	5.6	7.6	Adriatic LNG (ExxonMobil 70.7%, Qatar Petroleum 22%, SNAM 7.3%)	Adriatic LNG	Exempted (hybrid access)	2009

						regime – 20% regulated, 80% negotiated TPA)	
Lithuania	Klaipeda (offshore) Hoegh Independence FSRU	2.9	3.9	Owner: Hoegh LNG, Charterer: Klaipedos Nafta (the current leasing agreement expires in 2024, with access to LNG to be maintained either through purchasing the FSRU or continue to lease it <sup>15</sup> )	Hoegh LNG	Regulated	2014
Malta	Delimara (offshore) Armada Mediterrana LNG	0.5	0.7	Owner: BumiArmada, Charterer: Electrogas Malta (GEM 33.34%, Siemens 33.33%, SOCAR 33.33%)	Reganosa		2017
Netherlands	Gate	8.8	12	Gasunie (50%), Vopak (50%)	Gate Terminal	Exempted	2011
Poland	Świnoujście	3.7	5	Polskie LNG (100% Gaz-System)	Polskie LNG	Regulated	2016
Portugal	Sines	5.6	7.6	Ren Atlantico	Ren Atlantico under a public service concession regime	Regulated	2004
Spain	Barcelona	12.6	17.1	Enagas	Enagas	Regulated	1968
	Bilbao	6.5	8.8	Enagas (50%), EVE (50%)	BBG	Regulated	2003
	Cartagena	8.7	11.8	Enagas	Enagas	Regulated	1989
	El Musel (mothballed)	5.1	6.9	Enagas	Enagas	NA	2013 (built)
	Huelva	8.7	11.8	Enagas	Enagas	Regulated	1988
	Mugardos	2.6	3.5	Tpjeiro Group (51%, Xunta Galicia (24%), Sojitz (15%), Sonatrach (10%))	Reganosa	Regulated	2007
	Sagunto	6.4	8.7	Infraestructuras de gas (Enagas and Omal Oil) 50%, Iniciativas de gas (Enagas and Osaka Gas) 50%, with Enagas having a stake of 72.5%	Saggas	Regulated	2006
UK	Dragon	5.6	7.6	Shell 50%, Ancala LNG Ltd 50%. Contracts are in place governing the use of capacity rights (Shell 50%, PETRONAS 50%).	Dragon LNG	Exempted	1994
	Isle of Grain	14.3	19.5	National Grid Contracts are in place with BP/Sonatrach, Centrica, Total, Uniper, Sonatrach, Iberdrola, Engie	Grain LNG	Exempted	2005
	South Hook	15.4 (15.6 on the website)	20.9	Qatar Petroleum (67.5%), ExxonMobil (24.15%), Total (8.35%)	South Hook LNG terminal	Exempted	2009
	Teesside GasPort (offshore) (awaiting recommission)	3	4.1	Trafigura	Excelerate Energy	NA	2007
<b>Total</b>		<b>158.3</b>	<b>215.1</b>				
Turkey	Izmir Aliaga	4.4	6	Egegaz	Egegaz		2006
	Etki (offshore) Hoegh Neptune FSRU	3.7	5	Owner: Hoegh LNG (50%), MOL (48.5%), Tokyo LNG (1.5%)	Hoegh LNG		2016

<sup>15</sup> Poyry (2018).



				Charterer: Total – relet to Kolin/Kalyon for 3 plus years			
	Dortyol (offshore) MOL FSRU Challenger	4.1	5.6	Owner: MOL Charterer: Botas for 3 years	MOL		2018
	Marmara Ereglisi	4.6	6.3	Botas	Botas		1994
Total (with Turkey)		175.1	238				

Source: GIIGNL, Annual report 2019; King and Spalding (2018), LNG World News.

## 1.2 EU LNG import terminals: services and tariffs

### Services

Services offered by LNG import terminals in the EU can be divided into bundled and non-bundled services.

According to the Council of European Energy Regulators (CEER), there is only one type of *bundled service* offered by *all* EU import terminals (regulated and exempted), which constitutes a terminal's three essential activities: 'ship unloading + LNG storage + regasification (send out)'. The majority of EU import terminals assign capacity to different users through the reservation of a certain number of unloading slots.<sup>16</sup> At some terminals, particularly in Spain and Portugal, capacity is allocated on the basis of send-out regasification capacity.<sup>17</sup> At some terminals users are not allowed either to reserve part of send-out capacity or decide on the daily amount of gas to be injected into the (national) transmission network; injection must be either at a fixed rate or as decided by the LNG terminal operator. Where this is the case, users would need to use additional non-bundled services in order to increase flexibility (such as acquisition of additional LNG storage and/or send out capacity).<sup>18</sup> Send out rate may (as at Zeebrugge) or may not (as at Revithoussa) be fixed.

One type of bundled service '*ship unloading + LNG storage + truck loading*' is only offered at *some* terminals, where truck loading is available.

Another type of bundled services '*ship unloading + LNG storage + ship reloading*' is only offered at the Zeebrugge terminal. It includes the LNG being unloaded from a ship, stored and re-loaded (in whole or in part) onto another ship.<sup>19</sup>

Apart from bundled services, the majority of EU LNG terminals also offer *non-bundled services*.<sup>20</sup> These generally include unloading, LNG storage (France, Belgium, Portugal), regasification (Belgium's Zeebrugge, Portugal's Sines), re-loading or loading, transshipment, truck loading, cooling down, virtual liquefaction (natural gas to LNG virtual conversion) (Portugal's Sines), and bunkering (France's Dunkerque). Non-bundled services are offered either as complementary to bundled services, to increase the flexibility of bundled services, or as additional and independent services. Regulated French terminals – Fos Cavaou, Fos Tonkin, Montoir-de-Bretagne – also offer additional non-bundled services such as pooling of intra-monthly capacities, uniform option service, cargo sharing for unloading operations (see Section 3.1). Regulated Italian terminals – Toscana and Panigaglia – offer flexibility, peak shaving, LNG + underground storage, and quality adjustment services. The Greek Revithoussa terminal offers inertisation of LNG ship tanks, provision of liquid nitrogen, and a supply of fresh water.

### Tariffs

The CEER study analysed tariffs applied to the main bundled service of 'offloading + storage + regasification' (the only one offered by all EU terminals). It concluded that tariffs varied significantly between terminals and between countries, both in terms of *structure* and *value*.

<sup>16</sup> An unloading slot is the time window during which an LNG ship is scheduled and allowed to berth, unload the LNG and leave, CEER (2017), p. 21.

<sup>17</sup> Ibid, p. 21.

<sup>18</sup> Ibid, p. 21.

<sup>19</sup> This service is one of the forms of transshipment service, another being a direct ship-to-ship reload between two LNG ships berthed at the same terminal at two different jetties.

<sup>20</sup> CEER (2017), pp. 27-8.



Some terminals have very simple tariff structures having just one tariff term, for instance a fixed component term applied per cargo (Zeebrugge) or a variable term applied to the amount of delivered LNG (Klaipeda).<sup>21</sup> Other terminals have more complex structures with both fixed and variable terms (Świnoujście, Revithoussa), where a fixed term applies to send-out capacity and a variable term to the volume of regasified LNG. French terminal tariffs consist of fixed and variable parts but with a fixed term applied to the number of cargos received (instead of regasification capacity). The study noted that tariffication of non-bundled services also differed significantly between terminals thus making meaningful comparison of tariffs applied at different terminals very difficult.

In terms of the tariff value (the amount of money paid for the service), CEER acknowledged that because different structures were applied at different terminals, terms and coefficients were not comparable. Nonetheless, the study calculated such values for different terminals, based on the application of a tariff for the bundled 'offloading + storage + regasification' service to a 1000 GWh LNG cargo, regasified over 15 days. The resulting tariff varied between €0.81 and €3.87 per MWh.<sup>22</sup> The study also calculated costs resulting from the application of not only the tariff for the bundled service but also the entry tariff from LNG terminals into national transmission networks. The resulting tariff range is between €0.15 and €4.64 per MWh, which is still a very significant difference. The study explained such significant variations by differences in tariff structure and cost allocation between EU member states, differences in the terminals' age, technology, size and economies of scale, the degree of utilisation, and regulatory decisions. One specific reason for such variations between different terminals' tariffs is that the national regulatory authorities (NRAs) in several member states decided that some part of the costs of import terminals would be allowed to be recovered from other tariffs such as transmission tariffs. This would appear to suggest cross-subsidization between tariffs for access to LNG facilities and transmission tariffs which is prohibited under the Third (and previously under the Second) Gas Directive.

## 2. EU regulatory framework for LNG import terminals

All LNG import terminals located in the EU must operate under a regulated regime in line with the requirements established in the EU *acquis* – specifically, the Third Gas Directive and Gas Regulation 715, and previously, the Second Gas Directive (which was repealed from 3 March 2011) – unless exempted.

An exemption regime, under which an exemption from certain provisions of the Third Gas Directive could be sought, including in respect of LNG import terminals, is governed by Art. 36 of the Third Gas Directive. Prior to the Third Gas Directive, the exemption regime was governed by Art. 22 of the Second Gas Directive, under which exemptions from some of the Second Directive's provisions could be sought.<sup>23</sup>

The majority of EU LNG import terminals operate under a regulated regime: Zeebrugge in Belgium, Fos Cavaou, Fos Tonkin, and Montoir-de-Bretagne in France,<sup>24</sup> Revithoussa in Greece, Panigaglia and Toscana in Italy, Klaipeda in Lithuania, Delimara in Malta, Świnoujście in Poland, Sines in Portugal, as well as all (operational) terminals in Spain. Only six (out of 25) LNG import terminals are exempted – Isle of Grain, South Hook, and Dragon in the UK, Gate in the Netherlands, Adriatic LNG (Rovigo) in Italy,<sup>25</sup> Dunkerque in France. Although the number of exempted terminals constitutes a minority, the exempted *capacity* constitutes a significant proportion (37%) of total send-out capacity; non-exempted capacity constitutes 62%.<sup>26</sup>

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<sup>21</sup> Ibid, p. 32.

<sup>22</sup> The Lithuanian terminal appeared to be the lowest, and the Italian and Polish terminals highest. It is worth noting though that the tariff applied to Italian terminals includes the allocation of capacity at the entry point into the national transmission network (in addition to payment for offloading, storage and regasification) thus making it artificially high, *ibid*, p. 36.

<sup>23</sup> The exemption regime is explained and analysed in Section 4.1.

<sup>24</sup> Montoir-de-Bretagne terminal has been 'allowed to market transshipment services in a non-regulated manner', provided this 'does not impact the regulated activities' and is conditional on implementation of several conditions, including the establishment of a dedicated subsidiary to carry out transshipment services and allocation of all additional costs resulting from transshipment business to this subsidiary, CEER (2017), p. 17.

<sup>25</sup> Adriatic LNG terminal is only exempted in respect of 80% of its capacity.

<sup>26</sup> The remaining 1% of capacity is off-grid. CEER (2017), p. 17.





As the majority of exempted EU terminals were built prior to the Third Gas Directive's entry into force, they have been exempted under the provisions of the Second Gas Directive rather than from the provisions of the Third Gas Directive. The only terminal where an exemption was granted under the Third Gas Directive was the fourth phase of the Isle of Grain (Grain 4) terminal in the UK (Section 4.2).

This section outlines and analyses the regulated framework applicable to EU LNG import terminals, as provided by the Third Gas Directive and Gas Regulation 715, and prior to their entry into force, by the Second Gas Directive and Gas Regulation 1775.

## 2.1 Third Gas Directive and Gas Regulation 715

The Third Gas Directive outlines several specific provisions for LNG facilities, which are defined as the terminals used for 'liquefaction of natural gas and the importation, offloading, and regasification of LNG' and include 'ancillary services and temporary storage necessary for the regasification process and subsequent delivery to the transmission system' (Art. 2.11). Notably, regulatory treatment of LNG terminals differs from that of storage facilities and the Directive's definition of an LNG facility does not include 'any part of LNG terminals used for storage'.<sup>27</sup>

The Directive requires that EU member states designate or require natural gas undertakings which own LNG facilities, including LNG import terminals, to designate for a period of time determined by member states, 'having regard to considerations of efficiency and economic balance', one or more LNG system operators' (Art. 12). This means that if a member state has several import terminals located on its territory, one operator could operate all of them or there could be several operators operating different LNG terminals. This also suggests that it is impossible for any party – either from the EU or a third country – to operate an LNG import terminal until and unless a member state designates it as an operator or requires a vertically integrated gas undertaking which owns the terminal to do so. There are no clear criteria on the basis of which an EU member state might make such designation or a request for designation apart from broad considerations of efficiency and economic balance.

Once designated as such, each LNG system operator must 'operate, maintain and develop under economic conditions secure, reliable and efficient [...] LNG facilities to secure an open market, with due regard to the environment, ensure adequate means to meet service obligations' (Art. 13). It also must 'refrain from discriminating between system users or classes of system users, particularly in favour of its related undertakings'. Furthermore, it must 'provide any other [...] LNG system operator ... sufficient information to ensure that the transport and storage of natural gas may take place in a manner compatible with the secure and efficient operation of the interconnected system'. Notably, the responsibilities of an LNG system operator under the Third Gas Directive have remained largely unchanged compared to those under the Second Gas Directive (under which there were no references to securing an open market and ensuring adequate means to meet service obligations).

Notably, the Third Gas Directive does not require unbundling of LNG system operators, which means that the LNG function can remain part of vertically integrated undertakings alongside production or supply of natural gas (Art. 2.20) and only keeping separate accounts for each of the transmission, distribution, storage, and LNG activities is required (accounting unbundling, Art. 31). This is in contrast with the Directive's requirement of unbundling of transmission system operators (ownership unbundling, independent transmission operator (ITO), independent system operator (ISO), Art. 9, 14, 17-23) and storage operators (legal unbundling, Art. 15).

The Directive obliged member states to ensure 'the implementation of a system of TPA' to LNG facilities, including LNG import terminals, 'based on published tariffs, applicable to all eligible customers, including supply undertakings, and applied objectively and without discrimination between system users' (Art. 32.1). These tariffs, or the methodologies underlying their calculation, must be approved prior to their entry into force by an NRA, and the tariffs – and their methodologies (where only methodologies are approved) – must be published prior to their entry into force.

Under Art. 41 of the Directive the NRA is responsible for 'fixing or approving sufficiently in advance of their entry into force at least the methodologies used to calculate or establish the terms and conditions

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<sup>27</sup> This paper is only concerned with regulatory treatment of LNG import terminals as such and therefore does not analyse regulatory treatment of any part of LNG terminals used for storage, other than temporary storage necessary for the regasification process and subsequent delivery to the transmission system.



for connection and access to national networks including: transmission and distribution tariffs, and terms, conditions and tariffs for access to LNG facilities.’ (Art. 41.6(a)).

As for the level of tariffs, the Directive states that those tariffs or methodologies must allow ‘the necessary investments’ in LNG facilities to be carried out ‘in a manner allowing those investments to ensure’ their viability (Art. 41.6(a)). Furthermore, an NRA has ‘the authority to require’ LNG system operators ‘if necessary, to modify the terms and conditions, including tariffs and methodologies [...] to ensure that they are proportionate and applied in a non-discriminatory manner’ (Art. 41.10).

The Third Gas Directive stipulated that, should any party have a complaint against an LNG system operator ‘in relation to that operator’s obligations’ under the Directive, it ‘may refer’ its complaint to the regulatory authority, which ‘acting as a dispute settlement authority’, is obliged to ‘issue a decision within a period of two months’ (Art. 41.11).

The Directive contains several provisions governing the connection of LNG import terminals to the transmission system. In particular, the transmission system operator (TSO) is obliged to ‘establish and publish transparent and efficient procedure and tariffs for non-discriminatory connection’ of LNG import terminals to the transmission system, and that such procedure must be subject to approval by the regulatory authority (Art. 23.2). Importantly, the TSO is not entitled to refuse the connection of a (new) LNG regasification facility on the grounds of ‘possible future limitations to available network capacities or additional costs linked with necessary capacity increase’. Moreover, the TSO is obliged to ensure ‘sufficient entry and exit capacity for the new connection’ (Art. 23.3).

In addition to the Third Gas Directive, which contains *inter alia* general provisions on regulated TPA to LNG import terminals, Gas Regulation 715 contains more specific provisions in respect of TPA, capacity allocation mechanisms, congestion management procedures, trading of capacity rights, and transparency requirements. Gas Regulation 715 obliges LNG system operators to ‘offer services on a non-discriminatory basis to all network users that accommodate market demand’ (Art. 15). In particular, where an LNG or storage system operator ‘offers the same service to different customers’, it is obliged to do so ‘under equivalent contractual terms and conditions’ (Art. 15.1). It further obliges the LNG system operator to offer services that are ‘compatible with the use of the interconnected gas transport systems and facilitate access through cooperation with the transmission system operator’.<sup>28</sup> The LNG system operator is also obliged to make relevant information public, in particular ‘data on the use and availability of services in a time-frame compatible with the LNG [...] facility users’ reasonable commercial needs’, with such publication also to be monitored by the NRA.

As far as tariffs are concerned, Gas Regulation 715 specifies that LNG facility contracts must not ‘result in arbitrarily higher tariffs’ when they are signed ‘outside a natural gas year with non-standard start dates’ or ‘with a shorter duration than a standard LNG facility contract on an annual basis’ (Art. 15.3).

Regulation 715 allows for TPA being subject to ‘appropriate guarantees’ from network users with respect to their creditworthiness. Such guarantees are not considered to be ‘undue market-entry barriers’ and must be ‘non-discriminatory, transparent and proportionate’ (Art. 15.4). In line with Regulation 715, ‘contractual limits on the required minimum size of LNG facility capacity shall be justified on the basis of technical constraints’.

Importantly, the maximum LNG facility capacity must be made available to the market, taking into account system integrity and operation (Art. 17.1). Regulation 715 obliges the LNG system operator to implement and publish non-discriminatory and transparent capacity allocation mechanisms, such that they would

- ‘provide appropriate economic signals for the efficient and maximum use of capacity and facilitate investment in new infrastructure’,
- ‘be compatible with the market mechanism including spot markets and trading hubs, while being flexible and capable of adapting to evolving market circumstances’ and
- ‘be compatible with the connected network access systems’ (Art. 17.2).

<sup>28</sup> Of the member state where the LNG facility is located.



This suggests that the LNG system operator has a significant degree of discretion in designing a capacity allocation mechanism, with any mechanism complying with the aforementioned requirements being acceptable.

Regulation 715 further requires that any LNG facility contract must 'include measures to prevent capacity hoarding, by taking into account the following principles, which shall apply in cases of contractual congestion':

- the system operator must offer unused LNG facility capacity on the primary market 'without delay' and
- LNG facility users wishing to re-sell their contracted capacity on the secondary market must be entitled to do so (Art. 17.3).

Regulation 715 introduced a number of transparency requirements obliging the LNG system operator to make public 'detailed information regarding the services it offers and the relevant conditions applied' (Art. 19). In particular, the LNG system operator is obliged to make public information on contracted and available capacities 'on a numerical basis on regular and rolling basis and in a user-friendly standardised manner' and disclose the information 'in a meaningful, quantifiably clear and easily accessible way and on a non-discriminatory basis'. Notably, the requirement to make public the amount of gas in each LNG facility, inflows and outflows, and the available capacities, applies not only to regulated LNG terminals but also to those terminals that are exempted from TPA (Section 4), with this information also to be communicated to the TSO, and made public on an aggregated level and updated at least daily (Art. 19.4).

In addition to the Third Gas Directive, Regulation 715 further specifies that the LNG system operators or relevant regulatory authorities are obliged to make public 'sufficiently detailed information on tariff derivation, the methodologies and the structure of tariffs' for terminals under regulated TPA (but not for exempted terminals) (Art. 19.5). Furthermore, Regulation 715 obliges the LNG system operators to keep all the information, required under its transparency requirements, at the disposal of the national authorities (including the NRAs), the national competition authority and the EC for five years (Art. 20).

The Regulation also obliges LNG system operators to 'take reasonable steps to allow capacity rights to be freely tradable' as well as to 'facilitate such trade in a transparent and non-discriminatory manner' (Art. 22). Each such operator is obliged to 'develop harmonised [...] LNG facility [...] contracts and procedures on the primary market to facilitate secondary trade of capacity' as well as to 'recognise the transfer of primary capacity rights when notified by system users'. Such harmonised LNG contracts and procedures must be notified to the regulatory authorities.

Several EU Network Codes (NCs) have been adopted in furtherance of Art. 7 of Regulation 715 (for example the CAM NC<sup>29</sup> and the Tariffs NC<sup>30</sup>). Some of their provisions apply to entry points from LNG import terminals into the national transmission networks. For example, the Tariffs NC applies to 'all entry points and all exit points of gas transmission networks' (Art. 2.1), thus suggesting that it also applies to entry points from LNG import terminals, including its provisions on reference price methodologies. Reflecting the EU's view of LNG as a provider of additional security of supply and resilience – as suggested by the EU Energy Security Strategy and the LNG and Storage Strategy (Section 3.2) – the Tariffs NC stipulates that at entry points from LNG terminals into the national transmission system, 'a discount may be applied to the respective capacity-based transmission tariff for the purposes of increasing security of supply' (Art. 9, Recital 5).<sup>31</sup> This suggests that, other things being equal, an LNG supplier could have a price advantage compared to a pipeline gas supplier due to a potentially lower tariff applied at an entry point from LNG terminals. Notably, the Tariffs NC neither sets an upper limit on such a discount nor specific circumstances under which it could be applied, thus leaving a decision to the NRA.

The CAM NC does not apply to entry points from LNG terminals to the transmission system (just as it does not apply to entry points from production facilities), and only applies to interconnection points (Art.

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<sup>29</sup> CAM Network Code.

<sup>30</sup> Tariffs Network Code.

<sup>31</sup> Identical provision exists in respect of 'entry points from and exit points to infrastructure developed with the purpose of ending the isolation of member states in respect of their transmission systems'.



2.1). Correspondingly the Tariffs NC's other provisions, related to capacity auctions (such as provisions on reserve prices, pricing of bundled capacity, clearing and payable price) as well as provisions on incremental capacity, do not apply to entry points from LNG import terminals.<sup>32</sup> The CAM NC's only provision relevant for LNG facilities does not allow TSOs to take any action 'detrimental to the offer of capacity at other relevant points [...] such as those [...] LNG terminals' as part of their application of a joint method of capacity optimisation.

## 2.2 Second Gas Directive and Guidelines of Good Practice for LNG

The Second Gas Directive, which entered into force on 4 August 2003 (subsequently repealed by the Third Gas Directive on 3 March 2011), contained fewer and significantly less detailed provisions in respect of LNG facilities, than those stipulated by the Third Gas Directive. Nonetheless, mandatory regulated TPA to LNG import terminals as well as an obligation to publish tariffs for access which (or methodologies of which) must be approved by the NRAs, were already present in the Second Gas Directive, and it was those requirements from which several LNG terminals sought and received exemptions (Section 4.1).

Just like the Third Gas Directive, the Second Gas Directive required member states to designate or require natural gas undertakings which own LNG facilities to designate 'for a period of time to be determined by member states, having regard to considerations of efficiency and economic balance' one or more LNG system operators (Art. 7). Member states were also obliged to 'take the measures necessary to ensure' that LNG system operators '(a) operate, maintain and develop under economic conditions secure, reliable and efficient transmission, storage and/or LNG facilities with due regard to the environment; (b) refrain from discriminating between system users or classes of system users, particularly in favour of their related undertakings; (c) provide any other ... LNG system operator ... sufficient information to ensure that the transport and storage of natural gas may take place in a manner compatible with the secure and efficient operation of the interconnected system' (Art. 8). Thus the requirement to designate an LNG system operator(s) and its tasks are almost identical in the Second and the Third Gas Directives.

Likewise, the Second Gas Directive's requirements in respect of TPA are very similar to those under the Third Gas Directive. It required member states to 'ensure the implementation of a system of third party access to [...] LNG facilities based on published tariffs, applicable to all eligible customers, including supply undertakings, and applied objectively and without discrimination between system users'. It further required member states to 'ensure that these tariffs, or the methodologies underlying their calculation shall be approved prior to their entry into force by a regulatory authority' and that 'these tariffs – and the methodologies, where only methodologies are approved – are published prior to their entry into force' (Art. 18.1).

Just like the Third Gas Directive, the Second Gas Directive also stipulated an exemption regime, under which an exemption from its provisions on TPA and tariffs could be sought in respect of, *inter alia*, LNG facilities (Art. 22). (The exemption regime under Art. 22 of the Second Gas Directive is analysed alongside the exemption regime under Art. 36 of the Third Gas Directive in Section 4.1.)

The Second Gas Directive made the NRA responsible for 'fixing or approving prior to their entry into force, at least the methodologies used to calculate or establish the terms and conditions for: connection and access to national networks, including transmission and distribution tariffs' (Art. 25.2(a)).<sup>33</sup>

Although the Second Gas Directive had mandated the implementation of regulated TPA for LNG terminals based on published tariffs whereby at least the tariff methodologies are approved by the NRA prior to their entry into force, it did not establish any *specific* provisions in respect of tariffs, TPA services and capacity allocation and congestion management. Gas Regulation 1775 (Gas Regulation 715's predecessor), which entered into force on 23 November 2005 and applied from 1 July 2006, also did not contain any provisions – general or specific – on these issues.

<sup>32</sup> These provisions only apply to interconnection points.

<sup>33</sup> The Directive also stated that member states 'may provide that the regulatory authorities shall submit, for formal decision, to the relevant body in the member state' such tariffs or at least their methodologies (and their modifications), which would have the power to either approve or reject the regulatory authority's draft decision.



It was not until May 2008 that the European Regulators Group for Electricity and Gas (EREG)<sup>34</sup> developed and published *the Guidelines for Good Third Party Access Practice for LNG System Operators (GGPLNG)*, which contain specific provisions on tariffs for access to LNG terminals, TPA services, capacity allocation and congestion management, transparency requirements, and trading of capacity rights (overviewed and analysed in Annex 1). Although the GGPLNG were not legally binding, they were envisaged to serve as a guidance as well as a contribution towards the future amendment of Gas Regulation 1775. When Gas Regulation 715 entered into force on 3 September 2009, repealing Gas Regulation 1775 from 3 March 2011, it included some GGPLNG provisions (although these are less strict and less detailed than those envisaged by GGPLNG). These provisions include, *inter alia*, an obligation on the LNG system operators to develop ‘non-discriminatory, transparent, market-based’ capacity allocation mechanisms for allocation of primary and secondary capacity and congestion management procedures, an obligation to offer unused primary capacity to the market as firm capacity, and to facilitate secondary capacity trading.

## Conclusions

The Third Gas Directive mandates regulated TPA to LNG import terminals based on published tariffs whereas tariffs (or their methodologies) must be approved by the NRA prior to their entry into force (Art. 32). The Second Gas Directive had also mandated regulated TPA to LNG import terminals with tariffs (or their methodologies) approved by the NRA prior to their entry into force. The TPA provisions of the Third Gas Directive are nearly identical to those of the Second Gas Directive (Art. 18). However, the Third Gas Directive’s provisions on tariffs for access to LNG terminals are significantly more specific than those of the Second Gas Directive. Additionally, Gas Regulation 715 introduced several specific provisions on TPA (Art. 15), principles of capacity allocation and congestion management (Art. 17), transparency requirements (Art. 19) and trading of capacity rights (Art. 22). In contrast, its predecessor – Gas Regulation 1775 – included no provisions on LNG at all.

As far as connection of LNG terminals to the national transmission network, the Third Gas Directive obliged the TSO to establish and publish transparent and efficient procedures and tariffs for non-discriminatory connection, with such procedures to be approved by the regulatory authority. Also, it prohibited the TSO from refusing the connection of a new terminal on the grounds of the additional costs linked with a necessary capacity increase, or possible future limitations to capacities.

GGPLNG, which addressed the shortcomings of the Second Gas Directive provisions, served as an important contributor to the Third Gas Directive and Gas Regulation 715, by recommending many important provisions on capacity allocation and tariffs which became part of them. Overall, regulatory treatment awarded by the Third Gas Directive and Gas Regulation 715 to LNG import terminals is more strict and specific than that awarded by the Second Gas Directive, under which the majority of exemptions for LNG terminals were granted.

## 3. Regulated LNG import terminals in the EU

### 3.1 Regulatory treatment of LNG import terminals: an overview

The majority of EU LNG import terminals have operated on a regulated basis, initially under provisions stipulated by the Second Gas Directive and subsequently under the Third Gas Directive and Gas Regulation 715.<sup>35</sup> The Third Gas Directive has since been amended, with the amendment entering into force on 23 May 2019.

This section provides an overview of regulatory treatment of LNG import terminals in different EU member states, specifically in respect of capacity allocation rules and tariffs for access. It focuses on fully regulated terminals whereas regulatory treatment of exempted and partly regulated terminals is analysed in detail in Section 4. This overview suggests that regulated terminals, all of which operate under a single EU framework (provided by the Third Gas Directive and Gas Regulation 715), are

<sup>34</sup> EREG was a predecessor of the Agency for Cooperation of European Regulators (ACER), which was established under Regulation 713/2009. EREG stopped operating from 1 July 2011 when ACER became fully operational.

<sup>35</sup> In July 2009, the EC adopted the Third Gas Directive and Gas Regulation 715, repealing the Second Gas Directive (from 3 March 2011) and Gas Regulation 1775 (from 3 March 2011 to be implemented from 3 September 2009) respectively.



characterised by significant differences both in respect of capacity allocation rules and tariffs. Similar findings were made by the United Nations Economic Commission for Europe (UNECE) in its detailed study 'Current status and prospects for liquefied natural gas (LNG) in the UNECE region',<sup>36</sup> published in 2013, and by the Council of European Energy Regulators (CEER) in its detailed study 'Removing LNG Barriers on Gas Markets',<sup>37</sup> published in 2017.

### 3.1.1 Belgian regulated LNG import terminal: Zeebrugge

The Zeebrugge LNG terminal has a capacity of 9 bcma (6.6 mtpa) and is operated by Fluxys LNG. The terminal's basic service is provision of a 'slot' – which shippers can subscribe for – which includes a berthing right, basic storage and basic send out capacity. Subscription for primary capacity is made on a long-term basis – with no limit on duration of contract – via either a subscription window (in respect of capacities for which an investment decision has already been made) or an open season (OS) (in respect of capacities for which an investment decision has not been made). Should long-term capacity still be available once these procedures have been completed, it is allocated on the 'first committed, first served'<sup>38</sup> (FCFS) basis. Where a subscription window is used, the terminal operator is obliged to establish a detailed procedure, setting out the service's terms and conditions, and communicate it to the Belgian regulatory authority (Commission de Régulation de l'Electricité et du Gaz, CREG). A participant interested in booking capacity is required to submit a binding capacity request before the end of the subscription window. If the total requested capacity is higher than the capacity offered, priority is given to requests of longer duration. Capacity of the same duration is allocated on a pro rata basis. Where the OS is used, the terminal operator is obliged to provide an offer description, setting out the OS terms and conditions. A participant interested in booking capacity is required to submit a binding request before the end of the OS. If all the offered services cannot be allocated, the operator has the right not to allocate any capacity during the OS. (Where an OS is used no harmonised booking procedures exist and *ad hoc* deadlines and content requests are established when the OS is launched). Slots that have not been allocated on a long-term basis or else have been identified as available, are allocated on a short-term basis (e.g. the service of one slot or ship loading). Priority is given to shippers, which have notified the operator that they cannot or might not be able to use their subscribed slots during the next contractual year, followed by shippers which have make-up capacities, and followed by any actual or potential shipper on the FCFS basis. Depending on the slots scheduled via long-term contracts, additional slots can be created and added to the schedule two months in advance. All LNG services acquired on the primary market (and not used by users with long term contracts) can be traded on the secondary market either directly (over the counter between the terminal users, with the terminal operator being notified by a form signed by both users), or indirectly (by means of the secondary market platform, where the user requests the operator to post a notice that the service is available for sale). Capacity is allocated on the FCFS basis and is charged at the regulated tariff. Release of unused capacity by long term capacity holders and trading capacity on a secondary market is an obligation imposed by CREG.

The terminal's tariffs are regulated and are applied to LNG ship services (i.e. provision of a slot, gassing up and cooling down services, transshipment berthing right, small scale berthing right, additional berthing right, ship loading service), storage, regasification (send out), and truck loading services. In 2012 CREG approved a set of tariffs for the period from January 2013 to 31 March 2027 which has been subsequently updated to account for new services offered (e.g. transshipment in 2014 and small-scale berthing in 2018) and to change tariffs applied to a slot in 2019.

Since the start of operation, the terminal's primary capacity was fully contracted by Distrigaz, whereas all LNG was supplied by Algeria's Sonatrach under a 20-year contract (1987-2007). With the arrival of two more users in 2004 the terminal's capacity has been fully allocated to three users – Distrigaz with 2.75 bcma, Qatar Petroleum/Qatar Terminal Ltd with 4.5 bcma, and Tractebel with 1.8 bcma for the 2007-2027 period. In September 2019, Qatar Petroleum booked all primary capacity at the terminal from the date of expiry of the existing LTCs up to 2044, which had been offered during a subscription window which took place from 30 April to 24 May 2019.<sup>39</sup> It is understood that capacity requests were

<sup>36</sup> UNECE (2013).

<sup>37</sup> CEER (2017).

<sup>38</sup> Also known as 'first come, first served'.

<sup>39</sup> CREG, 'Zeebrugge LNG terminal set to secure new long-term commitments until 2044', press release, 1 July 2019.



prioritised by duration. As the terminal's primary capacity is fully booked until 2044, only secondary capacity is available on the market.

### 3.1.2 French regulated LNG import terminals: Fos Cavaou, Fos Tonkin and Montoire-de-Bretagne

There are four LNG import terminals in France, of which three – Fos Cavaou, Fos Tonkin, and Montoir-de-Bretagne – are regulated.<sup>40</sup> Fos Tonkin has capacity of 3 bcma (2.2 mtpa) and started operations in 1972; Montoir-de-Bretagne has capacity of 10.1 bcma (7.4 mtpa) and started operations in 1980; both are operated by Elengy. Fos Cavaou terminal has capacity of 8.3 bcma (6.1 mtpa) and started operations in 2010; it is operated by Fosmax LNG. All three terminals do not have specific subscription windows within which capacity can be booked; instead users can request capacity at any time as part of a continuous process.<sup>41</sup> Although primary capacity is generally allocated on the FCFS basis at all three terminals, recent allocations at Montoir-de-Bretagne and Fos Tonkin were adapted to maximize the amount of booked capacity, with priority given to bookings of longer duration (see below). The terminals' basic service is a continuous send-out service, accessible to any shipper from the first unloading (which also includes all of the flexible services offered at the terminal). Send-out is carried out as regularly as possible, in line with the LNG volumes unloaded and reloaded monthly as well as the storage level. The terminals also provide a flat send-out (uniform) option, which enables a send-out in a constant range over a 20 to 40 days period. This option is available (on the FCFS basis) to any shipper, which has a basic service subscription. It is not available to a spot shipper during the month of unloading. The following rule applies at all three terminals under a uniform option: a shipper is allowed to subscribe for not more than one cargo per month and in amount not exceeding annual quantity of 12 TWh (~1 bcm), whereas for any given month the total quantities unloaded must not exceed 20% of the terminal's capacity. A spot service, based on vacant slots in the monthly schedule at the booking date, is provided at all three terminals. It is available for the unloading bookings for a given month after the 20<sup>th</sup> day of the preceding month. The shipper's possession of regasification capacity, regardless of its quantity and duration, confers the right and obligation to book the corresponding entry capacity in the transmission network.

#### **Fos Cavaou terminal**

Access to the Fos Cavaou terminal is governed by the contract for access.<sup>42</sup> Capacity can be booked under long-term contracts (in excess of 36 months) or under short-term contracts (contracts concluded for a period equal to or less than 36 months and 'spot' contracts for a single cargo). Any capacity feasibility and/or reservation request can be sent to the terminal's operator at any time, with the latter being obliged to respond 'as soon as possible', with capacity allocated on the FCFS basis. The terminal offers 'smart' and spot regasification services, whereby a shipper who has subscribed for 'smart' service, can also have a uniform send out service and pooling service (allowing it to use part of its booking by using the capacity still available at Montoir-de-Bretagne and Fos Tonkin after the 20<sup>th</sup> day of the month preceding the month of unloading). Shippers not using their booked capacity are obliged to release it every month for subsequent publication and marketing by the operator. The contract for access enables the shipper to request the operator to sell the capacities it does not intend to use to another shipper or a third party. These capacities are sold on the FCFS basis and at a regulated tariff. A shipper also can trade its contracted capacity on the *secondary market* by selling all or part to a third party. It can also sell other services (such as dedicated storage). The operator provides a shipper with real-time access to the list of companies interested in capacity assignments and maintains the bulletin board, where a shipper can post an offer for assigning or buying capacity at the terminal.

Prior to 2017, 10% of the terminal's capacity was reserved for short-term reservations, but this requirement has since been lifted, with the operator being allowed to offer this capacity on long-term basis.<sup>43</sup> Thus 10 TWh (~0.8 bcm) of uncontracted primary capacity is being offered to the market every year until 2030 on the FCFS basis. As none of ~0.8 bcma offered by Fosmax LNG during a sale process taking place between 30 January 2019 and 27 February 2019 has been allocated, Fosmax LNG has

<sup>40</sup> The fourth French terminal – Dunkerque LNG – is exempted and analysed in Section 4.5.

<sup>41</sup> UNECE (2013).

<sup>42</sup> 'Fosmax LNG contract', Contract for access to the Fos Cavaou LNG terminal.

<sup>43</sup> CRE (2017).



made this volume available to the market on the FCFS basis for the period from 1 April 2017 to 31 March 2030.<sup>44</sup>

### ***Fos Tonkin and Montoir-de-Bretagne terminals***

Access to both terminals is governed by the framework contract, which can be shorter or longer than one year.<sup>45</sup> The terminal operator publishes monthly (scheduled capacity, available firm capacity, number of scheduled deliveries) and long-term annual capacities (total firm capacity, available firm capacity) as well as annual programs. At both terminals, capacity can be booked under infra-annual (short-term) contract (concluded for a period less than 12 months) and annual or supra-annual (long-term) contract (concluded for a period of 12 months or longer).<sup>46</sup> Capacity reservation request can be made on any day.<sup>47</sup> The operator is obliged to respond 'reasonably quickly, generally within one week' and capacity is allocated on the FCFS basis. Terminal users are allowed to transfer all or some of their rights and obligations to a third party under the conditions stipulated in the framework contract. The operator publishes a list of companies interested in capacity where current shippers, the companies active on the small-scale LNG market, and potential shippers interested in regasification capacity are listed. The operator also maintains a bulletin board, which enables current and future users to post a transfer/acquisition capacity offer, with the operator connecting the interested parties. There is no requirement to reserve any capacity for short-term bookings at either Montoir-de-Bretagne or Fos Tonkin terminals. However, the framework contract stipulates a capacity release mechanism, whereby a shipper may release its booked capacity at any time between the publication of the annual schedule and the 19<sup>th</sup> day of a given preceding month, with these capacities to be published by the operator. Should these capacities be subscribed by another shipper prior to the 20<sup>th</sup> day of preceding month, this will be done in line with the assignment procedure with the operator's consent. The contract also stipulates a short-term use-it-or-lose it (UIOLI) procedure, whereby the share of booked capacity not scheduled by the shipper in its monthly schedule request, is to be published as capacity available. It also stipulates a long-term UIOLI procedure, whereby if no firm capacity is available in the monthly schedule, any unloading cancelled without notification (except force majeure) is reported to the French regulatory authority (Commission de Régulation de l'Energie, CRE), which may demand the restitution of the booking by the shipper.

From July to November 2019 the operator (Elengy) has offered 3.5 bcma at the Montoir-de-Bretagne terminal in an OS process, consisting of non-binding and binding phases, for a period from 1 October 2021 to 31 December 2035.<sup>48</sup> The FCFS rule – generally applied for allocation of primary capacity at the French terminals – was suspended for the binding phase (mid-October to mid-November 2019) so that offers were deemed to have been received simultaneously for the purpose of transparent and non-discriminatory treatment.<sup>49</sup> Elengy announced in December 2019 that the OS process has resulted in the terminal's primary capacity being fully booked for 2023-35, with 'only few capacities' still available in 2021 and 2022; it has also stated that it is 'willing to study the different development options' for offering capacity beyond 2035.<sup>50</sup>

Elengy has also been exploring a possibility of selling a reduced volume of capacity at the Fos Tonkin terminal, where long-term capacity bookings will expire by the end of 2020, with a view of extending its life and avoid closure in December 2020.<sup>51</sup> In February 2019 Elengy announced an OS to sell the terminal's capacity for 2021-2030, subject to a successful economic test; the allocation rules were

<sup>44</sup> Fosmax LNG, 'End of the sale period of the access capacities at the Fos Cavaou LNG terminal', press release, 8 March 2017.

<sup>45</sup> 'Elengy Framework Contract', Elengy framework contract for access to Montoir-de-Bretagne and Fos Tonkin LNG terminals

<sup>46</sup> UNECE (2013).

<sup>47</sup> Provided that for the contracts of duration less than one year the date of first unloading is before the end of the year following the year in which request has been accepted.

<sup>48</sup> 'France's Montoir LNG terminal launches open subscription for 2021-2035', *Platts*, July 2019. Capacity for similar periods is offered by Gate and Grain LNG terminals.

<sup>49</sup> CRE (2019b).

<sup>50</sup> Elengy, 'Closing of OSP Montoir-de-Bretagne LNG terminal fully booked from 2023 to 2035', press release, 3 December 2019.

<sup>51</sup> CRE (2017), CRE (2018).





similar to those at Montoir and aimed at maximisation of booked capacities.<sup>52</sup> The allocation process is understood to have been successful.<sup>53</sup>

Tariffs are regulated by CRE at all three terminals, with tariff structure being the same, whereas tariff rates differ between terminals. Tariffs are applied to regasification service, flat send-out (uniform) option, reloading service, pooling services, monthly dedicated storage, small scale LNG unloading and reloading service. The tariff for the uniform option is added to the price of subscribing for the basic service. The price payable for regasification service is proportional to the quantity of unloaded gas and to the number of berthing operations, and is calculated by using a tariff rate for the number of berthings (which applies to each cargo unloaded) and a tariff rate for unloaded quantity (which applies to the quantities of LNG unloaded). Price payable for sending out a cargo, following its regasification, to the gas transmission system over a 20-40 day period is calculated proportional to the quantity of unloaded gas and is calculated by using a flat send-out tariff rate (which applies to quantity of LNG unloaded). Price payable for a ship reloading service is proportional to the number of berthing operations, number of loading operations, and quantity reloaded. A *ship or pay provision* applies at all three terminals, whereby shippers have an obligation to pay the tariffs applied to 100% of the quantities and of the number of unloading and reloading operations booked. CRE approved the tariff regulation framework in January 2017, based on the allowed revenue and the contracted capacity assumptions for 2017-20. It reduced the tariffs by ~19% for Fos Tonkin and Fos Cavaou, and by ~7% for Montoir compared to the previous tariff period. In November 2018 CRE revised the tariffs for 1 April 2019 – 31 March 2021, with average tariff being reduced by ~3.5% for Fos Cavaou; ~5% for Fos Tonkin, and ~4% for Montoir.

### 3.1.3 Greek regulated LNG import terminal: Revithoussa

Greece has one LNG import terminal – Revithoussa – which has a capacity of 6.9 bcma (5.1 mtpa) and is operated by DESFA.<sup>54</sup> Access to the terminal is governed by the Greek network code for the regulation of the national natural gas system.<sup>55</sup> The code mandates provision of the basic LNG service, which includes unloading, storage and regasification of LNG and the subsequent injection into the transmission system.<sup>56</sup>

To be able to use the terminal, a prospective user must submit a terminal use application to, and conclude an LNG agreement with, the terminal's operator. The user has a right to submit such application only if it has booked transmission capacity at the LNG entry point (that is the entry point where gas enters the national transmission system) or else serves other users which have booked such capacity. The application must state the requested amount of regasification capacity and the unloading plan for each month (unless the user participated in the annual planning procedure). (Users must send requests to the operator at least 45 days before the beginning of the month in which its first unloading is planned.) Applications are evaluated by the operator within a 5-day period and are granted on the FCFS basis. Minimum duration of contracts is one month (contracts can only be concluded for a whole number of months) whereas maximum duration of contracts is not specified.<sup>57</sup> The operator has a right to deny access if granting it may prevent it from fulfilling its public service obligations. Access could also be denied if the requested capacity exceeds the available regasification capacity or the transmission capacity booked at the LNG entry point. The user is allowed to transfer all or part of its booked regasification capacity as well as the storage capacity to another user, by signing a transfer agreement, which requires the operator's approval. The user is also allowed to lease its booked regasification and storage capacities; unlike the transfer agreement, the leasing agreement does not require the operator's approval. Each user is obliged to offer any part of its booked regasification capacity as well as the storage capacity that 'it considers it will not use for a given period' to third parties for transfer or lease, with the unused amount to be made available either via the electronic trading system or direct negotiation. Regasification capacity that has been booked by the user may also be released under an

<sup>52</sup> CRE (2019a).

<sup>53</sup> Engie, 'Engie and the Algerian national hydrocarbon company Sonatrach expand their trade relationships', press-release, 19 November 2019; 'Accords d'achat-vente de gaz entre Engie et Sonatrach', 5 December 2019.

<sup>54</sup> The Greek TSO DESFA has been privatised as part of the EU/IMF bail-out programme; privatisation was completed in December 2018 when 66% of shares was sold to a consortium of Snam, Enagás and Fluxys for €535 million, 'Greece's DESFA privatisation completes', *IJ Global*, 21 December 2018.

<sup>55</sup> The Greek network code (2018).

<sup>56</sup> *Ibid.*

<sup>57</sup> UNECE (2013).



operator's justified decision, if the user's daily reserve is zero, unloading is not planned, other users have submitted requests to book capacity, which cannot be fulfilled due to the lack of capacity; such release does not require the user's consent.

The terminal's tariffs are regulated. For the provision of the basic LNG service, a user must pay to the operator the charges according to the national natural gas system usage tariff. Under Greek tariff regulation, the percentage of the allowed revenue for LNG services may be recovered by users of the transmission exits through a separate tariff ('tariff for LNG dispersion' (Art. 8));<sup>58</sup> the Greek regulatory authority set the percentage at 75% in 2019. A discount can be made to the booked capacity coefficient for the use of the entry point from the LNG terminal. Allowed revenue corresponding to such discount is recovered from the exits of the transmission system with an equal charge for all exits (Art. 10) (as part of the transmission tariff). The user releasing its booked regasification capacity is exempted from paying the corresponding sum for the part of the released capacity which has been booked by the new user.

### **3.1.4 Lithuanian regulated LNG import terminal: Klaipeda (Independence)**

Lithuania has one offshore LNG import terminal – the FSRU Klaipeda (Independence). It has a capacity of 3.9 bcma (2.9 mtpa) and is operated by Hoegh LNG. Capacities are allocated on an annual basis, subject to availability. The operator is obliged to publish an invitation to participate in the annual capacity allocation procedure on its website by 25 April. A prospective user is required to submit its capacity allocation request within 30 days, together with the evidence of having the LNG sources, such as 'letters of intent, written confirmations of contractors and (or) equivalent evidence of LNG sales to the applicant, the total amount of which is not less than the requested capacity amount'. (Requests must be submitted 60 days before using the capacity, unless agreed otherwise.) The operator is obliged to evaluate the request within 5 days. Capacities are allocated and contracts are signed by 7 June. Capacities can also be allocated after completion of the annual allocation procedure and during the current gas year subject to availability.

The tariff for regasification service is set by the operator and approved by the Lithuanian regulatory authority (National Commission for Energy Control and Prices, NCECP) on a yearly basis (tariff set for 2019 was approved by the NCECP in November 2018). The tariff for reloading service is set and approved on a 5-year basis (tariff for 2015-2019 was approved by the NCECP in November 2014).

### **3.1.5 Polish regulated LNG import terminal: Świnoujście**

At the time of writing, there is one LNG import terminal in Poland – Świnoujście (although the country is considering having an FSRU near Gdansk).<sup>59</sup> The Świnoujście terminal is owned and operated by Polskie LNG, which is owned by Polish state-owned TSO Gaz-System. In May 2016, the Polish regulatory authority (Urząd Regulacji Energetyki, URE) granted Polskie LNG a concession for liquefaction and regasification which is valid until 31 December 2030. Under an open season (OS) procedure, conducted on 23 June 2009 – 12 February 2010, Polskie LNG allocated ~2/3 of its primary capacity (370,000 Nm<sup>3</sup>/hour, ~3.2 bcma) to Polish state-owned company, PGNiG.<sup>60</sup> In October 2017, an agreement between Polskie LNG and PGNiG entered into force, under which the latter contracted the terminal's entire primary capacity (570,000 Nm<sup>3</sup>/hour, ~5 bcma) until the end of 2034.

The terminal's regasification service includes unloading LNG from the carrier, storage, regasification, and supplying the gas to the exit point from the terminal. Additional services (such as for example reloading LNG on trucks) can only be ordered by those terminal users which use regasification services. Regasification service is provided by the operator as a long-term service for the users, which provide a sufficient volume of cargos annually to ensure the average regasification capacity of at least 150,000 m<sup>3</sup>/hour (~1.3 bcma) of annual throughout. Under a long-term contract, the operator is obliged to ensure continuous provision of regasification service throughout the year, except during the scheduled maintenance period and other limitations envisaged in the terminal's code. The operator also provides short-term service, lasting from at least one day to several successive days in a year.

<sup>58</sup> The Greek tariff regulation.

<sup>59</sup> 'Poland eyes second LNG import terminal', LNG World News, 6 May 2019.

<sup>60</sup> Polskie LNG, Capacities, <https://en.polskielng.pl/the-company/corporate-information/transparency-template/capacities/>



The terminal's tariffs are regulated. Tariff for regasification service consists of a fixed (for the contracted capacity) and variable fee (for the volume of gas resulting from regasification and supplied to the user at the exit point to the transmission system). The tariff for additional services includes a fee for reloading LNG on trucks whereas the tariff for separated services includes a fee for additional contracted capacity and a fee for separated storage.

### 3.1.6 Portuguese regulated LNG import terminal: Sines

The Sines LNG import terminal in Portugal has capacity of 7.6 bcma (5.6 mtpa) and is operated by Ren Atlantico. The terminal operates under a regulated TPA regime, and capacity is allocated on the basis of send-out regasification capacity. The terminal was established as a tolling facility, charging customers handling fees. It was not until 2013 that the concept of contracted capacity was introduced at the terminal, whereas previously payment was made according to usage. No long-term bookings are possible and capacity is contracted on an annual basis. Thus capacity can be booked for one gas year, with contracts automatically renewed, unless otherwise stated by the counterparty 60 days before the contract's expiry. Spot services can also be contracted. In case of congestion capacity is allocated through auctions.<sup>61</sup>

The terminal's tariffs are regulated. The tariff regulation, adopted by the Portuguese regulatory authority Entidade Reguladora dos Serviços Energéticos (ERSE) in June 2010, defines the methodology for calculating the level of revenues to be provided for each tariff (including the tariff for the use of Sines terminal) as well as the methodology for calculating the tariffs and determining their structure.

### 3.1.7 Spanish regulated LNG import terminals: Barcelona, Bilbao, Cartagena, El Musel, Huelva, Mugarodos, Sagunto<sup>62</sup>

Spain has seven LNG import terminals – Barcelona, Bilbao, Cartagena, El Musel,<sup>63</sup> Huelva, Mugarodos, Sagunto – more than any other EU member state. Barcelona, Cartagena, Huelva, El Musel are owned and operated by Enagás, Spain's largest TSO and the technical manager of the country's gas system. Bilbao (where Enagás has a 50% share) is operated by BBG and Sagunto (where Enagás has 72.5%) is operated by Saggas. Mugarodos is operated by Reganosa.

The terminals' basic service is the provision of regasification capacity, which can be contracted at any time and for any duration for up to 15 years.<sup>64</sup> Contracting regasification capacity gives a terminal's user the right to use unloading, storage and regasification facilities. Under the current legislation, a capacity access request must be submitted to the special platform (SL-ATR), which is managed by Enagás – GTS (an entity different from Enagás LNG terminal operator). Subject to confirmation of capacity availability by the terminal operators, a response, accepting or rejecting the request, is communicated to the prospective user through the platform. At the time of this paper being published, capacity is allocated on the FCFS basis but a new regulation is expected in the first half of 2020 which envisages capacity allocation through auctions. Capacity includes daily regasification capacity (the user decides on the send out rate), truck loading rights, unloading and storage rights. Slots are allocated in line with the initial annual schedule, with firm dates being established by the 25<sup>th</sup> day of the month preceding the month of unloading.<sup>65</sup> Nomination and gas allocation takes place daily, with payments made for the quantity of gas stored each day, for the quantity of gas regasified each day, and for each cargo unloaded/loaded.<sup>66</sup> It is also possible to contract spot services.

While many shippers use the Spanish terminals for unloading and regasifying as well as for storing LNG or loading trucks, others only trade. Notably, to be able to trade LNG at a specific terminal, a user needs to have a TPA contract with that terminal thus suggesting that users with bigger LNG portfolios have a competitive advantage and higher flexibility.<sup>67</sup> Notably, all TSOs operating in the Spanish market are obliged to reserve 25% of their total capacity for short-term (that is less than 2 years) contracts.<sup>68</sup>

<sup>61</sup> UNECE (2013).

<sup>62</sup> General overview of Spanish LNG sector, Gas Natural, 27 November 2018.

<sup>63</sup> At the time of this paper being finalised, El Musel terminal is mothballed.

<sup>64</sup> General overview of Spanish LNG sector, Gas Natural, 27 November 2018.

<sup>65</sup> Ibid.

<sup>66</sup> Ibid.

<sup>67</sup> Ibid.

<sup>68</sup> UNECE (2013), p. 92.



Tariffs at all Spanish LNG terminals are regulated. They are charged for unloading (on fixed and variable terms), storage (variable term only) (with penalties applied for having 'too much' LNG in storage), and send out/regasification capacity (including capacity and commodity charges). LNG storage and send out/regasification capacity tariffs are identical for all Spanish terminals, whereas tariffs for unloading LNG vary between the two groups of terminals, with both fixed and variable terms being nearly two times higher for Huelva, Cartagena and Sagunto terminals, compared to those charged at Barcelona, Bilbao and Mugardos terminals.

### 3.1.8 Italian regulated LNG import terminals: Panigaglia and Toscana FSRU<sup>69</sup>

There are three LNG import terminals in Italy – Panigaglia (La Spezia), Toscana FSRU (offshore), and Adriatic LNG (Rovigo) (offshore). Panigaglia and Toscana terminals are fully regulated whereas Adriatic LNG is exempted with only 20% of its capacity is subject to regulated regime (see Section 4.4). Panigaglia LNG terminal has capacity of 3.4 bcma (2.5 mtpa) and is owned and operated by GNL Italia (which is a 100% subsidiary of the Italian TSO SNAM). Toscana FSRU has capacity of 3.8 bcma (2.8 mtpa) and is operated by OLT (where SNAM has ~49%).

The Italian regulatory framework for LNG import terminals has been undergoing reform to introduce market mechanisms (such as auctions) as the means for regasification capacity allocation, in line with the consolidated law on the adoption of guidelines for free access to the LNG service, Annex A (TIRG).<sup>70</sup> This new framework envisages allocation of capacity for up to 15 years on a multiannual basis via an open ascending clock auction for annual and multiannual regasification capacity, with combined 'pay as you bid' capacity allocation for periods shorter than one year. As this paper is being finalised, the criteria for defining reserve prices (initially limited to establishing general principles and parameters) are being analysed by the Italian regulatory authority.

#### **Toscana FSRU (Offshore LNG Toscana, OLT)**

Access to the Toscana terminal is governed by the OLT regasification code and granted on equal terms to all parties.<sup>71</sup> The terminal offers regasification capacity on multi-year/annual and monthly bases, according to the timing established in the code. The operator is obliged to publish an annual unloading schedule for the subsequent gas year by 30 July, specifying the allocated, available, and released capacity. During the gas year, the capacity for the subsequent quarter is presented in a 90 day schedule. In order to be able to use the terminal, a prospective user must be a transmission service user or else appoint such users to whom to allocate the gas nominated at the redelivery point for the redelivery to SNAM. At the time the regasification capacity is used, the user must have an authorisation from the Italian government to import LNG.

The terminal provides continuous and spot regasification service. Continuous service is the service where the user participates in the determination of the 90-day unloading service. Spot service is provided in relation to an individual unloading to be carried out on a date pre-established by the operator once the 90 day unloading schedule has been defined.<sup>72</sup> Capacity at the terminal is allocated via auctions. Continuous capacity is allocated by the start of the gas year through multi-annual and annual allocations.

As far as *multiannual* allocations are concerned the procedure is as follows. The operator is obliged to publish on its website by 1 March the continuous capacity available for allocation from the sixth to the fifteenth gas year following the year of allocation, with any interested party having until 1 April to express interest in capacity for one or more years for which capacity is allocated. By 30 April the operator publishes the continuous capacity in a manner which conforms as closely as possible to the expressions of interest, while giving priority to those of longer duration (e.g. if several expressions of interest refer to the same year, the one with the highest number of consecutive gas years will prevail). By 28 May an applicant must sign corresponding capacity agreements and provide financial guarantees. On 1 June each applicant is obliged to send its request for continuous capacity as identified on the basis of the expressions of interest received by the operator, with capacity to be requested through the regasification auction platform. Capacity will be allocated on the basis of the ascending clock mechanism (as

<sup>69</sup> Adriatic LNG is party-regulated and is analysed in Section 4.4.

<sup>70</sup> Italian law on the adoption of guidelines for access to the LNG regasification service, Resolution 660/2017/R/gas, Annex A (TIRG).

<sup>71</sup> OLT Regasification Code, section 2.

<sup>72</sup> Ibid



described in CAM NC).<sup>73</sup> By 10 June the operator is obliged to publish the continuous capacity still available for allocation from the sixth to the fifteenth gas year subsequent to the year of allocation, whereas an applicant has until 28 June to sign corresponding capacity contracts and provide financial guarantees. On 1 July the applicant is obliged to send its request through the auction platform, with allocation made on the basis of ascending clock auction mechanism.

Continuous capacity is also allocated in an *annual* allocation process, under which by 10 June of the gas year, the operator publishes continuous capacity still available for allocation from the first to the fifth gas year subsequent to the gas year of allocation, with capacity for the first year being available in monthly slots. By 28 June an applicant must sign corresponding capacity contracts and provide financial guarantees. Capacity can also be allocated during the gas year once the gas year has started. This allocation process relates to the continuous service and refers to allocation of available delivery slots that may be assigned by the operator, once the annual and the 90 day unloading schedules have been finalised. The regasification capacity linked to such slots consists of remaining (primary) available capacity following the previous allocation procedures as well as released (secondary) capacity. In addition, the terminal offers spot capacity, which refers to allocation of available slots, once the 90 day unloading schedule has been finalised.

As this paper is being finalised, the OLT regasification code has been undergoing a consultation process on proposed modifications, aimed at *inter alia* 'higher flexibility for the terminal users related to the procedures of the allocation of capacity'.<sup>74</sup>

### **Panigaglia**

Access to Panigaglia terminal is governed by the GNL Italia regasification code.<sup>75</sup>

The terminal's core regasification service includes unloading, storage, regasification, and allocation of transport capacity for injecting regasified LNG into the Italian transmission network at the terminal's entry point into the network (this capacity is made available by SNAM, which takes delivery of this gas for redelivery to users as part of its transport service). The operator is obliged to publish the available capacities associated with slots, constrained slots and berthings, define and manage the procedure according to which the users may submit their capacity allocation requests, and carry out the capacity allocation process.<sup>76</sup> Capacity contracts can be concluded for one year (annual) or for more than one year up to 5 years (multiannual). At the time the regasification capacity is used, the user must have an authorisation from the Italian government to import LNG.

The terminal's core service can be either continuous or 'spot'. Continuous service involves the delivery of LNG according to the delivery schedule. Capacity is allocated by the operator in accordance with the time periods required for mooring, unloading and unmooring (the slots).<sup>77</sup> The terminal has specific windows to book each type of primary capacity, in line with harmonised booking procedures and specific deadlines. The terminal conducts two such procedures: regasification capacity booking procedure carried out *at the start of the gas year* and regasification capacity booking procedure carried out *during the gas year*. Both procedures relate to the terminal's continuous core regasification service.

The first takes place each year during June-July and allows users to book multi-annual (from the sixth year following the year of allocation and up to 15 years,<sup>78</sup> not necessarily continuous) or annual capacity for the next gas year (and up to 15 years). The procedure takes place in June (for the multiannual capacity) and in July (for the remaining available annual capacity). The capacity allocation is carried out on the IT platform by means of an open ascending clock tender (auction) procedure. The allocation of primary capacity takes precedence over secondary (released) capacity. Each party that has submitted a purchase offer in an auction at the clearing price is allocated the capacity as specified in the offer, with each party to be notified by the operator on the result of allocation and the related fee. Should the total quantity of LNG delivered by a user with respect to slots allocated at the beginning of the gas year be less than 90% of the volume of LNG expected to be unloaded under the annual

<sup>73</sup> With the reserve price set in line with the Italian law on the use of guarantees of free access to the LNG regasification service, Annex A (TIRG).

<sup>74</sup> OLT, regasification code and updating proposal area.

<sup>75</sup> GNL Italia regasification code.

<sup>76</sup> Ibid.

<sup>77</sup> Ibid.

<sup>78</sup> Previously, multiannual capacity was allocated for up to 5 years only, see UNECE (2013).



schedule, the user is obliged to make that capacity available to the operator for allocation to third parties. The user releasing the capacity still must pay the fee but is to be compensated by the operator once that capacity has been allocated to third parties. (The user may indicate a fee for released capacity which cannot be higher than that paid by the user itself). The second procedure – under which capacity is allocated for the gas year which has already started – takes place on a monthly basis from September to August. The capacity allocation procedure is carried out on the IT platform by means of the ‘pay as bid’ auction procedure. Allocation of primary capacity is prioritised over allocation of secondary (released) capacity. The terminal also provides a spot core regasification service, for a single unloading to be carried out on a date set by the operator once the monthly schedule has been defined.

Allocation of regasification capacity via all the capacity allocation procedures outlined above – at the start of the year, during the year, and spot – also implies the allocation of transmission capacity in the Italian transmission network. Once a capacity allocation procedure has been completed, the terminal’s operator, on behalf of its users, is obliged to request SNAM to provide the transmission capacity required for injection of regasified volumes into the network.

### 3.1.9 Maltese regulated LNG import terminal: Delimara

As of 2017, Malta has its own LNG terminal – the FSU Delimara – which is operated by Electrogas Malta and delivers LNG to an onshore regasification plant, which provides gas to the power station, also built by Electrogas Malta, for its entire project life of 18 years. Regulated TPA applies.

## 3.2 Regulatory barriers at LNG import terminals

### The CEER study on EU regulatory barriers for LNG

The 2017 CEER study, published eight years after the 3<sup>rd</sup> Gas Directive entered into force, focused specifically on services offered by import terminals and tariffs charged for these services,<sup>79</sup> identified specific regulatory barriers, potentially complicating access to and usage of terminals, such as the lack of transparency in respect of both services offered and (regasification and transmission) tariffs charged, high disparity between the type and the number of services offered at different terminals, differential treatment between primary and secondary capacity holders. These barriers are summarised below.

The study concluded that the lack of transparency was the main barrier to access as far as import terminals services were concerned, due to the lack of easily accessible, clear, updated information in English on the services offered.<sup>80</sup> The study also found a high disparity in respect of services offered, noting that only one bundled service – ‘unloading + LNG storage + regasification’ – is offered at all terminals, and the conditions differ ‘considerably’ between the terminals.<sup>81</sup> The study further noted that even these standardized services differed significantly between terminals and/or host member states. For example, at some terminals additional send-out capacity could be reserved on a daily basis whereas at others – only on annual basis. Some stakeholders noted that the lack of harmonisation made it more difficult to access some terminals where only non-bundled services were offered; they also noted that more non-bundled services should be offered in order to increase flexibility. It was suggested that the LNG system operators should present a minimum set of standardised products and develop a bundled product.<sup>82</sup> The study stated that the lack of standardization is not necessarily negative as the services offered at different terminals may differ because of particular circumstances under which each terminal was operating. It agreed that provision of additional services – such as cargo re-loading, bunkering, truck loading, transshipment or additional send-out flexibility – would increase flexibility, thus strengthening competition and reducing the financial risk of low utilization rates.<sup>83</sup> The study called upon LNG system operators and the NRAs to make an assessment of services offered and provide a recommendation as to whether it was necessary and possible to broaden the list of services offered, either through increased flexibility of existing services or an offer of additional services.

The study also noted differential treatment awarded by the LNG system operators to primary and secondary capacity holders due to member states’ national legislation. It also noted that users called

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<sup>79</sup> CEER (2017).

<sup>80</sup> Ibid, p. 6.

<sup>81</sup> Ibid, p. 31.

<sup>82</sup> Ibid, p. 13.

<sup>83</sup> Ibid, p. 6.



for access rules to be identical for both types of capacity holders whereas LNG system operators argued that full harmonisation could result in reduced competition between terminals.<sup>84</sup>

The 2017 CEER study found that although transparency in respect of available information on services had improved, it was still 'not a common practice' for EU LNG system operators to publish clear information on their services and conditions of access. As the CEER singled out the lack of transparency as the main barrier to access to LNG terminals, it called on the NRAs to address this issue in respect of LNG system operators located in their member states and ensure that at least the information envisaged in the GLE transparency template is published (see Annex 2).<sup>85</sup>

As with information on services, the study found that the lack of transparency was also a problem in respect of *tariffs* for access to LNG terminals. The study noted that although information on tariffs charged by regulated terminals was available, it was often not easily accessible, understandable, and/or only available in the national language. The study acknowledged the usefulness of online tariff simulation tools but noted that these were only available at very few terminals. It specifically called for provision of tariff simulation tools as 'a critical instrument to understand the application of the tariffs under any circumstance'. CEER called on NRAs to address these issues.

The study found 'notable differences' between different terminals in terms of tariff values, noting tariff variation between 0.1 to ~4 euros/MWh (Section 1.2), but concluded that as long as tariffs respected 'all the regulatory relevant tariff principles and relevant European regulation in place, in particular avoiding unjustified cross-subsidies between users and/or countries', it did not identify 'any fundamental barrier' posed by the level of tariffs.

CEER identified a lack of consensus among stakeholders on the application of a discount on transmission tariffs at the entry points from LNG terminals to the transmission network. Notably, the Tariffs NC envisaged the possibility of applying a discount to 'the respective transmission tariffs for the purposes of increasing security of supply' at entry points from LNG terminals (Section 2.1). Some stakeholders argued that such discount would be justified by LNG's contribution to security of supply, whereas others considered it 'discriminatory' and potentially creating cross-subsidies between network users (as not all players were users of LNG or not in the same proportion).<sup>86</sup> Notably, the Third (and previously the Second) Gas Directive does not allow cross-subsidization between LNG and transmission (Art. 31). The study also noted stakeholders' concerns on the lack of 'clear boundaries' between the LNG system operators and the TSOs in respect of tariff setting.

Concerns were also expressed in relation to those terminals which have been built mainly on security of supply grounds and which would not have been built if market demand was the only consideration.<sup>87</sup> In particular, the study noted a concern expressed by some stakeholders about a possibility of tariff increases at some terminals once long-term contracts underpinning their construction end, and whether such increases could potentially constitute a regulatory barrier to LNG entry into the EU market in the future. Concerns were also expressed in relation to cross-border transmission tariffs applied inside the EU, with some stakeholders worried that this might prevent access to LNG by those member states which do not have an LNG import terminal on their territory.

In conclusion, the CEER study called on the NRAs to address the lack of transparency in respect of both services and tariffs by ensuring that relevant and regularly updated information is published in both national and English languages in a comprehensive and accessible way. Importantly, CEER also noted that while regulated terminals are obliged to publish their tariffs, *exempted* terminals are under no such obligation. While the study demonstrated significant differences in structure and value of tariffs charged by regulated terminals, it is not publicly known if tariffs charged by exempted terminals also differ significantly from each other and with tariffs charged by regulated terminals. The study noted that the absence of information on the tariffs charged by the exempted terminals makes it impossible to conclude whether a level-playing field exists between regulated and exempted terminals, and suggests investigating whether this situation could be changed. In July 2019, CEER has published a follow up

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<sup>84</sup> Ibid, p. 14.

<sup>85</sup> GLE transparency template, Annex 2.

<sup>86</sup> CEER (2017), p. 14.

<sup>87</sup> Decisions to invest in such terminals were often made on the basis of other considerations, such as contribution to security of supply, political support, inclusion in the EU PCI list, and the NRA's position.



study – How to Foster LNG markets in Europe? – which contains further analysis of access conditions and tariffs, focusing specifically on several regulated terminals in Spain, Italy, Belgium and Lithuania.<sup>88</sup>

### The EU LNG and Storage Strategy

The CEER study was developed on the basis of the CEER response to consultation on the EU *LNG and Storage Strategy*, developed as a constituent part of EU Energy Security Strategy, published in 2016.<sup>89</sup> It also contributed towards the EU Follow-up LNG Study, published in 2017, through the CEER participation in a steering committee for that study. One of the Energy Security Strategy's aims was to 'exploit the potential' of LNG to make the EU gas system more 'diverse and flexible',<sup>90</sup> reflecting the EC view of LNG supplies as the means of reducing an overall EU dependence on Russian gas. Correspondingly, one of the main goals of both the LNG and Storage Strategy and the Follow-up LNG Study was to ensure that LNG supplies did not face any undue regulatory barriers, either on EU or national levels, while entering the EU internal gas market.

The LNG Strategy provided a broad overview of LNG supplies in the EU and recommended:

- ensuring the necessary infrastructure is in place allowing all member states to benefit from access to global LNG markets, either directly or via other member states;
- completing the internal energy market so that 'the right price signals' were sent to attract global LNG where it is needed and allow the necessary investments to take place;
- cooperating with international partners to promote free, liquid and transparent global LNG markets by 'intensifying dialogues with current and future suppliers and other major LNG consumers' to remove trade barriers.<sup>91</sup>

The Strategy acknowledged that overall the EU has sufficient (and significantly underutilized) LNG regasification capacity, but it is not 'optimally distributed' across the EU thus resulting in 'supply vulnerability' of some member states in central east and south east Europe as well as the Baltics. The Strategy notes that these regions have decided to build additional LNG import terminals instead of improving their access to existing terminals in north west and south west Europe. It recognized that (the lack of) commercial viability was the main barrier for construction of new terminals in vulnerable countries, and called for provision of EU financing,<sup>92</sup> specifically in respect of the Krk terminal in Croatia and expansion of the existing Świnoujście terminal in Poland.<sup>93</sup> The Strategy noted that 'a significant number' (six - see Section 4) of LNG terminals are exempted from TPA, and called on the NRAs to 'continue to ensure a level playing field for existing terminals', 'enable the introduction of new services', and 'continue to enforce transparent and effective market-based capacity allocation mechanisms' at exempted terminals, to attract new suppliers.

Finally, the Strategy underlined a foreign policy dimension, stating that the EU needs to 'work closely with international partners [...] to ensure that market participants are not prevented from establishing commercial relationships (for example, by territorial restrictions). The Strategy called for an assessment of compliance of all the existing intergovernmental agreements (IGAs) on LNG concluded between EU member states and third (non-EU) countries.

Overall, unlike the CEER study, the LNG Strategy, while providing a broad picture of LNG in the EU, contained very little information about regulatory aspects of LNG import terminals and specifically about regulatory barriers.

### The EU Follow-up LNG Study

In September 2017, a year and a half after the EC had published its LNG and Storage Strategy, it published its Follow-up LNG Study,<sup>94</sup> which aimed to 'elaborate' the Strategy further and support its

<sup>88</sup> CEER (2019).

<sup>89</sup> EU LNG and Storage Strategy, 2016.

<sup>90</sup> Ibid.

<sup>91</sup> EU LNG and Storage Strategy, 2016.

<sup>92</sup> Commission staff working document accompanying the Communication on an EU strategy for liquefied natural gas and storage, 12 February 2016, COM(2016)49final. The EU fourth PCI list includes the following LNG terminals: Krk (Croatia), Shannon (Ireland), Gdansk (Poland), and a terminal in northern Greece.

<sup>93</sup> Both of these projects have PCI status.

<sup>94</sup> Follow-up Study to the EU LNG and Storage Strategy, September 2017.





implementation. In particular, the Study analysed utilization of LNG import terminals while also identifying areas for EU-level regulatory intervention. One of the Study's chapters is devoted to the assessment of the impact of access rules, capacity allocation and other regulatory aspects on LNG terminals. The Study argued that an 'appropriate regulatory reform' is needed for LNG trade to develop in the EU but, like its predecessor, the EU LNG and Storage Strategy, said relatively little about the suggested content of any such reform. The Study does not appear to suggest a strong appetite on the part of the EU for an overhaul of the existing regulatory framework, as it stated that 'light touch regulation or even government direction' is often sufficient and 'restrictive regulation can delay or stop a trading environment'.<sup>95</sup>

The study noted that development of LNG trading in the EU has been hampered by the fact that many existing LNG import terminals have not yet been depreciated and therefore need to be underpinned by long-term contracts<sup>96</sup> as well as because TPA to exempted terminals remains fully or partly restricted. It disagreed with what it said was the gas industry's view that the exempted LNG import terminals<sup>97</sup> should be 'free from any form of regulation' and argued that barriers to TPA should be addressed 'regardless of the type of the terminal'. However, the study acknowledged that such barriers could only be addressed upon the expiry of exemptions, at which point the terminals would have to offer TPA 'on an acceptable basis'. Notably, exemptions for the majority of exempted terminals will not expire until the late 2020s – early 2030s (Section 4). At the same time, the study acknowledged that 'at a time when there is close to zero' capacity utilisation<sup>98</sup> at such terminals 'it is difficult to argue there are fundamental barriers to TPA'. In fact, due to low utilisation of EU LNG import capacity, legal/regulatory capacity restrictions have not resulted in *actual* capacity constraints in north west Europe, although according to the study some concerns exist in east and south east Europe.<sup>99</sup>

The study suggested resolving any problems in respect of capacity access on a 'terminal by terminal' basis to identify problems with access to capacity at both regulated and exempted terminals and improving transparency of information (especially in respect of tariffs and access). As far as *regulated* terminals are concerned, the study recommended adopting EU-level regulation, which would require publication of prices and capacities. Importantly, the study mentions an (as yet absent) LNG Network Code which would stipulate rules of access for regulated LNG terminals and 'offer transparent and non-discriminatory access to regasification capacity'. (Notably Gas Regulation 715 envisaged the development of 12 EU network codes on various issues but no specific LNG network code has been envisaged (Art. 7)). As far as *exempted* terminals are concerned, the study recommended respecting the existing exemptions and considering ways of making the exempted terminals more transparent. Specifically, the study suggested negotiated TPA under which the exempted terminals would be allowed to propose their own solutions to identified access problems, taking into account the need to improve access and combine advance scheduling.

As is clear from the above overview, both the LNG and Storage Strategy and the Follow-up Study were of rather general nature and played only a very limited role in analysing the EU regulatory framework for LNG import terminals. The EC's next study on LNG, which is expected to be finalised in 2020, will focus specifically on identification of the existing regulatory barriers for access to terminals and development of remedies.<sup>100</sup> This new LNG study will form a constituent part of the EU Decarbonisation Package, which will include upgrading the existing, and developing new, gas-related legislation.<sup>101</sup> The new LNG study aims to identify actual and potential regulatory barriers and discrepancies in the regulatory treatment of LNG terminals on the national level. It is expected to propose remedies and ultimately to conclude whether additional EU-level regulation is needed. The study, which will build up

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<sup>95</sup> Ibid, p. 100.

<sup>96</sup> EU LNG import terminals are on average newer than EU import gas import pipelines.

<sup>97</sup> See Section 4.

<sup>98</sup> At the time when the Follow-up Study on the EU LNG and Storage Strategy was published in 2017, capacity utilisation of European LNG import terminals was very low - ~20% - although not zero. It has since increased to 27% in 2018 and to 48% in 2019.

<sup>99</sup> Ibid, p. 101.

<sup>100</sup> From the latest Madrid Forum to the next Gas Package, an interview with the director of DG ENER, Klaus-Dieter Borchardt, Florence School of Regulation, 9 January 2019.

<sup>101</sup> Studies on enhancing liquidity by combined gas and capacity release programmes; distortive effects of non-harmonized tariffs; licensing and regulatory requirements; regulatory framework for LNG terminals; tailor-made regulation. See Borchardt interview Jan 2019.



on the CEER study, is expected to develop an assessment of various regulatory regimes applicable to LNG import terminals in different member states and recommend adjustments if and as necessary. The study could potentially translate into new legislative initiatives modifying the existing EU regulatory framework for LNG terminals and a new Network Code for LNG.

## Conclusions

A number of LNG regulatory barriers have been identified by recent CEER and EC studies. The lack of transparency in respect of both services (for *inter alia* unloading, storing, and sending out) and tariffs for accessing the import terminals and for entering the transmission system from the terminals, has been singled out as the main barrier. Lack of service standardisation, differing treatment of primary and secondary capacity holders, and significant tariff variation between regulated terminals are also areas of concern, although not necessarily actual barriers, especially given the low level of terminal utilisation during 2012-2017. However, utilisation levels have increased strongly in 2018-2019. Should this trend continue in the future, these issues might become actual barriers. Importantly, CEER stated that the fact that exempted terminals do not publish their tariffs whereas regulated terminals are obliged to do so, suggests the lack of a genuine level-playing field and concludes that this might constitute an actual or potential barrier to LNG imports.

Several recommendations were made to address these regulatory barriers. In particular, the NRAs were recommended to address the lack of transparency in respect of both services and tariffs by ensuring that relevant and regularly updated information is published in both national and English languages in a comprehensive and accessible way. LNG system operators were recommended to present a minimum set of standardised products and develop a bundled product whereas NRAs were recommended to suggest whether more services should be offered. The NRAs were also recommended to address transparency of tariffs, and in particular require all regulated terminals to provide tariff simulation tools. In respect of the tariff publication requirement for regulated – but not for exempted – terminals, it was recommended that the possibilities, and extent, of remedying this discrepancy should be 'investigated'. No judgement was expressed either on the application of a discount on transmission tariffs at the entry points from the terminals to the transmission network, or on the potential of cross-border transmission tariffs to complicate access to LNG for member states which do not have import terminals on their territory, but both issues were acknowledged as potential barriers.

The EC and CEER studies suggest that there is no strong appetite on the part of the EU for an overhaul of the existing regulatory framework governing LNG import terminals. However, there is an indication of increased willingness to remove actual (and potential) regulatory barriers, particularly in respect of TPA and tariffs. This could potentially be achieved by developing additional EU-level legislation, which could take the form of either amending the Third Gas Directive and/or Gas Regulation 715 or (more likely) developing a new LNG Network Code. Notably, exempted terminals could also be affected as their exemptions could be amended to ensure regulatory treatment more comparable to that of regulated terminals. However, such changes are more likely to be concerned with increased transparency (i.e. obligation to publish tariffs for access) rather than fundamental changes to TPA conditions.

## 4. Exempted LNG import terminals in the EU

Six LNG import terminals in the EU – the Isle of Grain (Grain 1, 2 and 3), South Hook and Dragon in the UK, Gate in the Netherlands, Adriatic LNG in Italy,<sup>102</sup> and Dunkerque in France – operate under an exemption regime (Fig. 1). All of these terminals have been granted an exemption under the Second Gas Directive (Art. 22) (see Section 4.2), which was applicable at the time when they applied for exemptions. The Isle of Grain expansion project (Grain 4) to date remains the only terminal to which an exemption has been granted under the Third Gas Directive (Art. 36).

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<sup>102</sup> Adriatic LNG operates partly under exemption regime (80% of its capacity is exempted) and partly regulated (20%). Another Italian LNG terminal – Offshore LNG Toscana (OLT) – has initially received an exemption but has subsequently asked for it to be annulled; it has since operated on a regulated basis.



Although six exempted terminals constitute a small minority of EU LNG import terminals, their exempted import *capacity* constitutes more than one third (37%) of total EU send-out capacity. Therefore, it is important to understand how the exempted terminal capacity is allocated and charged for. This section overviews an EU exemption regime under Third and Second Gas Directives and analyses regulatory treatment of all six exempted terminals under exemptions conditions.

**Table 2: Existing EU LNG import terminals which have been granted an exemption**

Decision date	Country	LNG terminal	Start-up date
10.02.2005	UK	Grain	2005
10.02.2005	UK	South Hook	2009
10.02.2005	Italy	Adriatic LNG	2009
29.03.2005	UK	Dragon	2009
26.03.2007	Netherlands	Gate	2011
11.12.2009	Italy	OLT (Toscana FSRU)	2013
06.01.2015	Italy	OLT (Toscana FSRU)*	2013
20.01.2010	France	Dunkerque	2016
04.06.2013	UK	Grain**	NA

\* exemption waived at the request of OLT

\*\* exemption annulled

Source: EC, GIIGNL 2019

#### 4.1 Exemption regime

An *exemption regime* under Art. 36 of the Third Gas Directive<sup>103</sup> (and prior to that, an exemption regime under Art. 22 of the Second Gas Directive<sup>104</sup>) was one of the frameworks in accordance with which major new gas infrastructure – including LNG import terminals – could be, and have been, built in the EU, which was liberalizing its internal gas market in the 2000s and 2010s.

The exemption procedure under Art. 36 of the Third Gas Directive is reviewed below, while references are also made to Art. 22 of the Second Gas Directive to demonstrate the continuity of the exemption regime, first established under the latter and further refined under the Third Gas Directive.<sup>105</sup> Notably the original Third Gas Directive was amended in 2019, with important changes being made to *inter alia* the exemption regime governed by Art. 36; no exemptions have been granted yet under the amended Directive.

Art. 36 of the original Third Gas Directive stated that ‘*major new gas infrastructure*,<sup>106</sup> i.e. interconnectors, LNG and storage facilities, *may, upon request, be exempted, for defined period of time*’ from the Directive’s provisions of Art. 9 (unbundling), Art. 32 (TPA), Art. 33 (access to storage), Art. 34 (access to upstream pipeline networks), Art. 41.6, 41.8, 41.10 (tariffs/methodologies). An exemption may be granted not only to ‘major new infrastructure’ but also to ‘significant increases of capacity in existing infrastructure and to modifications of such infrastructure which enable the development of new sources of gas supply’ (Art. 36.2).<sup>107</sup>

Very similarly, the Second Gas Directive had stated that ‘major new gas infrastructures,<sup>108</sup> i.e. interconnectors between Member States, LNG and storage facilities, may, upon request, be exempted from’ regulated TPA to transmission and distribution systems and LNG facilities (Art. 18), negotiated/regulated TPA to storage (Art. 19), tariff provisions (Art. 25.2-4). It also stated that an exemption may be granted not only to new infrastructure but also to ‘significant increases in capacity in

<sup>103</sup> Third Gas Directive. In October 2017, the EC proposed amending the Third Gas Directive. The Directive was amended in 2019, which has introduced important changes to *inter alia* the Exemption Regime (‘Amended Third Gas Directive’). The amended Directive entered into force on 23 May 2019 and must be transposed into national laws of member states by 24 February 2020. So far, no exemptions have been granted to EU LNG terminals under the amended directive.

<sup>104</sup> Second Gas Directive.

<sup>105</sup> In 2009, the EC adopted guidance explaining the general framework and the assessment criteria under Art. 22 of the Second Gas Directive, see EC (2009). Notably, the EC has not developed any further guidance in respect of Art. 36 of the Third Gas Directive and has continued to refer to the 2009 guidance in its subsequent exemption decisions, for example see the EC TAP decision.

<sup>106</sup> ‘New infrastructure’ means ‘an infrastructure not completed by 4 August 2003’ (Art. 2.33).

<sup>107</sup> The Directive also left in place the exemptions from TPA granted under Art. 22 of the Second Gas Directive until their expiry.

<sup>108</sup> New infrastructure referred to an infrastructure not completed by the entry into force of the Second Gas Directive.



existing infrastructures' as well as to 'modifications of such infrastructures which enable the development of new sources of supply' (Art. 22.1).

In order to be exempted, infrastructure must meet the following *exemption criteria* (Art. 36.1):

- a) the investment must enhance competition in gas supply and enhance security of supply;
- b) the level of risk attached to the investment must be such that the investment would not take place unless an exemption was granted;
- c) the infrastructure must be owned by a natural or legal person which is separate at least in terms of its legal form from the system operators in whose systems that infrastructure will be built;
- d) charges must be levied on users of that infrastructure; and
- e) the exemption must not be detrimental to competition or the effective functioning of the internal market in natural gas, or the efficient functioning of the regulated system to which the infrastructure is connected.

The criteria for granting an exemption under the Second Gas Directive were identical to those under the original Third Gas Directive (Art. 22.1).

The amended Third Gas Directive largely preserved these criteria apart from amending the competition criterion (e), which has been modified as follows:

- e) the exemption must not be detrimental to competition in the relevant markets which are likely to be affected by the investment, to the effective functioning of the internal market in natural gas, the efficient functioning of the regulated systems concerned, or to security of supply of natural gas in the Union'.

This is an important difference because, for an exemption to be granted under the amended Directive, an assessment has to be made of its impact on competition in 'the relevant markets which are likely to be affected by the investment', with no specific criteria defining which markets would be considered 'relevant' and 'likely to be affected' by the investment. Prior to the Directive being amended, such assessment would only have to be made in respect of the internal market of the EU. Also, under the amended Directive an assessment would have to be made in respect of the impact on the efficient functioning of 'the regulated systems concerned', with no specific criteria as to which systems would be considered 'concerned'. Previously, such assessment would have only been required in respect of the regulated system to which the infrastructure was connected. All exemptions issued to EU LNG terminals under the Third Gas Directive were made before the Directive was amended. As noted earlier, to date, no exemptions have been granted under the amended Directive.

It is worth stressing that the granting of an exemption under the Third Gas Directive was not intended to be automatic; in other words, the exemption can be refused (although in reality the vast majority of projects which applied for an exemption were successful) thus suggesting the possibility of discretion being applied by national authorities and the EC. Also, even if granted, an exemption can only be of limited defined duration. The decision on whether to grant an exemption, which conditions to attach to an exemption, as well as the length of time for which an exemption might be granted, all rest with the NRAs and/or member states, as well as with the EC, with the latter's decision being final and binding. The procedure is explained below.

The original Third Gas Directive stipulated the right of the national regulatory authorities (NRAs) to decide on the exemption:

'the regulatory authority ... may, on a case-by-case basis, decide on the exemption' (Art. 36.3).

The amended Directive introduced an obligation on the NRA (or where appropriate another competent authority) to consult:

- a) the NRAs of the member states the markets of which are likely to be affected by the new infrastructure; and



- b) the relevant authorities of the third countries, where the infrastructure in question is connected with the Union network under the jurisdiction of a member state, and originates from or ends in one or more third countries' (Art. 36.3).

It is only where the third-country authorities do not respond within (unspecified) 'a reasonable time frame' or within 'a set deadline not exceeding three months', that the NRAs will have the right to adopt the necessary decision (Art. 36.3).

The Directive also provides for member states to make such decisions themselves based on the opinion submitted by their NRA or the Agency for the Cooperation of Energy Regulators (ACER) (Art. 36.7):

'member states may provide that their regulatory authority or the Agency, as the case may be, shall submit, for the purposes of the formal decision, to the relevant body in the member state its opinion on the request for an exemption'.

The Third Gas Directive also states that while deciding on the exemption, consideration must be given 'on a case-by-case basis' to 'the need to impose conditions regarding *the duration of the exemption and non-discriminatory access*' with account to be taken, in particular, of 'the additional capacity to be built or the modification of existing capacity, the time horizon of the project and national circumstances' (Art. 36.6). Importantly, before granting an exemption, the regulatory authorities are obliged to '*decide upon the rules and mechanisms for management and allocation of capacity*' that would apply to the exempted new capacity. In this respect, the Third Gas Directive is different from the Second Gas Directive as the latter did not oblige the regulatory authorities to decide on the rules and mechanisms for management and allocation of capacity, leaving it at their discretion whether or not to stipulate such rules (Art. 22.2(c)).

Under the Third Gas Directive, NRAs are thus obliged to develop a set of legally binding regulatory procedures governing allocation and management of new capacity as part of an exemption, thus effectively filling the gap left in the Third Energy Package (TEP), which had outlined general rules, but not specific procedures, for either existing or new capacity. (As far as pipeline – *but not LNG* – infrastructure is concerned, these gaps had been filled by the CAM NC (Section 2.1)).

The Third Gas Directive stated that these rules must require that 'all potential users of the infrastructure are invited to indicate their interest in contracting capacity before capacity allocation in the new infrastructure, including for own use, takes place'. Furthermore, the regulatory authority is obliged to require 'congestion management rules to include the obligation to offer unused capacity on the market', as well as to require users of the infrastructure to be 'entitled to trade their contracted capacities on the secondary market'. Importantly, the regulatory authority is obliged to take into account the results of this capacity allocation procedure while making its assessment of whether the infrastructure in respect of which an exemption is sought meets the exemption criteria specified in Art. 36.1(a), 36.1(b), and 36.1(e). (In other words, whether the new infrastructure enhances competition and security of supply, whether its level of risk is such that that the investment would not take place without an exemption, and whether it is detrimental to competition, to the effective functioning of the internal gas market, or to the efficient functioning of the regulated system to which it is connected.)

The Third Gas Directive has also introduced a cross-border dimension in the exemption-granting process (absent in the Second Gas Directive) having stipulated a procedure to be followed when the new infrastructure in respect of which an exemption is sought is located in the territory of more than one member state. In this case, the Directive empowered – but not obliged – the newly created Agency for Cooperation of Energy Regulators (ACER) to submit an advisory opinion to the NRAs of the member states concerned, which 'may be used as a basis for their decision' (Art. 36.4). If all the NRAs agree on the request for exemption within six months of the date on which it was received by the last of the NRAs, they are obliged to inform ACER of their decision. If the NRAs concerned 'have not been able to reach an agreement' within this period or in the event of a joint request from the NRAs, ACER is obliged to exercise the tasks conferred on the NRAs, including in respect of deciding on an exemption.<sup>109</sup>

The amended Directive has further developed a cross-border dimension in the exemption-granting process, by extending its scope to include transmission lines between a member state and a third

<sup>109</sup> It is not clear whether in that case ACER would have powers overriding those of member states, where it is member states rather than the NRAs that make exemption decisions.



country. It empowered the NRA of the member state where the first interconnection point with the member states' network is located (or, where appropriate, the competent authority of that member state) to consult the relevant authority of that third country 'with a view to ensuring, as regards the infrastructure concerned' that the Directive is applied 'consistently in the territory and, where applicable, in the territorial sea of that member state' (Art. 36.4). Where the third country authority does not respond to the consultation 'within a reasonable time or within a set deadline not exceeding three months', the NRA may adopt the necessary decision.

The decision on whether to grant an exemption (taken by the NRA or by the member state, to whom either the NRA or ACER submitted its opinion) must be notified to the EC 'without delay' together with 'all the relevant information with respect to the decision', which must contain, in particular:

- a) the detailed reasons on the basis of which the exemption was granted or refused, with a reference to the aforementioned exemption criteria;
- b) the analysis of the effect on competition and the effective functioning of the internal gas market resulting from the grant of the exemption;
- c) the reasons for the time period and for the share of the total capacity for which the exemption is granted;
- d) the result of the consultation with the regulatory authorities if the exemption relates to an interconnector;
- e) the contribution of the infrastructure to the diversification of supply (Art. 36.8).

Within two months from the day following the receipt of a notification, the EC 'may' take a decision requiring the regulatory authority to amend or withdraw the decision to grant an exemption. This two-month period may be extended by an additional period of two months if the EC is seeking further information in respect of an exemption; this period is counted from the day following the receipt of the complete information sought by the EC. The Directive thus provides the EC with *at least four months* for taking a decision. The Directive is much less clear on what and whether there is an upper limit on the EC decision making period. The Directive states that 'the initial two-month period may also be extended' (for an unspecified duration) with the consent of both the EC and the regulatory authority. It is not clear whether the possibility of an extension refers to the first two-month period (in other words when the EC first received the notification) or to the additional two-month period (in other words when the EC has sought additional information). In any case, given that the Directive does not specify the maximum duration of an extension and does not mention whether an extension could be sought repeatedly, it could be argued that there is no upper limit on the time that could be spent by the EC in deciding on an exemption. (By comparison, under the Second Gas Directive, the EC was only allowed to spend two months at most for an exemption assessment (Art. 22.4)). Also, unlike the Second Gas Directive, the Third Gas Directive made it mandatory to notify the EC not only about every exemption *decision* but also about any exemption *request* (Art. 36.8)).

The EC's exemption decision is final and binding (Art. 36.9). Its power – and available discretion – in respect of making the decision is very significant, whereas the process of granting or refusing an exemption lacks transparency. The EC has been able to exercise a significant degree of discretion while making its exemption assessments, mostly due to the fact that the Third Gas Directive (similar to the position for the Second Gas Directive) did not provide *any quantitative criteria* for granting an exemption, including in respect of its impact on competition. The Directive is not specific on the financial or volumetric characteristics of projects, and simply refers to 'major' infrastructure and 'significant increases in capacity'. Given that *all* infrastructure projects in the gas sector *are* costly – and hence qualify for being called 'major' – one could argue that *any* infrastructure project could be exempted.

As noted earlier, the majority of exemptions granted to LNG import terminals were granted under the Second Gas Directive, with only one exemption granted under the Third Gas Directive. The next section analyses exemptions granted to all six exempted import terminals to date, and analyses capacity allocation and tariff regimes applied at these terminals within the limits set by the exemptions. For readers not needing the detail of the exemptions, a summary is provided at the end of each sub-section.

## 4.2 Exempted terminals in the UK: Isle of Grain, South Hook, and Dragon

### 4.2.1 The Isle of Grain terminal

The Isle of Grain LNG terminal, located in the south east of England, is one of the three LNG import terminals operating in the UK and is the largest LNG import terminal in Europe.<sup>110</sup> The terminal (initial and expansion phases) is owned and operated by Grain LNG Ltd,<sup>111</sup> a 100% owned subsidiary of the Great Britain TSO, National Grid.<sup>112</sup> (National Grid also owns National Grid Gas, a gas TSO, which owns and operates the national transmission system, i.e. the high pressure pipeline to which the Isle of Grain terminal is connected.<sup>113</sup>) Grain LNG and National Grid Gas are legally separate entities, and Grain LNG has full financial separation from other companies within National Grid.<sup>114</sup>

The terminal has been developed in three phases – Grain 1 (2002-05),<sup>115</sup> Grain 2 (2005-08),<sup>116</sup> Grain 3 (2007-10),<sup>117</sup> The fourth phase, Grain 4 (2014-19), is under development.<sup>118</sup> The terminal's current capacity is 19.5 bcma (14.3 mtpa). Once Grain 4 is completed the terminal's capacity will increase to 28.4 bcma.<sup>119</sup> The terminal's utilisation rate was 18.8% in 2018-19 (up from 5.2% in 2017-18).<sup>120</sup> It has two entry points – high and low pressure – to the national transmission network and has lower minimum send out requirements in comparison to other UK terminals.<sup>121</sup> It is located close to the Interconnector UK (IUK) and Balgzand-Bacton Line (BBL) interconnectors, which means that only a short-haul tariff needs to be paid for exporting gas to continental Europe.

At present, all of the primary capacity at the Isle of Grain terminal is fully contracted under long-term contracts – with each phase's primary capacity having been auctioned through an open season (OS) – to six companies (BP/Sonatrach, Centrica, Sonatrach, GDF Suez, Uniper and Iberdrola).<sup>122</sup> In particular, BP/Sonatrach was awarded a 20-year contract for 3.3 mtpa (4.4 bcma) of capacity (Grain 1) to cover the 2005-25 period. As the terminal's capacity increased to 14.8 mtpa, additional long-term contracts were awarded to Centrica, GDF Suez<sup>123</sup> and Sonatrach in March 2005 to start from December 2008 (6.5 mtpa, Grain 2). Subsequently, long-term contracts were signed with E.On,<sup>124</sup> Iberdrola and Centrica in May 2007 to start from December 2010 (5 mtpa, Grain 3).<sup>125</sup> Primary capacity rights consist of firm rights to berth and unload, to use storage capacity, and to nominate LNG for regasification and send out into the national transmission network.

In 2011 the terminal held an OS process to test market demand for additional import capacity, following which it received several bids in November 2011, and subsequently held negotiations with three parties based on the bids received. It was anticipated that capacity would be 'released to two new customers, with additional capacity also being allocated to an existing customer or customers'.<sup>126</sup> As noted earlier, the terminal's capacity is being expanded and additional storage and berth slots are expected to be

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<sup>110</sup> There is also a fourth LNG terminal in the UK (Teesside FSRU) with capacity of 3 mtpa. The terminal, which started operations in 2007, was decommissioned in 2015. In 2017 Trafigura announced it might re-commission it but this has not happened yet, see 'Trafigura confirms LNG-import terminal plans for Teesside', 21 February 2017.

<sup>111</sup> Phase 3 of the Grain terminal (Grain 3) has been funded by National Grid in the form of an inter-company loan to Grain LNG.

<sup>112</sup> Isle of Grain – Application for an exemption (consultation), 14 December 2006, p.1 10.

<sup>113</sup> The terminal is also connected to the local distribution system owned by Southern Gas Networks.

<sup>114</sup> National Grid Gas is subject to License Conditions and Gas Act obligations to prevent unfair commercial advantage is conferred on Grain LNG.

<sup>115</sup> Operational since July 2005, see National Grid, Grain LNG – Investor Relations, November 2012.

<sup>116</sup> Operational since December 2008, *ibid*.

<sup>117</sup> Operational since December 2010, *ibid*.

<sup>118</sup> According to National Grid, all permits for Phase 4 have been received, see National Grid, Grain LNG presentation, Investor Site Visit, 2019.

<sup>119</sup> 'UK's Isle of Grain mulls LNG reload option', 10 February 2014.

<sup>120</sup> National Grid Annual Report and Accounts 2018-2019.

<sup>121</sup> Isle of Grain LNG website, <http://grainlng.com/>

<sup>122</sup> Grain LNG – primary capacity available from 2025.

<sup>123</sup> GDF Suez has since been renamed as Engie and the latter sold its LNG business to Total in 2018.

<sup>124</sup> In 2003 E.On merged with Ruhrgas to form a new company E.On Ruhrgas, which was subsequently renamed E.On; this was followed in June 2016 by demerger of E.On into two companies – E.On and Uniper – with gas business transferred to Uniper.

<sup>125</sup> Grain LNG – our customers; Isle of Grain 4 – Ofgem exemption decision; National Grid, Grain LNG presentation, 2019.

<sup>126</sup> Isle of Grain 4 – application for exemption.



offered to the market in 2025 (Grain 4).<sup>127</sup> Some of this capacity will consist of newly-built capacity and some of existing capacity which will become available as the existing contract (presumably the first BP/Sonatrach contract) expires.<sup>128</sup> According to Grain LNG, expansion will make it more competitive than typical newly built capacity by means of optimising its existing assets.<sup>129</sup> The results of this process suggested 8.4 bcma capacity demand for Grain 4, which would increase Grain's import capacity from 20 to ~28 bcma.

### Exemptions

The first three phases of Grain LNG (Grain 1, 2, and 3) hold an exemption from regulated TPA requirements either under the Second Gas Directive. The fourth phase (Grain 4) had been granted an exemption under the Third Gas Directive but has since been revoked due to delayed start of construction.

#### Grain 1 and 2 Exemptions

In August 2004, the terminal applied for an exemption from regulated TPA under the Second Gas Directive for all of the proposed capacity, that is the initial capacity of 4.5 bcma (Grain 1) and the expansion capacity of 10 bcma (Grain 2). In December 2004, the Great Britain (GB) regulatory authority, Ofgem, granted an exemption, which was notified to the EC on 1 December 2004. (Unlike the South Hook terminal analysed in Section 4.2.2, the Isle of Grain terminal did not apply to receive a written regulatory guidance from Ofgem, and its decision to invest in the project was made prior to Ofgem having a policy on issuing written regulatory guidance.<sup>130</sup> However, it received verbal guidance from Ofgem indicating that it could expect to receive an exemption in the future, once Ofgem was empowered to do so under the Second Gas Directive.<sup>131</sup>)

Ofgem confirmed that all the criteria for granting of an exemption under Art. 22 of the Second Gas Directive (Section 4.1) were satisfied, and granted the Isle of Grain terminal an exemption in respect of its entire proposed capacity (i.e. the initial capacity of 4.5 bcma for a duration of 20 years and the expansion capacity of 10 bcma for a duration of 25 years from the start of commercial operations).<sup>132</sup> In particular, Ofgem stated that by introducing a new entry point the terminal would increase diversity of supply thus suggesting that the security of supply criteria is met.

Although the main investment decision in respect of Grain 1 was made in May 2003, i.e. prior to the terminal's application for an exemption, Ofgem considered that 'the investment risk' criteria were met (i.e. that the level of risk was such that the investment in the terminal would not have been made without an exemption) as there was no possibility for the project to seek written guidance on a possible exemption, whereas the project received verbal assurances that an exemption would likely be forthcoming. This view was subject to the terminal demonstrating that 'all capacity had been offered to the market, an effective use-it-or-lose it (UIOLI) regime was in place ... and appropriate information gathering powers were in place'.

Ofgem also considered that given that the terminal was legally separate from the national transmission system operator, National Grid Gas (formerly known as Transco), the criteria that the terminal must be owned by a person other than the gas transporter who operates (or will operate) the pipeline system connected (or to be connected) to the terminal is met. Ofgem stated that National Grid Gas was obliged to ensure that no unfair commercial advantage was conferred on the Isle of Grain terminal, with Ofgem to investigate any potential breach as part of its regulator monitoring.<sup>133</sup>

<sup>127</sup> 'Grain LNG importation terminal to offer ~8mtpa of cost competitive capacity to the market', press release

<sup>128</sup> This suggests that out of ~8 mtpa, 4.7 mtpa is newly-built capacity and 3.3 mtpa is existing capacity.

<sup>129</sup> Ibid.

<sup>130</sup> The main investment decision relating to the conversion phase of the project for Isle of Grain was made in May 2003, see Isle of Grain – Ofgem Exemption Decision, 4 December 2004.

<sup>131</sup> Ofgem only received formal powers to grant exemptions when changes were made to the Gas Act 1986 on 26 August 2004. DTI/Ofgem confirmed in the final views document published in November 2003, which related to the matter of exemptions more broadly, that Ofgem was prepared to consider applications from infrastructure project developers who were seeking early guidance on possible exemptions, see Isle of Grain – Application for an exemption.

<sup>132</sup> Isle of Grain – Ofgem exemption decision, 4 December 2004.

<sup>133</sup> National Grid Gas has a statutory obligation to develop an economic and efficient system, and it has a licence obligation to ensure that its transportation business shall not give or receive any cross subsidy to or from any other business of itself or of an affiliate or related undertaking of it.





Ofgem's initial preference was that tariffs were to be published, but having learnt from the terminal operator that tariffs, while available to Ofgem, were commercially confidential, Ofgem finally decided that the terminal should not be required to publish its tariffs but could be required, under the terms of the exemption, to provide information on tariffs to Ofgem so that it would be able to investigate any disputes arising over tariffs.

As far as the competition criteria were concerned, Ofgem's view was that the terminal could be expected to have an overall positive impact on competition. Ofgem noted that the terminal conducted an OS in which parties were invited to express an interest in capacity in the first phase of the terminal (Grain 1) and was conducting an OS in respect of the second phase (Grain 2) at the time of the exemption application. The terminal also agreed to implement anti-hoarding measures and publish 'relevant information to enable the market to make considered decisions with regard to secondary trading'. Although Ofgem has not specifically approved these anti-hoarding measures, it could review the exemption should these measures result in primary capacity not being utilised. In particular, Ofgem noted that, at the very least, the terminal needed to demonstrate the existence of a transparent mechanism that allows spare capacity to be made available to market so that capacity is not hoarded, and unused capacity can be obtained in a transparent market-based manner by third parties in order to maximise the use of the terminal. Although the presence of unutilised capacity does not necessarily mean capacity is hoarded, if Ofgem receives complaints that the terminal's secondary trading and anti-hoarding mechanisms are not effective, it could review the exemption.

During winter 2005-06, Ofgem and the market had concerns regarding the operation of the Grain 1 facility. In particular, it was concerned that the UIOLI arrangements were 'not operating in a manner that allowed third parties to access the terminal in the event that the primary capacity holders were not using the facility'. Ofgem has worked with Grain LNG and the primary capacity holders at Grain 1 who have introduced additional UIOLI arrangements, which have since been monitored by Ofgem.<sup>134</sup>

On 10 February 2005 the EC approved the exemption, without requiring any amendments.<sup>135</sup>

### *Grain 3 Exemption*

In 2006, as the terminal was considering a further expansion of its capacity (Grain 3),<sup>136</sup> it applied for an exemption in respect of expansion capacity for 20 years (or up to October 2029 at the latest).<sup>137</sup> At the time of the application, the terminal was finalising an OS in respect of this capacity and holding negotiations about firm bids, received in November 2006. The names of the bidders and the maximum volume of capacity of bids by existing customers (i.e. Grain 1 and Grain 2 shippers) were notified to Ofgem.

In April 2007 Ofgem granted an exemption<sup>138</sup> for a maximum period of 19 years from the start of commercial operation. (The target commissioning date for Grain 3 was October 2010.) Thus Ofgem has shortened the period for which the terminal has sought an exemption from 20 to 19 years, to ensure that the exemption duration is 'as adjusted as possible to the shortest reasonable payback period', with no fixed final time limit so that an unexpected delay in the target commissioning date for Grain 3 (October 2010) would not reduce in practice the maximum duration of the exemption.

Ofgem concluded that Grain 3 met all the exemption criteria under the Second Gas Directive (Art. 22). In particular, it concluded that the project would increase capacity for LNG imports thus potentially increasing the diversity of gas supplies but these benefits would only materialise fully effective secondary trading and anti-hoarding mechanisms were implemented. Ofgem also noted that the project would result in reduced market concentration.<sup>139</sup>

<sup>134</sup> Isle of Grain – Application for an exemption (consultation), 14 December 2006, p.1.

<sup>135</sup> Isle of Grain – EC exemption decision (2005).

<sup>136</sup> Included inter alia the installation of gas blending plant as part of the expansion at Grain, which enhances the ability to accept LNG from a variety of sources and the addition of a second jetty and additional storage capacity.

<sup>137</sup> Isle of Grain 3 – Application for exemption, June 2006.

<sup>138</sup> Isle of Grain 3 – Ofgem exemption decision.

<sup>139</sup> I.e. the extent to which the market is dominated by a small number of participants.



As far as the investment risk criterion is concerned, Ofgem concluded that the level of risk was such that the investment would not be (or would not have been) made without the exemption.<sup>140</sup> As in its decision on Grain 1 and 2, Ofgem stated that the criterion that the terminal must be owned by a person other than the gas transporter who operates (or will operate) the pipeline system connected (or to be connected) to the terminal is met.

Ofgem also confirmed that the criterion that charges would be applied was met as capital and operating expenditures were to be recovered through the sale of long-term capacity rights with shippers to be charged an annual fee for the use of Grain 3 capacity, with no part of it to be underwritten by regulated transmission charges.

Ofgem also concluded that the exemption would not be detrimental to competition by analysing the impact of the exemption on upstream (wholesale) and downstream markets, assessing the levels of market concentration with and without an exemption. It stressed that effective secondary trading and the implementation of effective anti-hoarding measures was central for its conclusion that the exemption would not be detrimental to competition and made granting an exemption conditional on the implementation of such arrangements in respect of Grain 3 capacity, noting that failure to develop and implement such arrangements could give Ofgem grounds for amending or revoking the exemption.

Ofgem noted that Grain LNG suggested including an explicit provision in the Grain Specific Terms Agreement STA to develop and implement anti-hoarding arrangements similar to those used in Grain 1,<sup>141</sup> or used at any other terminal developed by any other shipper that has 'regulated TPA exempt LNG importation capacity secured via long term contracts by the time Grain 3 enters commercial operation in 2010'. While acknowledging the Grain LNG commitment, Ofgem noted that such arrangements remained 'untested' and stressed that it was Grain LNG's responsibility to ensure that anti-hoarding measures were 'appropriate and effective'. Ofgem also proposed publishing a guidance note on the design of effective anti-hoarding arrangements for LNG import terminals in 2008. The proposed note, outlining 'key high-level principles' for anti-hoarding arrangements, was expected to be indicative and not legally binding. It would still be the terminals' responsibility to satisfy themselves that their anti-hoarding arrangements were effective.

Ofgem decided to not require an *ex ante* approval of anti-hoarding measures developed by Grain LNG prior to granting an exemption. It also noted that there is a link between provision of information and effective anti-hoarding measures, as third parties need to be able to understand 'clearly (and sufficiently far in advance) whether or not primary capacity is going to be used by primary capacity holders, and welcomed Grain LNG's readiness to make information on historical usage of Grain 3 available to Ofgem and to other parties, subject to confidentiality agreements with shippers. More generally, Ofgem was supportive of the principle of equivalence in the information required to be provided by LNG terminals and interconnectors.

While analysing the impact of the exemption on competition, Ofgem stated that the extent of any impact on competition resulting from granting an exemption would 'critically depend' on the outcome of the OS process and the market share allocation to various participants at Grain 3. Ofgem acknowledged the Grain LNG statement that 'many aspects' of regulated TPA were included in its proposed access arrangements, including a non-discriminatory OS in respect of Grain 3 capacity, which 'should provide comfort' that this would allow capacity access on the basis of 'market prices and contract durations proposed by bidders'.

It made its assessment on the basis of the information submitted by Grain LNG following the receipt of firm bids from prospective users.<sup>142</sup> Grain LNG has provided Ofgem with the list of the potential holders of Grain 3 capacity and stated that no other parties will be allocated capacity in the OS process. Grain LNG has also confirmed that more than half of bidders were not existing customers, while also noting that no new customers were involved in the development of LNG terminals elsewhere in the UK. It has further confirmed that no existing customer of Grain (i.e. Grain 1 and 2) will be allocated more than 100 out of 210 GWh/d (i.e. ~50%) of Grain 3 capacity but noted that it placed no restrictions on the bids submitted by prospective users during the open season.

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<sup>140</sup> The Interpretive Note defines these as projects that would significantly increase final customers' bills if underwritten by regulated tariffs. A rule of thumb of such an increase given by the Interpretive Note was more than €10 per connected customer.

<sup>141</sup> At the time when Grain 3 applied for an exemption, Grain 2 was under development whereas Grain 1 was already operational.

<sup>142</sup> Grain LNG has only made this information known to Ofgem as confidential, hence it is not publicly available.



Based on this information Ofgem concluded that in the event that there are new entrants as a consequence of Grain 3, then Grain 4 would bring significant benefits by decreasing concentration and promoting competition. Ofgem made the exemption conditional on the final outcome of the OS process, noting that once the final capacity allocation is known, 'and in particular in the event that the outcome is different' from that provided by Grain LNG to Ofgem during the exemption assessment process, Ofgem may re-examine whether Grain 3 meets all the relevant criteria, and may modify or revoke the exemption ("fast track" revocation) in the event that the information on the basis of which Ofgem made its initial decision to grant the exemption changes.

#### **Grain 4 Exemption**

In August 2009, Grain LNG applied for an exemption from regulated TPA in respect of Grain 4 in the amount of up to 8.4 bcma for 27 years. By the time the application was made the Third Gas Directive had been adopted thus placing the UK under an obligation to transpose it into national law by 3 March 2011. Therefore Ofgem considered the Grain 4 exemption application under the Third Gas Directive (Art. 36) (Section 4.1), rather than under the Second Gas Directive (Art. 22) as was the case in respect of Grain 1, 2 and 3.

Grain LNG wanted to reserve Grain 4 capacity for three parties involved in the OS under long-term agreements with a duration between 13 and 25 years.<sup>143</sup> The exemption was granted from regulated TPA and tariff provisions in March 2013, four years after the application was first made.<sup>144</sup> The duration of the exemption was not to exceed the project's pay-back period of 24 years.<sup>145</sup> The exempted capacity was split into three tranches: 3.7, 2.6 and 2 bcma, with the first tranche exempted for 22 years (from 2018 until 2040), the second – for 20 years (from 2016 until 2036), and the third – for 13 years (from 2016 until 2029). When the exemption period for each tranche ends, its corresponding capacity – 'uncontracted capacity' – was to become subject to regulated TPA. Ofgem also stipulated that it must approve an anti-hoarding mechanism for selling any unused Grain 4 capacity before the terminal became operational, which would be subject to subsequent periodic reviews.

On 4 June 2013 the EC approved the exemption for Grain 4 without requesting any amendments.<sup>146</sup> The EC has agreed that all the criteria for an exemption under Art. 36 are met as long as no single prospective user acquires more than two of the three aforementioned tranches. Both Ofgem and the EC noted that the exemption could be reconsidered should the final result of the OS be materially different.

Although commercial operation at Grain 4 was planned to start in winter 2016-17, at the time of this paper being completed it was not expected until 2025. As Grain 4 construction had not started within 2 years of the date of the EC's approval of the exemption (that is prior to 4 June 2015), the Grain 4 exemption was revoked by Ofgem with effect from 4 June 2015.<sup>147</sup> This does not preclude the Grain terminal from applying for an exemption in the future, but to our knowledge this has not yet happened.

#### **Capacity Allocation, Anti-Hoarding Mechanisms, Tariffs**

As noted above, all of the terminal's capacity – existing (Grain 1, 2 and 3) and yet to be built (Grain 4) – has been/is being allocated through an OS process.

The terminal has developed and implemented anti-hoarding measures, which are applied when the primary capacity holders 'do not wish to fully utilize their capacity holdings at the terminal with their own LNG'.<sup>148</sup> Grain LNG has a 'hierarchy' of anti-hoarding measures, which starts from *bilateral trading of cargoes*, when the primary capacity holders acquire third-party cargoes. Capacity contracts concluded between Grain LNG and its primary capacity holders include take or pay provisions,<sup>149</sup> thus suggesting payment by the primary holder to the terminal for contracted capacity, irrespective of whether or not it was used. Therefore, the primary capacity holders are 'fully incentivized to compete to acquire third party cargoes via bilateral trading arrangements', if they do not intend to fill their capacity with their own LNG. Under the bilateral trading of cargoes anti-hoarding provision, a primary capacity holder can

<sup>143</sup> Isle of Grain 4 – Ofgem exemption decision, 8 March 2013.

<sup>144</sup> Isle of Grain 4 – Ofgem exemption decision, 2013.

<sup>145</sup> Grain 4 estimate of its payback period was 27 years but this was reduced by Ofgem to 24 years.

<sup>146</sup> Isle of Grain 4 – EC exemption decision, 2013.

<sup>147</sup> Isle of Grain 4: revocation of exemption, 4 June 2015.

<sup>148</sup> Grain LNG, Third party access arrangements: guide for prospective secondary capacity customers.

<sup>149</sup> Grain LNG presentation, 2019.



conclude a bilateral agreement with a third party to purchase the latter's LNG cargo – on the terms agreed bilaterally (with no involvement of the terminal itself) – so that the primary capacity holder could use its contracted capacity with third-party gas.

*Within terminal trading* of individual capacity rights between the terminal's customers (both primary capacity holders and third parties) is another mechanism in the terminal's hierarchy of anti-hoarding arrangements.<sup>150</sup> It could be used by the primary capacity holders to facilitate trading of their capacity and by secondary capacity holders.

A third anti-hoarding arrangement, implemented at Grain LNG, is *Secondary Capacity Mechanism (SCM)*, under which the primary capacity holders can sell their capacity rights to third party shippers to give them firm access to capacity. Under the SCM, an LNG cargo could be handled through the terminal by the primary capacity holder and delivered back to the third party (or a counterparty) at the National Balancing Point (NBP).<sup>151</sup> Alternatively, the third party can obtain capacity rights from the primary holder for a pre-determined period of time and manage unloading and nomination through the terminal and into the transmission network itself. In the latter case, the third party would need to have a direct contractual relationship with the terminal. Notably this option is not available at the Dragon terminal (Section 4.2.3), where no direct contractual relationship between the terminal operator and the third party is possible. Presumably, this option is available at the Isle of Grain terminal because, unlike Dragon, it is operated by, a 100% owned subsidiary of National Grid.

Any third party interested in using the SCM needs to provide the primary capacity holder with information about how much capacity and on which dates it wants this to be made available; the primary capacity holder will inform it about the arrangements which need to be made for booking secondary capacity. Notably such arrangements, including tariffs, are specific to each primary capacity holder (thus suggesting they are determined by it), although the key principles are similar. Typically, capacity products available under a SCM consist of:

- single, firm, fixed date berthing slot(s),
- firm temporary LNG storage,
- *firm* deliverability over a pre-determined period sufficient to vacate storage space prior to the primary capacity holder's next scheduled slot.<sup>152</sup>

Parameters such as the size of vessel, the amount of storage space and send-out capacity available depend on the primary holder's capacity holdings, with some adjustments possible by means of within-terminal trading. The SCM arrangements, including tariffs, are not publicly available.

In addition to the three anti-hoarding measures listed above – bilateral trading of cargoes, within terminal capacity trading, and the SCM – all of which are applied by the primary capacity holders – the terminal's operator, Grain LNG, has its own *use-it-or-lose-it (UIOLI) anti-hoarding mechanism*. According to this mechanism, if spare capacity is expected at the terminal that was not used or sold by primary holders or has been returned by primary holders, Grain LNG will offer this capacity to the market at an auction as a UIOLI slot. Any third party willing to participate in the UIOLI anti-hoarding mechanism must become a registered user, sign a framework agreement with the terminal, and be subject to a credit check.

An auction procedure consists of two stages: at the first stage the UIOLI slot will be awarded to the highest bidder, subject to *inter alia* any reserve price, whereas at the second stage the slot will be awarded on a 'first come, first served' (FCFS) basis, also subject to any reserve price. (Methodology for setting a reserve price for an auction is not public). The terminal has a right to cancel an auction at any time while it remains open and before the slot is awarded.

A UIOLI slot consists of a berthing slot, LNG storage capacity and interruptible<sup>153</sup> deliverability. The slot is offered seven days (or sometime earlier) prior to the berthing date.<sup>154</sup> Under this mechanism, the

<sup>150</sup> National Grid Grain LNG, Third party access arrangements: guide for prospective secondary capacity customers, 2017-18.

<sup>151</sup> This arrangement is similar to the one used at the Dragon terminal.

<sup>152</sup> Grain Capacity Guide.

<sup>153</sup> As opposed to firm deliverability when the SCM is used.

<sup>154</sup> This is less than the 12 days offered at Dragon.



third party will be able to nominate send out of gas to the NBP according to predefined parameters of its slot throughout its duration. In order to receive gas at the NBP the third party must have a shipper license, be party to the GB network code, and book the necessary entry capacity itself.<sup>155</sup> In addition to nominating LNG for delivery into the national transmission network, the third party also has a right to transfer it to other parties by means of within-terminal trading. The unloaded LNG must all be delivered to the network (exported) or transferred by the time the window allocated for the UIOLI slot expires.

The terminal operator manages the UIOLI anti-hoarding mechanism, which envisages a direct contractual relationship between the terminal operator and a third party, with no direct involvement of primary capacity holders (unlike in the case of Dragon, Section 4.2.3). The implementation of the UIOLI anti-hoarding mechanism is mandatory.

### **Isle of Grain LNG - Summary**

- The terminal is owned and operated by Grain LNG, a 100% subsidiary of National Grid;
- It was developed in three phases (Grain 1, 2 and 3) (19.5 bcma); the fourth phase (Grain 4) (~8.4 bcma) is under development;
- All the primary capacity is booked under long-term take-or-pay contracts, with each phase's capacity allocated in an OS (via auction); Grain 4 OS was held in 2011 to test market demand for additional import capacity, following which it received several bids in November 2011, and subsequently held negotiations with three parties based on the bids received;
- Grain 1, 2 and 3 hold an exemption under the Second Gas Directive, Grain 4 (prior to revoking) held an exemption under the Third Gas Directive:
  - Grain 1 and 2: exemption granted in respect of its entire proposed capacity (i.e. the initial capacity of 4.5 bcma for a duration of 20 years and the expansion capacity of 10 bcma for a duration of 25 years from the start of commercial operations); not required to publish tariffs but could be required to provide information on tariffs to Ofgem, including for dispute resolution purposes; required to develop and implement anti-hoarding measures (but no obligation of *ex ante* approval by Ofgem);
  - Grain 3: exemption granted in respect of the entire capacity for 19 years from the start of commercial operation; required to develop and implement anti-hoarding measures (but no obligation of *ex ante* approval by Ofgem); no existing customer of Grain 1 and 2 to be allocated more than ~50% of Grain 3 capacity;
  - Grain 4: exemption was granted in respect of the entire capacity, split into three tranches: 3.7, 2.6 and 2 bcma, and exempted for 22, 20 and 13 years respectively; upon the end of each tranche exemption period its capacity to become subject to regulated TPA; anti-hoarding mechanism made subject to *ex ante* approval by Ofgem; exemption was revoked due to delayed start of construction.
- Two types of anti-hoarding measures, one type is to be applied by primary capacity holders and another – by the terminal operator:
  - The first type consists of *bilateral trading of cargoes* when the primary capacity holders acquire third-party cargoes; *within terminal trading* of individual capacity rights between the terminal's customers; the *Secondary Capacity Mechanism (SCM)*, under which the primary capacity holders can sell their capacity rights to third party shippers;
  - The second type is a *use-it-or-lose-it (UIOLI) anti-hoarding mechanism* under which the operator will offer capacity to the market in an auction as a UIOLI slot: capacity that was not used or sold by primary holders, or has been returned by primary holders, is expected to become available for UIOLI.

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<sup>155</sup> Importantly, the terminal could interrupt send out by the third party during the slot, in which case additional deliverability would be allocated on days subsequent to the slot. Such allocation is done at the discretion of the terminal but will 'ultimately allow export of all shipper stock held'.



#### 4.2.2 The South Hook terminal

The South Hook LNG terminal, located in south west Wales, was planned to have initial capacity of 10.5 bcma and expansion capacity of another 10.5 bcma. At present, the terminal, which was commissioned in 2010,<sup>156</sup> has capacity of 21 bcma (15.6 mpta) having achieved its full planned capacity. The terminal was developed as part of a fully integrated gas supply chain, with gas being extracted from the Qatari North Field (offshore), piped to Ras Laffan (onshore) for liquefaction, from where it is shipped to the South Hook terminal, where it is regasified prior to delivery into the national transmission system.

##### **Exemption**

The terminal's original owners – Qatar Petroleum and Exxon Mobil – applied for an exemption from regulated TPA under the Second Gas Directive in 2004.<sup>157</sup> The GB regulatory authority, Ofgem, confirmed that all the criteria for granting an exemption under Art. 22 of the Second Gas Directive were satisfied, and granted an exemption in respect of the terminal's entire capacity (i.e. the initial capacity of 10.5 bcma and the expansion capacity of 10.5 bcma both for a duration of 25 years from commencement of commercial operations).<sup>158</sup> In particular, Ofgem stated that 'gas in a new location could be expected to enhance security of supply, as could the fact that this gas would be from a new source' thus meeting the security of supply criterion. It also stated that 'the level of risk ... is likely to merit exemption' as 'it was difficult to see how the risks associated with this project can be mitigated by anything other than some form of long-term contractual support' thus meeting the 'investment risk' criterion. It also stated that the terminal would be 'fully separate' from National Grid Gas (formerly Transco) thus satisfying the condition that the terminal was not to be owned by a person other than the gas transporter who operates or will operate the pipeline system connected or to be connected to the facility. Also Ofgem stated that tariffs should not be published but the terminal 'could be required' under the terms of the exemption to provide Ofgem with tariffs.<sup>159</sup>

Ofgem concluded that the terminal met the competition criterion: because the presence of Qatar Petroleum could be expected to increase upstream and wholesale market competition, whereas the impact of ExxonMobil on the downstream market was expected to be neutral.<sup>160</sup> Ofgem also considered that the terminal would not be detrimental to the effective functioning of the internal gas market in the UK as the entry capacity delivered into the national transmission system 'will be booked consistent with entry capacity elsewhere' on the system.

Notably, Ofgem said that holding an open season (OS) would have been 'a beneficial factor' in support of the exemption application and committed to ensuring that effective anti-hoarding provisions are put in place. Although Ofgem did not specifically approve the anti-hoarding measures, it noted that should such arrangements result in primary capacity not being utilised, this could constitute grounds for reviewing the exemption.<sup>161</sup> Ofgem stated that 'at the very least' the terminal will 'have to demonstrate that there is a transparent mechanism that allows spare capacity to be made available to market', the ultimate objective being to 'ensure that capacity is not hoarded and that unused capacity can be obtained in a transparent market-based manner by third parties' in order to maximise the use of the terminal.

<sup>156</sup> Commissioning was initially scheduled for 2007, see South Hook – Application for exemption, 22 September 2004.

<sup>157</sup> South Hook – Application for exemption. Prior to submitting a formal application for an exemption in 2004, the terminal had first submitted 'an informal application' in 2003 seeking an early guidance on its basis, which received favourable opinions both from Ofgem and the EC.

<sup>158</sup> South Hook – Ofgem Exemption Decision, November 2004.

<sup>159</sup> Interestingly, Ofgem had initially been in favour of requiring the terminal to publish its tariffs for both third party and own use, but changed its mind and decided not to require publication of tariffs following the public consultation results (where only one respondent supported publication of tariffs), see Ofgem exemption decision.

<sup>160</sup> The preliminary views letter on SHTCL's informal application said that, if it was assumed that the wholesale market includes all sales and resales of gas, ExxonMobil's proportion of the wholesale market was still not significant. Alternatively, taking a narrower assessment that the wholesale market is only physical, and treating ExxonMobil's purchase of the Qatar Gas II volumes as the relevant transaction, the addition of 100 per cent of the gas coming out of the South Hook terminal would result in an increase in ExxonMobil's share of the wholesale market but, in Ofgem's current view, not to a level that would be likely to be detrimental to competition. Ofgem's view was that the level of wholesale liquidity did include all sales and resales.

<sup>161</sup> In particular, on the grounds that the exemption from section 19D is operating in such a manner that is detrimental to competition or the operation of an economically efficient gas market.



Ofgem may revoke the exemption if the EC requests the withdrawal of the exemption decision, and if the EC has requested amendment of the exemption decision but the terminal owner does not agree to such amendment. Should there be any grounds for revocation, Ofgem may, with the consent of the terminal owner, amend this exemption rather than revoke the exemption. Ofgem also may, with the consent of the terminal owner, amend this exemption where Ofgem has been requested to amend the exemption by the EC. Should the ownership of the terminal change, the exemption is transferable to another terminal owner, subject to Ofgem approval.

The exemption was notified to the EC on 1 December 2004, at the same time as the exemption for the Isle of Grain terminal. The EC approved the South Hook exemption on the same day as the Isle of Grain exemption, similarly not requiring any amendments to the Ofgem exemption.<sup>162</sup>

### **Capacity allocation and tariffs**

The South Hook terminal is owned and operated by the South Hook LNG Terminal company, which is owned by three shareholders: Qatar Petroleum (67.5%), ExxonMobil Qatargas (II) Terminal company (24.15%), and Total (8.35%). (Originally, the South Hook terminal was owned by Qatar Petroleum and Exxon Mobil, which sold some of their shares to Total in 2006).<sup>163</sup> The South Hook Gas Company – separate and distinct from the South Hook LNG Terminal Company – is responsible for LNG commercial arrangements, including imports. It is owned by Qatar Petroleum International and Exxon Mobil Qatargas, holding 70% and 30% of the shares respectively. The management of the import capacity is separate from the operation of the terminal, but Qatar Petroleum maintains majority shares in both companies – 67.5% and 70% respectively.

The South Hook Gas Company is the base user of the terminal and has booked all of its (primary) capacity under the corresponding agreement with the South Hook LNG Terminal Company. Capacity booking includes:

- a firm right to berth within specified slots and unload LNG (of agreed quantity and quality),
- a firm LNG storage space at the terminal matching the firm quantity of unloaded LNG,
- a firm right for regasified LNG to be re-delivered at the tailgate of the terminal (re-delivery capacity) immediately prior to the national transmission system entry flange on any given day.

Notably it is the South Hook Gas Company – rather than the South Hook Terminal Company – that is the first point of contact for an LNG supplier seeking to access secondary capacity at the terminal. In order to have access to the terminal's secondary capacity, a third party must first become an additional user of the terminal, which involves *inter alia* signing a confidentiality agreement (CA), sending an application letter to the operator, and paying the application fee. The operator then sends the third party copies of the terminal access agreement (TAA) and the terminal access code (TAC)<sup>164</sup> which the applicant must sign. After this the TAC becomes legally binding.<sup>165</sup> To become an Additional User a party also needs to demonstrate to the operator that there exist necessary arrangements for re-delivery of regasified LNG into the national transmission system.<sup>166</sup>

The terminal's secondary capacity can be accessed by an additional user in the form of a South Hook Bundle (SHB) – a single berthing slot, firm redelivery capacity and LNG storage space for a defined period of days.<sup>167</sup> There are three ways of achieving this: (a) by agreement with the South Hook Gas Company; (b) by participating in a capacity auction; (c) by way of capacity transfers with other additional users.

An additional user can book such capacity by participating in an auction, conducted by the South Hook Terminal Company, as and when secondary capacity becomes available on a defined timescale.

<sup>162</sup> South Hook – EC exemption decision, 10 February 2005.

<sup>163</sup> 'Total finalises Qatargas, South Hook LNG acquisitions', *Oil & Gas Journal*, 8 December 2006.

<sup>164</sup> Other documents include South Hook manual (SHM) and Network Entry Provisions (NEPS).

<sup>165</sup> South Hook LNG terminal – how to become an additional user of South Hook LNG terminal.

<sup>166</sup> It is possible to become an additional user without having already made specific arrangements to acquire secondary capacity (but additional requirements apply when an additional user acquires a SHB).

<sup>167</sup> These parameters are all as agreed by the Base User when making the original transfer, except in the case of an auction. The Additional User must nominate redelivery of all the LNG unloaded within the SHB Period.



The terminal operator offers an additional Release SHB at an advertised auction to all additional users when 'sufficient unused redelivery capacity and scope for an additional berthing slot' is forecast.<sup>168</sup> The Release SHB is offered 14 days ahead of the slot for a fixed period of 7 days only.<sup>169</sup> The terminal operator defines the range of capacity available for the Release SHB, taking into account inter alia limitations at the entry point to the national transmission system.

The operator advertises an auction to all additional users, specifying the date of the berthing slot, duration of the SHB period and whether matching entry capacity at the national transmission system is available. Additional users can bid for the Release SHB (they are able to submit 'bid enquiries', specifying their cargo size, quality and the approved tanker name 10 days before the berthing slot) and offer the price they are willing to pay.

The terminal operator responds to each enquiry to indicate if it is feasible within the auctioned capacity range and, if so, confirms the berthing slot date.<sup>170</sup> If the terminal decides that the bid enquiry is feasible, it informs the additional user of the reserve price (if any) so that the additional user could confirm the bid by posting the offered price.<sup>171</sup> Ten days before the berthing slot the operator will select the winning bid by means of applying the selection criteria (in the SHM), subject to a reserve price, and announce the auction result.

As the terminal operator offers the Release SHB on behalf of the South Hook Gas Company, an additional user (if its application was accepted) will have to conclude a release capacity transfer agreement with the South Hook Gas Company for the Release SHB. Capacity is transferred from the South Hook Gas Company to the additional user, and the latter pays the price offered at the auction to the former. The terminal operator will execute the release capacity transfer agreement in respect of the relevant Release SHB on behalf of the base user. According to the terminal website, in certain (unspecified) cases, applicants for a Release SHB have an option of applying for a matching amount of the national transmission system entry capacity for each of the 7 gas days during the SHB period.

As an alternative to acquiring a SHB at an auction, an additional user can purchase an SHB either from the South Hook Gas Company (the base user) directly, or else accept an SHB transfer from other additional users.<sup>172</sup> The base user can transfer capacity to an additional user only as an SHB. It can also transfer firm redelivery capacity to additional users that already hold an SHB. The additional firm redelivery capacity will be added to the existing SHB. All users may also purchase additional interruptible redelivery capacity made available by the terminal operator on any particular Gas Day. An additional user may only transfer the whole of the SHB to another additional user and cannot transfer part of the terminal capacity in an SHB. Where an additional user wants to buy the capacity either from the base User (the South Hook Gas Company) or from another additional user – as a bilateral transfer – both parties must jointly notify such transfer to the terminal operator.<sup>173</sup>

In order to use the terminal capacity under a SHB, an additional user must comply with the TAC requirements, including in respect of its credit-worthiness (relating inter alia to redelivery charge), which must be satisfied at least 15 days before the start of SHB period, and the usage of the terminal-approved LNG tankers.

The base user is always liable to pay charges for its primary capacity to the terminal operator. The additional user is liable to pay charges for secondary capacity to the base user. All users pay to the operator a redelivery charge (which covers variable operating costs including emissions allowances) and charges for any interruptible redelivery capacity acquired.

According to the terminal's secondary capacity guidance, 'in certain circumstances' the terminal operator 'may comply with its obligation to redeliver regasified LNG on any particular day to an

<sup>168</sup> South Hook Capacity Guide, January 2018.

<sup>169</sup> If the Terminal Operator's forward projections show that the Base User's Inventory levels do not allow enough LNG Space for a Release SHB but there is berth availability, the Terminal Operator may offer an Advance Release SHB. Under this mechanism, the SHB period commences before the unloading (i.e. before the Berthing Slot) and inventory is loaned by the Base User to the Additional User for this period to enable it to redeliver LNG consistent with the SHB.

<sup>170</sup> If the berthing slot date is later than day D the SHB would be an advance release SHB.

<sup>171</sup> If the bid enquiry is not confirmed it has no effect.

<sup>172</sup> As once a SHB has been bought by an Additional User, it can be sold to other Additional Users.

<sup>173</sup> The TAC and the electronic Terminal Access System (TAS) set out the detailed mechanism for such transfer and notification. A fee is payable by the transferee Additional User.





additional user by delivering gas at the NBP to that additional user (or its nominee).<sup>174</sup> Importantly, an additional user is itself responsible for arranging delivery of its regasified LNG from the terminal into the national transmission system. It can either become a shipper itself<sup>174</sup> or make an arrangement with a third party, which would ship its gas through the national transmission system. According to the terminal's secondary capacity guidance, 'under certain circumstances' the South Hook Gas Company (as the base user) 'may transfer' entry capacity into the national transmission system to an additional user in connection with its Release SHB.

Notably, the South Hook Gas Company, as the base user, can offer LNG processing services to others for periods when it is not using all the terminal's capacity itself.<sup>175</sup> According to the terminal's website, this arrangement would not require an interested LNG owner to become an additional user and are not covered by the terminal's guidance for allocation of secondary capacity. No further detail is publicly available about the nature of this arrangement.

#### **South Hook Terminal - Summary**

- An exemption in respect of the terminal's entire capacity of 21 bcma (the initial capacity of 10.5 bcma for a duration of 25 years and the expansion capacity of 10.5 bcma for a duration of 25 years) was granted from when commercial operations commenced);
- The terminal is operated by the South Hook LNG Terminal Company which is separate from the South Hook Gas Company, which is the terminal's base user and is responsible for LNG commercial arrangements;
- All primary capacity is booked by the base user under an agreement with the terminal operator;
- A third party must first contact the base user and become an additional user in order to have access to secondary capacity;
- Secondary capacity can be booked in the form of a South Hook Bundle (SHB) by means of (a) agreement with the base user; (b) participation in a capacity auction; (c) capacity transfers with other additional users;
- The base user can offer LNG processing services to others for periods when it is not using all the terminal's capacity itself, this arrangement would not require an interested LNG owner to become an additional user and is not covered by the terminal's guidance for allocation of secondary capacity;
- The base user is always liable to pay capacity charges to the operator for its primary capacity rights whereas the additional user is liable to pay secondary capacity charges directly to the base user;
- The operator could be required by Ofgem to provide information on tariffs (but has no obligation to publish tariffs);
- The operator is obliged to develop anti-hoarding arrangements (but no requirement for *ex ante* approval by Ofgem).

#### **4.2.3 The Dragon terminal**

The Dragon LNG terminal is located in Wales, close to South Hook.<sup>176</sup> Dragon was planned to have an initial capacity of 6 bcma and an expanded capacity of up to 6 bcma (thus totalling 12 bcma), to be constructed in one or more phases. The terminal's current capacity is 7.6 bcma.<sup>177</sup>

#### **Exemptions**

Shortly after the UK regulatory authority, Ofgem, granted an exemption to the Isle of Grain and the South Hook LNG terminals, it also granted an exemption from certain provisions of the Second Gas

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<sup>174</sup> To make these arrangements an additional user needs *inter alia* to have a shipper license, be a party to the National Grid's network code, and acquire entry capacity.

<sup>175</sup> South Hook Capacity Guide.

<sup>176</sup> Dragon LNG terminal, <https://dragonlng.co.uk>

<sup>177</sup> Extra capacity of 1.6 bcma could be explained by de-bottlenecking Phase 1.



Directive to the Dragon LNG terminal.<sup>178</sup> The exemption was notified to the EC on 3 February 2005, and on 29 March 2005 the EC approved it without requesting any amendments.<sup>179</sup>

Under the Second Gas Directive several criteria, including its impact on competition, had to be fulfilled for an exemption to be granted. Ofgem has stated that it views the exemption as not being detrimental to competition and explained that such view is dependent on the Dragon terminal providing possibilities for secondary (capacity) trading and anti-hoarding mechanisms (i.e. UIOLI arrangements). Ofgem also stated that, under the terms of the exemption, the Dragon terminal could be required to provide Ofgem with information on tariffs, thus enabling it to have access to the necessary information to investigate future possible disputes submitted by market participants over tariffs. The exemption was granted for a period of 20 years in respect of the initial capacity (of 6 bcma) from the start of commercial operation, and for a period of 20 years from the start of commercial operation of each phase of expansion capacity (of 6 bcma).<sup>180</sup> The terminal received its first cargo in July 2009, four years after the exemption was granted.<sup>181</sup>

The EC agreed that the exemption criteria have been fulfilled despite the indirect involvement of Centrica (a company which already had 'a moderately strong position in the retail market') in the terminal, as it decided that sufficient safeguards were provided in the exemption. Centrica is a counterparty to a long-term supply contract (LTSC) with Petronas which, alongside Shell, holds 50% of the terminal's capacity under contracts which at the time of writing are still in place.<sup>182</sup> At the time the exemption was granted, this LTSC covered all of the gas imported through the terminal, that is 50% of the total capacity of the first phase, 3 bcma, for 15 years. Petronas, alongside Shell, originally owned a 50% stake in the terminal until July 2019, when it sold it to an infrastructure investment fund, Ancala LNG.<sup>183</sup>

Should any grounds for revocation of the exemption arise, Ofgem has a right – with the consent of the terminal owner – to amend rather than revoke the exemption. Also, Ofgem has a right – with the consent of the terminal owner – to amend the exemption where it has been requested to do so by the EC in the process of the exemption assessment by the latter. Should the ownership of the terminal change, the exemption is transferable to another terminal owner, subject to Ofgem approval.

### **Capacity allocation, access and tariffs**

All (primary) capacity in the Dragon terminal has been sold to the primary shippers – Shell and Petronas – under long-term capacity contracts for 20 years, reflecting the terminal's exemption from TPA. Under these contracts, primary shippers have capacity rights enabling them to berth and unload LNG, store LNG prior to regasification, regasify and send out regasified LNG into the GB transmission system.<sup>184</sup>

The primary shippers also have the right to sell or sublet their capacity rights to third parties. According to the Dragon terminal's guide to secondary capacity access,<sup>185</sup> third parties wishing to use capacity should contact either of the primary shippers – that is Shell or Petronas – as 'a prelude to potential bilateral negotiations' for the use of capacity, or conclude ex-ship agreements with them for the delivery of LNG to the terminal. Only if the primary shippers identify that a berth slot will not be used by themselves or a third party will the anti-hoarding mechanism be used based on an auction. Only a third party that has been confirmed by the primary shipper as a qualified bidder can take part in the auction.

In other words, the anti-hoarding mechanism is a 'last resort' which is used if the primary shippers fail to source the cargo to use the slot themselves, or have been unable to reach an agreement with a third party to use the slot, or sell a cargo on an ex ship basis to the primary shipper which holds the slot. The mechanism is triggered if the primary shipper has not identified a vessel to use the slot at least 12 days before the slot is available.

<sup>178</sup> Dragon – Ofgem exemption decision, 1 February 2005.

<sup>179</sup> Dragon – EC exemption decision, 29 March 2005.

<sup>180</sup> Dragon – Draft application for an exemption - Ofgem final views, June 2004.

<sup>181</sup> Dragon LNG Terminal, <https://www.dragonlng.co.uk/about-us/our-terminal>

<sup>182</sup> A long-term availability-based throughput agreement with Shell and Petronas.

<sup>183</sup> Shell has retained its 50% stake, see 'Ancala acquires 50% interest in Dragon LNG', 2 July 2019.

<sup>184</sup> Dragon Capacity Guide.

<sup>185</sup> Ibid.



Third parties can access capacity in the terminal either by concluding a bilateral agreement with one of the primary shippers for use of capacity, by concluding an ex ship agreement with one of the primary shippers, or by using the anti-hoarding mechanism if both two previous methods failed and the primary shipper has identified a slot that will not be used.

Under the terms of the anti-hoarding mechanism, the primary shippers provide the third party with a firm service enabling it to unload a cargo at the terminal and receive an equivalent quantity of gas (minus losses and fuel gas used) at the entry point into the national transmission system (the National Balancing Point).<sup>186</sup> Thus the primary shipper uses its contractual rights with the Dragon terminal (stipulated in long-term capacity contracts) to ensure that it can meet its obligations vis-à-vis the third party. Each primary shipper is responsible for providing *inter alia* firm access to a slot, sufficient storage space, sufficient regasification capacity, and sufficient entry capacity into the national transmission system. Notably there is no direct contractual relationship between the third party and the Dragon terminal.<sup>187</sup>

Payment consists of a base charge, transportation charges (on a pass-through basis) in line with the tariff charged by the TSO (National Grid Gas) under the network code, as well as nitrogen charges (where applicable) and additional charges where relevant (such as insurance). The primary shipper notifies indicative charges to the third party prior to a capacity auction. Effectively this means that the primary shipper receives an LNG cargo at the terminal from the third party and redelivers gas to it at the NBP. The Dragon terminal guide states that 'operational risk and charges [...] reflect the risk and costs' that the third party would face if it were directly contracting the capacity itself, and that by delivering gas at NBP the primary shipper 'may, at its discretion, be able to minimise the costs and risks'. However, under the terms of the exemption, it is not possible to ascertain what would be the risks and costs to the third party had it been directly contracting the capacity itself, as at present direct contracts are not possible.

Notice of an anti-hoarding mechanism auction is published on the terminal's website at least 12 days prior to the relevant slot. Specific conditions associated with the auction (including a reserve price and indicative transportation related charges) are not published and are only provided to the third party (which has been previously confirmed as a qualified bidder) upon request. The party submitting the highest bid wins the auction.

As far as the reserve price is concerned, the terminal's guide states that the price is used to 'ensure that at least the costs of providing the service are covered', including lost revenues if in order to provide sufficient space for the third party LNG, the primary shipper was 'forced to send out gas early at a lower price than would have been available if the gas had been sent out later'. The guide specifies that the reserve price may also be used to 'ensure that the primary shipper receives a reasonable share of the market value of the slot'. Given that at present it is impossible for any third party to contract capacity directly, it is not clear how market value of the slot could be determined. The terminal's guide provides no detail on how market value is determined and what share is considered reasonable.

### ***The Dragon Terminal - Summary***

The terminal was planned to have an initial capacity of 6 bcma and an expanded capacity of up to 6 bcma (totalling 12 bcma); its current capacity is 7.6 bcma.

An exemption was granted for a period of 20 years in respect of the initial capacity of 6 bcma from the start of operation, and for a period of 20 years in respect of each phase of expansion capacity of 6 bcma from the start of operation;

All primary capacity is booked by Shell and Petronas under long-term contracts for 20 years but secondary capacity is available for third parties;

The terminal is obliged to enable secondary capacity trading and anti-hoarding mechanisms (i.e. UIOLI arrangements);

Third parties can access capacity either by concluding a bilateral agreement with one of the primary shippers for use of capacity, or concluding an ex ship agreement with one of the primary shippers, or

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<sup>186</sup> Ibid.

<sup>187</sup> Apart from the confidentiality agreement.



using the anti-hoarding mechanism (if both two previous methods failed and the primary shipper has identified a slot that will not be used);

The anti-hoarding mechanism is based on an auction where the highest price bidder wins. The primary shipper receives an LNG cargo at the terminal from the third party and redelivers gas to it at the NBP, and there is no direct contractual relationship between the third party and the terminal;

The auction reserve price is such as to cover 'at least the costs of providing the service' including lost revenues and may also be used to 'ensure that the primary shipper receives a reasonable share of the market value of the slot';

The terminal operator could be required to provide the regulatory authority with tariff information, including for dispute resolution purposes.

### 4.3 Exempted terminals in the Netherlands: Gate

The Gate LNG terminal is the first (and so far the only) Dutch LNG import terminal. It has been operational since 2011 and has capacity of 12 bcma. The terminal's total capacity was originally envisaged to be 16 bcma (12 bcma being the initial capacity). At the time of writing the terminal is considering an increase in capacity of up to 2 bcma, which could be made available to the market from 1 September 2021.<sup>188</sup> The terminal is connected to the Gasunie Transport Service (GTS) gas transmission network.

#### Exemption<sup>189</sup>

On 17 November 2006 the Dutch government (based on the Dutch regulatory authority's opinion) granted an exemption to the Gate terminal from TPA under the Second Gas Directive in respect of 16 bcma from 1 September 2011 for 20 years. (Thus the exemption will expire in 2031). The exemption was granted subject to certain conditions, in particular, the obligation to apply a use-it-or-lose-it (UIOLI) mechanism, under which unused capacity must be offered on the secondary market at least one month before regasification, with such mechanism being made part of all the throughput agreements (TA). The exemption also forbids assigning more than 50% of primary capacity to a party with a dominant market position. Furthermore, it obliges the terminal to develop a procedure for future capacity expansion, under which all parties would be able to express interest in contracting capacity in an open and transparent process.

The exemption decision was notified to the EC on 23 November 2006 and on 26 March 2007 the EC approved the exemption without asking for any modifications.<sup>190</sup>

#### Capacity access and tariffs

Two Dutch companies – Gasunie and Royal Vopak – were the original initiators and owners of the Gate terminal, each owning a 50% stake. They subsequently reduced their combined share to 80% (keeping 40% each), and other European companies, which booked primary capacity in the terminal, acquired 20% of the shares. The ownership has since reverted to the original shareholding.

All of the terminal's initial primary capacity of 12 bcma has been contracted by four companies – DONG, RWE-Essent, OMV-Econgas and E.On – under long term agreements signed during 2006-08.<sup>191</sup> As part of their capacity agreements, these companies acquired a 5% equity stake each in the terminal, with the remaining 80% remaining to be owned by Gasunie and Vopak (which reduced their stakes by 10% each). In May 2006 the terminal signed a long term throughput agreement with RWE for 3 bcma, with RWE also taking a 10% stake in the terminal. At the same time, another contract for 2 bcma was

<sup>188</sup> Gate LNG terminal, Details on Open Season, 7 March 2019, <https://www.gateterminal.com/en/nieuwsberichten-archive/details-on-open-season/>

<sup>189</sup> Gate LNG terminal, Contracts/Codes, Regulation, <https://www.gateterminal.com/en/commercial/contracts-codes/>

<sup>190</sup> Gate – EC exemption decision. Although the EC has not asked for any amendments to the Dutch regulatory authority's exemption decision, it has provided several comments.

<sup>191</sup> King and Spalding (2017); 'Gate LNG capacity reallocation heralds new era for Dutch hub', *ICIS*, 25 June 2015.



signed with another user.<sup>192</sup> In August 2008 the terminal signed yet another long term throughout agreement with E.On for 3 bcma, with E.On taking a 5% stake.<sup>193</sup>

Prior to the terminal's start of operations in 2011, RWE and DONG returned some of their primary capacity.<sup>194</sup> This has resulted in a situation where 0.9 bcma of the terminal's primary capacity became uncontracted and available on the market when the terminal started operation.<sup>195</sup> This capacity of 0.9 bcma – which is set to increase to 1 bcma by 1 October 2019 – has been offered on the market through an open season (OS) process, on a FCFS basis. If and when the terminal is expanded – at present an additional 2 bcma is considered – this capacity will also be available on the market.

On 7 March 2019 the terminal launched an OS in respect of 1 bcma of available (primary) capacity and 2 bcma of additional (i.e. expansion capacity subject to FID) on the FCFS basis,<sup>196</sup> having invited all interested parties to enter into binding capacity contracts until 19 April 2019. (This meant that the whole process would need to be completed during a very short period of just one month and a half. Within this period a party would be required to sign a confidentiality agreement,<sup>197</sup> notify its expression of interest by 5 April 2019, and sign a binding contract by 19 April 2019). During this OS parties were able to book the 3 bcma of capacity for the period from 1 September 2021 to 31 August 2031, although the expansion capacity was not offered on the FCFS principle until after the open season.

Capacity contracts must include the following information (for possible later allocation):

- start date (between 1 September 2021 and 31 August 2022),
- end date (at least 5 years after the start date but not later than 31 August 2031),
- annual contracted quantity (amendable as per allocation results) between 0.1 and 1 bcma,
- additional capacity (amendable as per allocation results) of not more than the lower of 2 bcma and 200% of annual contracted capacity (as requested through the 2019 OS and/or as a result of previous allocation).

Available capacity of 1 bcm was to be allocated first, and if more than 1 bcma was requested, requests were to be prioritized by duration, start date (capacity requests with an earlier start date were to be prioritized), with the remaining requests of equal duration and a start date being allocated pro-rata. Available capacity of 1 bcma was offered as a bundled service (annual contracted capacity) of berthing slots, storage and send-out rights.

Once the available capacity of 1 bcma was allocated, secondary (expansion) capacity of 2 bcma was to be allocated next, and if more than 2 bcma was requested, requests were to be prioritized by duration, and start date, with the remaining requests of equal duration and start date being pro-rated.<sup>198</sup> The expansion capacity of 2 bcma has been offered as an unbundled service consisting of additional send-out rights but without additional storage capacity or berthing slots. A party could not acquire additional capacity of more than double its annual contracted capacity, irrespective of whether the capacity had been allocated through an ongoing OS or was the result of previous capacity allocations. The terminal does not disclose its tariffs publicly and only states that tariffs are based on commercial negotiations

<sup>192</sup> Gate LNG terminal website, Major European gas companies committed to Gate terminal, 9 May 2006, <https://www.gateterminal.com/en/nieuwsberichten-archief/vopak-en-gasunie-2/>

<sup>193</sup> Gate LNG terminal website, Gate LNG signs agreement with E.On Ruhrgas, 5 August 2008, <https://www.gateterminal.com/en/nieuwsberichten-archief/agreement-e-on-ruhrgas/>

<sup>194</sup> In 2015 RWE sold its remaining capacity of 2 bcma to Shell whereas DONG recovered its lost capacity and expanded it from 2 to 3 bcma. It is understood that RWE has retained access rights to secondary capacity being released as part of UIOLI as part of an agreement with Shell, 'Gate LNG capacity reallocation heralds new era for Dutch hub', *JCS*, 25 June 2015. Notably, DONG has signed a 10-year supply contract with Iberdrola for 1 bcm, which started in 2011 and has an option of a 5-year extension, see Gate LNG terminal website, 'Iberdrola delivers LNG', <https://www.gateterminal.com/en/nieuwsberichten-archief/iberdrola-delivers-lng/>

<sup>195</sup> Gate LNG terminal website

<sup>196</sup> Gate LNG terminal website, Gate terminal extends primary capacity allocation timing, 29 April 2019,

<https://www.gateterminal.com/en/nieuwsberichten-archief/gate-terminal-extends-primary-capacity-allocation-timing/>

<sup>197</sup> It is only upon the signature of the confidentiality agreement that the party gets access to detailed capacity allocation procedure, which is not available in public domain.

<sup>198</sup> Notably, allocation of additional (expansion) capacity was subject to the terminal taking FID not later 1 September 2019.



during the contracting process. Furthermore, it states that, as it has been granted an exemption, it is not under obligation to publish its tariffs and hence will not publish them.

The Gate terminal operator was expected to notify the parties about their capacity allocations by 26 April 2019. (Any remaining available capacity was to be allocated on the FCFS basis after the open season.) However, despite several expressions of interest received by the terminal during the open season, no capacity contracts have been signed, and capacity allocation timing has been extended further.<sup>199</sup> At the time of writing, neither 1 bcma of available capacity nor 2 bcma of expansion capacity have been allocated yet and the terminal is now offering this capacity on the FCFS basis.

Notably, allocation of the entry capacity in the Dutch transmission network is not part of the terminal's OS and is a separate process, and the responsibility of each party. The user of terminal services is responsible for making all the necessary arrangements for the delivery of its regasified LNG at the delivery point into the Dutch transmission system. These arrangements included holding a GTS shipper licence. It is possible, under certain circumstances, for the existing customers to transfer their GTS entry capacity to a new user (a shipper in the GTS grid) in connection with a release of a UIOLI slot.

The usage of the terminal's services is governed *inter alia* by the general terms and conditions (GTC), the special (customer specific) terms and conditions (STC) and a throughput agreement (TA) – all of which are only made after a confidentiality agreement has been signed by the terminal and a prospective user.<sup>200</sup> Once the terminal has received the signed CA, accompanied by the letter 'summarizing its interest and participation in the LNG/gas market', the terminal would 'elaborate the request and, if applicable, proceed for next steps', including payment of an application fee. The terminal would then organize a meeting to discuss the nature of the applicant's interest, the terminal's business model and specific wishes. The GTC may be submitted after this meeting. Any customer of the terminal must sign a TA. Customers of the terminal as well as registered users (i.e. parties which have acknowledged and approved the GTC but may have not yet signed a TA) have access to the terminal's electronic board where it is possible to see the annual unloading schedule and slots offered by capacity holders.

Services related to secondary capacity can only be rendered to permitted transferees,<sup>201</sup> which have agreed a TA with the terminal and capacity is transferred from an existing terminal customer (either a single UIOLI slot or other capacity). Existing customers may transfer the whole (an entire transfer) or a part (a partial transfer) of their contracted capacity to another customer or to a permitted transferee. The terminal will publish the UIOLI slots on the board on behalf of its current capacity users not earlier than 30 days before the relevant slot starts. Registered users interested in such UIOLI slots must contact the capacity users offering these slots and agree on the terms and conditions for each slot. Once the agreement has been reached, the registered user must have the status of a permitted transferee in order to be able to use this slot. If a registered user indicates its interest in acquiring a berthing slot, the nomination is made on the board for a transfer to take place. Once payment for the slot has been received, the UIOLI customer is entitled to a berthing slot in the specified scheduled arrival window, storage capacity and gas delivery rights during a pre-determined period.

### The Gate Terminal - Summary

- An exemption was granted in respect of 16 bcma (total planned capacity) as of 1 September 2011 for 20 years whereas the terminal's current capacity is 12 bcma (a 2 bcm expansion operational by 2021 is under consideration);
- ~ 1 bcma of uncontracted primary capacity (due to the departure of one of the initial capacity holders) and 2 bcma of expansion capacity has been offered in 2019 in an OS on the FCFS basis;
- Requests were to be prioritized by duration, and start date, with the remaining requests of equal duration and start date to be pro-rated;

<sup>199</sup> Gate LNG terminal website, Gate terminal extends primary capacity allocation timing, 29 April 2019,

<https://www.gateterminal.com/en/nieuwsberichten-archive/gate-terminal-extends-primary-capacity-allocation-timing/>

<sup>200</sup> Any party (new user), which wants to have access to the terminal's capacity needs to sign the confidentiality agreement.

<sup>201</sup> A permitted transferee (PT) (i.e. capacity user or registered user) is permitted to use the terminal capacity (by a transfer or by buying a UIOLI slot).



- No party may acquire the additional capacity in the amount of more than double its annual contracted capacity, irrespective of whether the latter has been allocated through an ongoing OS or is a result of previous capacity allocations;
- Despite several expressions of interest, no capacity contracts have been signed, and primary capacity allocation timing has been extended with capacity offered on the FCFS basis;
- Allocation of the entry capacity in the Dutch transmission network is not part of the terminal's OS and is a separate process, which is a party's own responsibility.

#### 4.4 Exempted terminals in Italy: Adriatic LNG

The Adriatic LNG terminal, with capacity of 8 bcma, which constitutes 10% of national consumption and 50% of national LNG import capacity, is located offshore Italy, in the northern Adriatic Sea, and connected with the Italian transmission network by pipeline. It is one of three Italian LNG terminals. The terminal became operational in the second half of 2009 and is operated by Adriatic LNG, which was founded in May 2005 by Qatar Petroleum, ExxonMobil and Edison. Its present ownership is as follows: Qatar Petroleum (22%), ExxonMobil (70.7%), Snam (7.3%).<sup>202</sup> The service offered by the terminal includes provision of terminal capacity, berthing of LNG carriers, unloading, storage, re-delivery of gas at the entry point into the Italian transmission system (at Cavarzere). Qatar has been the main source of the terminal's LNG imports although the terminal has also received supplies from Egypt, Trinidad and Tobago, Equatorial Guinea and Norway.

##### Exemption

The Italian regulatory authority, Autorità di Regolazione per Energia Reti e Ambiente (ARERA), granted an exemption from TPA to Adriatic LNG in respect of 80% of the terminal's capacity – so called foundation capacity<sup>203</sup> – for 25 years.<sup>204</sup> The remaining 20% of capacity – so called non-foundation capacity – has been made subject to regulation, including TPA provisions. The EC approved the exemption on 10 February 2005 without requesting any amendments.<sup>205</sup> Adriatic LNG is the only Italian terminal which has an exemption (albeit partial) whereas two other Italian terminals – Panigaglia LNG terminal and OLT (Toscana FSRU) – operate under a regulated regime (Section 3.1).

Edison<sup>206</sup> contracted the foundation capacity (~6.4 bcma) under the terminal's foundation capacity agreement for 25 years to regasify LNG, through a supply and purchase agreement with Qatari RasGas. (This agreement (contract) is expected to expire around 2035). Under the terms of the exemption the remaining (non-foundation) capacity must be offered to third parties under a regulated regime in line with the procedures defined by the Italian Ministry of Economic Development and ARERA, such as an open season. In 2008 Adriatic LNG offered its non-foundation capacity to third parties in an open season (OS) process for the duration of the exemption period (until ~2035) with 12% of the capacity allocated to BP until 2019<sup>207</sup> and 8% remaining available.

##### Initial Open Season, 2008 (non-foundation capacity)

A third party can access the non-foundation capacity by participating in an OS. Notably, prior to discussing an OS with the terminal's operator, receiving confidential information on the OS process, or submitting a capacity access request, any third party is required to conclude a confidentiality

<sup>202</sup> SNAM bought a 7.5% stake in Adriatic LNG from Edison, which was one of the three original partners together with QP and ExxonMobil. At the same time SNAM bought ITG, which operates the gas transmission pipeline, which connects the Adriatic LNG terminal to the Italian gas transmission network. ('Snam signs definitive agreements with Edison: investment in 100% of the issued share capital of Infrastrutture Trasporto Gas and 7.3% of the capital of Adriatic LNG', press release, 25 July 2017.)

<sup>203</sup> Foundation capacity is the capacity in respect of which an exemption from TPA has been granted by the Italian regulatory authority and approved by the EC in the amount of 80% of the terminal capacity.

<sup>204</sup> Adriatic LNG – ARERA exemption decision. The Italian regulatory authority, ARERA, adopted a resolution, which established the access rules for the LNG regasification services, including the procedure for the allocation of the regasification capacity and the outline of the access code (Resolution 167/05). However, the criteria set out in Resolution 167/05 for the allocation of regasification capacity do not apply to the first allocation of capacity at new regasification terminals which have been granted a TPA Exemption (but only applies to (i) already existing regasification terminals; and (ii) new regasification terminals which have not applied for or been granted a TPA Exemption).

<sup>205</sup> Adriatic LNG - EC exemption decision, 2005 (in Italian).

<sup>206</sup> As of 2012 part of EDF Group (99.48%).

<sup>207</sup> Adriatic LNG terminal website, open season for capacity subscription of the offshore regasification terminal of terminale GNL Adriatico.



agreement. Subject to concluding the agreement and meeting certain requirements such as inter alia having an LNG import agreement (confirming that the applicant has LNG available which is consistent with the access request<sup>208</sup>) and sufficient LNG tanker capacity to transport these volumes to the delivery point,<sup>209</sup> a third party may become an applicant for the non-foundation capacity by submitting an access request to the terminal's operator by the specified deadline. The access request must specify:

- the duration of the capacity agreement<sup>210</sup> which cannot be shorter than one gas year and cannot be longer than 10 years,
- the total quantity of LNG and the total number of unloading slots which cannot be less than four per gas year,
- the indicative month and year of unloading,
- the indicative quality of LNG for each of unloading slots,
- the loading ports of the LNG,
- the technical specifications of the LNG tankers used,
- any qualification which gives the applicant a priority right in the allocation of non-foundation capacity,
- any actions or proceedings pending or threatened against or affecting the applicant which would have a material and adverse effect on its ability to participate in the OS and to perform its obligations under the capacity agreement,
- assurances that participation in the OS and the execution and performance of the capacity agreement by the applicant do not conflict with any laws and other agreements,
- information that the applicant has provided ARERA with a copy of a valid import contract.

Each applicant may submit several access requests as long as they do not overlap in time. All access requests in respect of non-foundation capacity are ranked in accordance with the criteria and congestion management procedures (the subscription allocation criteria, see below).

An OS is required to be conducted for at least six months, with the terminal operator notifying each applicant of the portion of non-foundation capacity allocated to it on 18 September 2008, together with:

- the copy of the capacity agreement to be signed,
- a copy of the draft access code<sup>211</sup> (or a copy of the interim rules),
- an indication of the tariff proposed to the regulatory authority for approval,
- an indication of other costs and charges, and a date by which the operator must receive the executed capacity agreement.

The capacity agreement included the allocation of unloading slots on a monthly basis, with slots allocated to maximise the usage of the terminal. The actual binding scheduling of unloading slots was

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<sup>208</sup> All Italian LNG terminals require a prospective shipper to have confirmation of LNG availability.

<sup>209</sup> Other requirements include the following: (i) where any quantity of LNG that is the subject of the Access Request is to be imported from countries outside the European Union, the Applicant must have received authorisation granted by MSE for the importation of such quantity of LNG pursuant to the provisions set out in the decree of the Italian Ministry of Industry, Trade and Crafts of 27 March 2001. In the event of such Applicant having an LNG import contract which has a duration of less than one year it must demonstrate the availability of strategic storage; (ii) the Applicant must possess all other concessions, authorisations, licences, declarations of no objection (*nulla osta*) and permits necessary for the performance of all activities under, connected with and ancillary to, the Access Request; (iii) the Applicant is in compliance with its obligations under the agreements entered into with third parties, which are referred to or which relate to the matters described in paragraphs (a) and (b) above.

<sup>210</sup> A capacity agreement consists of: foundation capacity agreements, non-foundation capacity agreements, and spot capacity agreements.

<sup>211</sup> Adriatic LNG prepared a draft access code setting out the standard conditions for the use of the terminal and held a consultation procedure for its adoption and approval by the NRA.





done in line with the access code. Prior to signing the capacity agreement, the applicant had to demonstrate its creditworthiness.<sup>212</sup>

Transfers or assignments of requested or allocated non-foundation capacity were not allowed until the capacity agreement was entered into and was subject to its terms.

### Capacity allocation and tariffs

Access to the Adriatic LNG terminal's capacity is governed by the terminal's access code.<sup>213</sup> The terminal operator is obliged to determine the terminal's capacity by considering technical and operational limits, by 1 June of each gas year. It is obliged to publish:

- the terminal capacity;
- foundation capacity, divided into:
  - foundation capacity that is available for subscription (comprising unsubscribed foundation capacity plus released foundation capacity), and
  - foundation capacity that is not available for subscription (comprising subscribed foundation capacity minus released foundation capacity);
- non-foundation capacity, divided into:
  - available capacity (unsubscribed non-foundation capacity (including unsubscribed foundation capacity that has been re-classified according to the code's provision that on the 1 June each gas year all unsubscribed foundation capacity and all released foundation capacity for the following gas year must be reclassified as unsubscribed non-foundation capacity and released non-foundation capacity) and released non-foundation capacity), and
  - non-foundation capacity that is not available for subscription.

In respect of foundation capacity that is available for subscription and non-foundation available capacity, the operator must publish the number of available unloading slots in each month and, if known, the timing of such slots.

Every year during June-July, Adriatic LNG offers its capacity for mid- and long-term periods (between one year and up to ten years) and, on a monthly basis, it also offers the infra-annual capacity (until the end of the gas year).

It is possible to subscribe for access to foundation capacity that is available for subscription and non-foundation available capacity. The code states that the operator may allocate foundation capacity that is available for subscription to one or more users by concluding a foundation capacity agreement.<sup>214</sup> Because, according to the code, on 1 June each gas year *all* unsubscribed foundation capacity and *all* released foundation capacity for the following gas year must be reclassified as unsubscribed non-foundation capacity and released non-foundation capacity, the mechanism for allocation of this capacity and tariffs charged for it would be the same as for available capacity (see below).

As far as *available capacity* is concerned (that is capacity consisting of unsubscribed non-foundation capacity that is available for subscription, including unsubscribed foundation capacity that has been reclassified as unsubscribed non-foundation capacity and any released non-foundation capacity), the code states that any party may apply for such capacity for *the continuous or spot regasification service* by submitting a request to the terminal operator in accordance with the *annual subscription process* (in respect of available capacity for the immediately following and subsequent gas years) or the *infra-*

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<sup>212</sup> It was anticipated that the Applicant would be asked to provide (i) evidence that its credit rating with reference to its long term unsecured and unguaranteed debt is equal to or higher than Baa3 (Moody's) or BBB- (S&P), or (ii) a parent company guarantee if such credit rating requirement is met by a parent company, or (iii) a bank guarantee. More details about credit requirements are included in the Access Code.

<sup>213</sup> Adriatic LNG regasification code.

<sup>214</sup> Adriatic LNG regasification code, chapter 2.4.1



*annual subscription process* (in respect of infra-annual capacity, which includes inter alia the available capacity during the gas year that was not subscribed under the annual subscription process).

Available capacity for the following and subsequent gas years is allocated through the *annual subscription process*, whereby all applicants submit their requests on 1 July. Available capacity is allocated via an auction on a priority basis (in line with the subscription allocation criteria):

- the highest priority assigned to end clients (except electricity producers) importing gas for own consumption for a period of 5-10 years;
- the second priority is assigned to applicants offering the entire volume to be imported at the virtual exchange point for 5-10 years;
- this is followed by those offering a quota of at least 20% of their gas to be imported at the virtual point for 5 years;
- then applicants importing LNG from states other than those with which long-term import agreements were in place on 28 September 2004 for 5 years;
- then applicants which hold a total allocated capacity at entry points to the national transmission system below 25% of overall capacity for 5 years;
- the lowest priority is assigned to any other requests for periods shorter than 5 years.

Thus the operator prioritises access requests by the type of applicant (favouring end users), volume of gas to be sold at the VTP, type of supplier (favouring new and less dominant suppliers), share of capacity booked at the national transmission system (favouring less dominant users), by duration (favouring longer term bookings).

Infra-annual capacity is made available by the operator during the gas year as continuous regasification service (with capacity booked for the three months following the current month) and as spot capacity,<sup>215</sup> based on capacity requests submitted by the applicants. Access requests for continuous capacity are ranked according to the same subscription allocation criteria as used in the annual subscription process. Access to spot capacity is ranked by volume, with higher volume requests being given priority, on the FCFS basis.

The minimum amount of capacity that can be booked under the OS is equal to one gas year with four unloading slots, which must be spread evenly throughout each gas year.<sup>216</sup>

The regasification tariff charged for (exempted) foundation capacity (80% of the terminal's capacity booked by Edison) is negotiated.<sup>217</sup> The regasification tariff charged for released foundation capacity as well as for (non-exempted) non-foundation capacity is regulated.<sup>218</sup> The tariff is determined by the terminal operator and approved by the ARERA, and in line with a method which must be approved by the Italian regulatory authority. The applicable rate may be modified by Adriatic LNG in compliance with the criteria defined by the ARERA, 'respectful of the obligation of transparency and non-discrimination and without prejudice to regasification contracts already signed'.<sup>219</sup> All costs and fees that it may incur in relation to the connection, entry and transport into the national transmission system are passed by the operator to all users; such costs are not covered by the regasification tariff. Users are also responsible to pay directly or reimburse the operator any additional charges associated with ancillary services.

### Adriatic LNG - Summary

- An exemption has been granted in respect of foundation capacity – 80% of the terminal's total capacity – and has been booked by Edison for 25 years;

<sup>215</sup> Once the operator determines there is spot capacity available, taking into account the number and duration of unloading slots, storage capacity, send out capacity and the available pipeline capacity at the entry point into the transmission network, it must publish spot capacity on its electronic platform.

<sup>216</sup> The terminal's operator has the right to reject capacity requests if the slots are not evenly spread.

<sup>217</sup> Adriatic LNG presentation.

<sup>218</sup> Ibid.

<sup>219</sup> Adriatic LNG, Regasification service, <https://www.adriaticlng.it/en/market-area/archive/2018-19/tariffs/regasification>



- The remaining 20% of capacity (~1.6 bcma) – non-foundation capacity –has been offered to third parties in an OS process for 25 years; 12% was allocated to BP and 8% remains available;
- Access is governed by the terminal’s access code;
- Available capacity (capacity consisting of available unsubscribed non-foundation capacity, including unsubscribed foundation capacity that has been re-classified as unsubscribed non-foundation capacity, and any released non-foundation capacity) is offered annually for a period between one and 10 gas years as well as monthly for a period until the end of a gas year (an applicant must present a copy of an import contract to confirm availability of LNG);
- Capacity allocation requests both for annual and infra-annual capacity ranked with requests being prioritised by the type of applicant (favouring end users), volume of gas to be sold at the VTP, type of supplier (favouring new and less dominant suppliers), share of capacity booked at the national transmission system (favouring less dominant users), and duration (favouring longer term bookings);
- Capacity allocation requests for spot capacity are ranked by volume, with higher volume requests being given priority, on the FCFS basis;
- The tariff charged for foundation capacity is negotiated whereas the tariff charged for released foundation capacity as well as for non-foundation capacity is regulated, and liable to modifications in compliance with the regulatory authority’s criteria.

#### 4.5 Exempted terminals in France: Dunkerque

The Dunkerque (Dunkirk) LNG terminal is owned by Dunkerque LNG. Its original ownership was as follows: EDF (65.01%), Total (9.99%) and Fluxys (25%). In 2018, a Fluxys-led consortium (which also includes AXA Investment Managers-Real Assets and Credit Agricole Assurances) acquired a 35.75% stake from EDF and Total. This acquisition left Fluxys with a stake of ~30.39% and its consortium partners with ~15.19% each, making the consortium the owner of a 60.75% stake. EDF and Total subsequently sold their remaining stakes to a consortium of Korean investors (led by IPM group in cooperation with Samsung Asset Management). The terminal is now part of the Fluxys Group. It is operated by Gaz-Opale, in which Fluxys has a 49% stake and the remaining 51% stake is owned by Dunkerque LNG (where Fluxys has 30.39%).<sup>220</sup>

The terminal became operational in 2017 with an annual regasification capacity is 13 bcma.<sup>221</sup> It is connected directly to two markets – France and Belgium – using two separate pipelines. The terminal offers standard services of unloading and reloading, with vessels of all sizes being acceptable. It also offers storage and send out which are managed by the shipper (this option enables customers to trade themselves and is not available at other French terminals). Thus, the terminal offers all its users a package of firm rights including berth slots, storage and regasification capacity and entry capacity into the transmission network(s).<sup>222</sup> It also offers various additional services. Dunkerque LNG does not publish its tariffs as it is not regulated and hence is under no obligation to do so.

In total, 10 bcma (~77%) of regasification capacity has been booked by the terminal’s two original shareholders, EDF (8 bcma) and Total (2 bcma) – under long-term contracts for 20 years (the duration of the exemption) from the start of operations until 2036.<sup>223</sup> Up to 2.5 bcma of primary capacity is available in 2020 only (which is offered by the terminal operator on the FCFS basis) whereas 3.5 bcma will be available as of 2021 (to be offered through a call for market interest – an open season (OS) – which will start imminently.<sup>224</sup>

<sup>220</sup> Fluxys, Dunkirk LNG terminal to become part of the Fluxys group, press release, 29 June 2018; ‘EDF and Total Selling Their Stake in Dunkirk LNG Terminal’, *World Maritime News*, 2 July 2018.

<sup>221</sup> When the terminal was planned, two variants were under consideration – 10 and 13 bcma. Ultimately the decision was made to build a terminal with the capacity of 13 bcma.

<sup>222</sup> CRE (2009).

<sup>223</sup> Dunkerque LNG – EC exemption decision, Dunkerque LNG terminal website, Commercial offers.

<sup>224</sup> The documentation pertaining to this OS as well as a formal notification to the market are under preparation by Dunkerque LNG.



## Exemption

In June 2009 the Dunkirque LNG company applied for a full exemption from regulated TPA for a period of 20 years from the commercial start date (initially envisaged for 2014 but changed to 2017). According to French law, the Energy Ministry has a right to grant an exemption, taking into account an opinion issued by the French regulatory authority CRE.<sup>225</sup> The exemption was granted in October 2009, subject to meeting certain requirements, and approved by the EC, subject to further conditions, in January 2010.<sup>226</sup>

When Dunkerque LNG applied for an exemption, none of its planned capacity had been booked, and it was planning to sell its capacity to no more than 3 or 4 parties, including EDF.<sup>227</sup> Prior to applying for an exemption, in 2009 it decided it was necessary to organise a market test to 'ensure a comprehensive reservation of capacities', targeting LNG producers and suppliers, utilities with licences to supply the French market, and other European utilities, with a view to communicating a list of companies to CRE. It said that it would select clients, favouring in particular: companies that were both LNG suppliers and regasification capacity subscribers; companies willing to take ownership shares; and companies interested in regasification capacity higher than 2 bcma. The non-discriminatory nature of the market test procedure was to be confirmed by CRE.

CRE reviewed compliance of the project with the exemption criteria under Art. 22 of the Second Gas Directive and confirmed the project's positive impact on security of supply subject to two conditions:

- that a gas re-export service via LNG tankers should not use more than 10% of the terminal's capacity;
- that there should be no 're-emission of gas via pipeline exiting directly from the terminal' (with the exemption to be re-examined should either of these conditions be breached).<sup>228</sup>

As far as the project's impact on competition is concerned, the regulatory authority recommended that, should a decision be made to build the terminal with a 10 bcma – rather than 13 bcma – capacity, the exemption should be conditional on a transparent and non-discriminatory OS to demonstrate that market demand was insufficient for a 13 bcma terminal.<sup>229</sup> In the event a decision was made to build a 13 bcma terminal, although CRE requested that the non-discriminatory market test was to be approved by it prior to implementation. It recommended that an OS should be implemented in compliance with ERGEG Good Practice Guidelines for LNG (GGPLNG) (Annex 1).

As part of its exemption request, Dunkerque LNG guaranteed that EDF would not hold more than 8 bcm of capacity in the terminal (irrespective of the terminal's final capacity). CRE agreed and warned that the exemption would be withdrawn should this limit be breached.<sup>230</sup> It also recommended that should a part of the terminal's capacity remain unsubscribed after the initial capacity allocation (which is the current situation, as only 10 bcma out of 13 bcma of capacity was allocated – 8 bcma to EDF and 2 bcma to Total), the terminal should offer such uncontracted capacity to the market at regular intervals 'until a buyer is found, by means of transparent and non-discriminatory open seasons'.<sup>231</sup>

The OS terms and frequency must be approved by CRE, which noted that Dunkerque LNG would be able to sell capacity 'in the intermediate periods in the form of short term capacity, including [to] EDF group'. It also confirmed that the project would have a positive impact on competition in the wholesale gas market and would have no adverse impact on competition in the retail market, provided that GDF Suez would not hold primary regasification capacities exceeding 1 bcma.<sup>232</sup>

CRE ruled that the exemption should be conditional on the implementation and publication of UIOLI and secondary capacity market mechanisms, with UIOLI to be approved before the terminal becomes

<sup>225</sup> CRE (2009).

<sup>226</sup> Dunkerque LNG - EC exemption decision.

<sup>227</sup> According to the exemption request, EDF stated that it will 'only subscribe for capacities if a sufficient coverage of these capacities can be guaranteed by long term LNG supply contracts'. It was noted that the negotiation of such contracts would be facilitated by the possibility for LNG producers to preferentially subscribe capacities at the terminal, see CRE (2009), p. 5.

<sup>228</sup> CRE (2009), p. 5.

<sup>229</sup> Ibid, p. 6.

<sup>230</sup> Ibid, p. 6.

<sup>231</sup> Ibid, p. 6.

<sup>232</sup> Since renamed as Engie.



operational. It also asserted that terminals benefitting from an exemption must not be given a competitive advantage over regulated terminals. Thus Dunkerque LNG must comply with CRE's decisions on operational rules in respect of interacting with other infrastructure. In particular a terminal capacity holder is obliged to subscribe for the corresponding entry capacity into the transmission network, and an economic test must be performed to ascertain that the costs of connection directly linked to each project are borne by the shippers concerned.<sup>233</sup> Thus subscribers for the terminal's capacities are required, under the terms of the exemption, to ensure they have booked the corresponding entry capacities into the national transmission network, in respect of volume and duration, with GRTgaz, with the latter to receive an income corresponding to the total capacity created at the Dunkerque LNG entry point in order to ensure that the connection with the terminal will not be subsidised by other network users. Thus the regulatory authority has recommended that Dunkerque LNG compensates GRTgaz in the event that shippers holding regasification capacities at the terminal do not subscribe for all the entry capacity into the transmission network.<sup>234</sup> Furthermore, while applying the current tariff for the usage of the gas transmission network, Dunkerque LNG will be obliged to cover any difference between the GRTgaz forecast investment costs for the connection of the terminal, and the income resulting from the charge applicable at the entry point into the network from the terminal.

CRE has also stated that any decisions concerning the contribution of LNG terminals to infra-day flexibility should apply to both regulated and exempted terminals (thus including Dunkerque LNG). CRE has confirmed that the project would not have gone ahead without the exemption and agreed that the exemption was necessary to guarantee that EDF would have significant access and would allow the terminal to offer access to other parties selected in a non-discriminatory manner, allowing for the conclusion of long term contracts. It has also confirmed the absence of any legal link between Dunkerque LNG and GRTgaz thus satisfying an exemption criterion that the terminal must be owned by a person separate from the operators in whose systems the terminal is built. As far as the tariff is concerned, Dunkerque LNG has stated in its exemption request that it will establish 'a single tariff which will be known to all subscribers at the terminal'.<sup>235</sup> Such tariff would cover construction and operation charges, enable debt servicing, and ensure 'satisfactory' rate of return. CRE requested that the exemption is to be conditional on the terminal communicating its tariff to the regulatory authority together with all the capacity contacts signed.<sup>236</sup> In summary, CRE recommended granting a full exemption from TPA for 20 years, subject to those conditions.

It is understood that a non-discriminatory OS has been conducted during the initial allocation of capacities in the terminal, which was submitted to CRE for approval. Furthermore, the terminal was obliged to offer primary unsubscribed capacity to market on the basis of a transparent and non-discriminatory open season, approved by CRE. Also, the terminal was obliged to establish and publish the conditions under which subscribed but unused (i.e. secondary) capacity would be offered to the market, with a UIOLI mechanism to be approved by CRE. The contractual framework for marketing UIOLI capacities is already in place whereas the conditions applicable to the utilisation of UIOLI associated services (berthing right as well as associated storage and send-out capacities) are expected to be published by the terminal operator imminently. At the time of writing, the UIOLI requests are considered by the operator case by case, based on submitted enquiries, with available UIOLI slots dates being published on the terminal's website.<sup>237</sup>

In December 2009 the exemption decision was notified to the EC, which approved it in January 2010, subject to several conditions.<sup>238</sup> The EC requested *inter alia* that, as part of an OS procedure for assessing market demand, Dunkerque LNG must at least contact all gas market players with a gas

<sup>233</sup> I.e. income derived from subscribed capacities to enter the transmission network from the terminal should be sufficient to cover the cost of infrastructure connecting the terminal with these networks over 20 years.

<sup>234</sup> The CRE recommendation has been implemented as follows in France: on 24 June 2011, in aggregate, enough entry capacity has been booked triggering GRTgaz investment for the construction of the connection between the terminal and the French transmission network; the corresponding threshold – minimum aggregate entry capacity and minimum duration of the bookings – was 250 GWh/day for a twenty-year period. On 22 December 2011 CRE approved the proposed investment by GRTgaz for connecting the terminal to the French transmission network, leaving the possibility of evacuating all gas from the terminal (up to 520 GWh/day) to the French market.

<sup>235</sup> CRE (2009), p. 10.

<sup>236</sup> *Ibid.*, p. 10.

<sup>237</sup> Dunkerque LNG, Electronic bulletin board, <https://ebb.dling-sico.com/AvailableUioli>

<sup>238</sup> Dunkerque LNG - EC exemption decision.

supply license in France; CRE must confirm the OS conditions in advance; the short-list of potential users compiled after the OS must not be restricted only to those companies able to make a commitment to subscribe for 2 bcma of capacity under 'ship or pay' conditions for 20 years; the criterion for capacity allocation favouring companies interested in capacities of more than 2 bcma must only be linked to the objective of limiting the number of capacity users.<sup>239</sup> The EC also requested that the anti-hoarding mechanisms developed by Dunkerque LNG must be approved by CRE in advance, with the latter have the power to request amendments. Finally, the EC asked for the conditions imposed on Dunkerque LNG to remain in place even if more than 10% of the terminal capacity were to be re-exported either as LNG or pipeline gas in the future.

### Capacity allocation and tariffs

Dunkerque LNG states that its design makes it possible to 'optimise the upstream market (for gas import contracts), as well as the downstream market (network send-out) via the allocation of confirmed transmission rights in respect of the number of unloading/reloading slots, storage capacity, minimum and maximum send-out. Storage rights are 'managed on the basis of complete transparency between the terminal and its customers', with the inventory level and send out being managed 'entirely by shipper up to the limit of the rights allocated', thus enabling the flexibility required to vary network send-out volumes in response to demand and trading movements. At present, Dunkerque LNG does not appear to provide a public description of its capacity allocation process. Its exemption, as granted by CRE and approved by the EC, is conditional on the implementation of UIOLI procedures (which must be *ex ante* approved by CRE).

### Dunkerque LNG - Summary

- An exemption was granted for 20 years in respect of all primary capacity of 13 bcma;
- 10 bcma of primary capacity have been allocated (through an OS *ex ante* approved by CRE) to EDF and Total (the two original shareholders) for 20 years from the start of operation until 2036;
- Up to 2.5 bcma of primary capacity is available in 2020 only and is offered to the market by the terminal operator on the FCFS basis;
- 3.5 bcma of capacity will be available as of 2021, to be offered to the market through a call for market interest (an OS) which will start imminently and the terms of which must be approved by CRE;
- UIOLI and secondary capacity mechanisms must be published and implemented, whereas UIOLI mechanisms must be approved by CRE prior to the terminal becoming operational;
- There is an obligation for capacity holders to book corresponding entry capacity in the transmission network, with an economic test to ascertain that the costs of connection are borne by shippers;
- A single tariff (covering construction and operation charges, debt servicing, 'satisfactory' rate of return) must be established and communicated to all terminal users and CRE.

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<sup>239</sup> For example, where the short list would include more than four potential underwriters, Dunkerque LNG could use a regasification capacity allocation criterion that favours market participants with an interest in capacity greater than or equal to 2 bcma.



## Conclusions

### **Paper's Rationale: LNG sellers, operating in an oversupplied global market, need to understand the complexity of TPA rules for EU import terminals to be sure of 'finding a home' for their cargoes in Europe.**

This paper is based on a proposition that given a huge glut of LNG – with yet more supply coming on stream in 2020 and with more FIDs for new projects signed in 2019 and expected to be signed in 2020 – LNG sellers are facing a problem of whether they can 'find a home' for their LNG cargoes in an over-supplied global market. With the EU being the only market with regulated third party access (TPA) to LNG import terminals, the sellers can always place a cargo in the EU for which no other market can be accessed unless the owner of an import terminal and/or a buyer of imported LNG agrees. The market situation has changed dramatically compared to the mid-2010s when the main issue was the EU's ability to attract and absorb competitively priced global LNG supply. Entering the 2020s, it is LNG sellers that need to be assured they can access the EU market and hence they need to understand the TPA rules for regulated and exempted EU import terminals.

### **Regulated and Exempted Terminals**

The majority of EU LNG import terminals – Zeebrugge in Belgium, Fos Cavaou, Fos Tonkin, and Montoir-de-Bretagne in France, Revithoussa in Greece, Panigaglia and Toscana in Italy, Klaipeda in Lithuania, Delimara in Malta, Świnoujście in Poland, Sines in Portugal, as well as all seven terminals in Spain – operate under a regulated regime, as currently represented by the Third Gas Directive and Gas Regulation 715.

Six LNG import terminals in the EU (representing 37% of EU LNG import capacity) – Isle of Grain, South Hook, Dragon in the UK, Gate in the Netherlands, Adriatic LNG in Italy, and Dunkerque in France – operate under an exemption regime. All of these terminals (except the fourth phase of the Isle of Grain terminal, Grain 4, for which the exemption has since been revoked) applied for and were granted exemptions under the Second Gas Directive (prior to the adoption of the Third Gas Directive in July 2009 and the repeal of the Second Gas Directive from 3 March 2011).

### **Short and Longer Term Capacity Bookings**

A pattern appears to have emerged of increased interest from sellers (producers) in booking EU import terminal capacity on a long-term basis. In September 2019, the regulated Zeebrugge terminal in Belgium sold its entire capacity of 9 bcma through 2044 to Qatar Petroleum. Shortly afterwards, in December 2019, the regulated Montoir-de-Bretagne terminal in northern France sold its previously unsold 3.5 bcma of capacity through 2035.<sup>240</sup> At the time of writing, the exempted Gate terminal in the Netherlands and the exempted Dunkerque terminal in northern France are also offering capacity on a long-term basis, and it is possible that long-term bookings will be made there too (although no contracts had been signed at the end of 2019).<sup>241</sup>

This pattern of increased interest in long-term capacity bookings at EU LNG import terminals, particularly in north west Europe,<sup>242</sup> might indicate that the LNG sellers want to have an assurance that they will be able to place their cargoes in Europe if they cannot sell them in Asia, which is the primary global LNG market. OIES modelling suggests that Europe may need ~80 bcma of LNG imports in the 2020s, and – as there is likely to be surplus LNG – it could also absorb another 40-50 bcma, although that would come under severe competitive pressure from pipeline gas. To be able to place those LNG volumes in the EU market, sellers will need to understand the rules for buying capacity at various EU import terminals, with those located in north west Europe being particularly relevant. Sellers will also need to understand the rules for buying capacity in different time frames. Although existing LNG import capacity is sufficient for accommodating the above volumes of LNG, some suppliers (such as Qatar) might not want to take the risk of not being able to sell their surplus LNG cargoes, so they are buying

<sup>240</sup> There is no public information on the buyer(s) of Montoir-de-Bretagne capacity.

<sup>241</sup> At the same time, there appears to be less appetite for long term capacity at the southern European terminals, with both Fos Cavaou and Fos Tonkin terminals in southern France having failed to attract long term bookings for their capacity offered on a long term basis.

<sup>242</sup> Where the countries accounting for 75% of EU gas demand are located.



up capacity at EU terminals on a long-term basis as ‘an option’ (e.g. at the Zeebrugge terminal). Other suppliers might be satisfied with relying only on short-term capacity bookings, but because of the need to ensure market outlets for LNG, the question which EU terminals provide for short-term capacity reservations becomes increasingly important.

With only a handful of EU terminals offering primary capacity on a long-term basis and with a lion’s share of the terminal capacity being already booked long-term – on average, capacity bookings at EU import terminals expire in the 2030s – market interest in long-term capacity bookings could lead to a spike in demand for remaining capacity. This could cause a stampede at other terminals, particularly Gate, Dunkerque, UK terminals (Grain, Dragon and South Hook), and potentially German terminals (under development). Even if market interest in long-term capacity subsides, potential LNG suppliers will still need to know the TPA rules for each of the EU import terminals which are explained and analysed in this paper. In addition to an overview and analysis of the existing regulatory framework governing the terminals, this paper suggests how it could evolve in the future.

### Existing regulatory framework: Third Gas Directive and Gas Regulation 715

At present no LNG-specific regulation governing the use of import terminals exists at the EU level, and various LNG-related provisions are only to be found in and distilled from the Third Gas Directive and Gas Regulation 715. These provisions, which have mandated regulated TPA to all EU LNG import terminals based on published tariffs, are of a general nature (although more specific compared to the previous generation of regulation, as represented by the Second Gas Directive, which was repealed as of 3 March 2011) and as such have left a significant degree of discretion to the regulated terminal operators in respect of capacity allocation mechanisms, UIOLI procedures, and tariffs.<sup>243</sup> The terminals which have been exempted from the TPA and tariffs requirements under the Second Gas Directive (the majority of the exemptions), have been able to determine their capacity allocation mechanisms, UIOLI procedures, and tariffs themselves, whereas the terminals exempted under the Third Gas Directive are obliged to apply capacity allocation mechanisms developed by the NRAs.

Since no LNG-specific detailed regulatory framework exists on the EU level, LNG terminals’ operators have been able to choose different ways of complying with the Third Gas Directive and Gas Regulation 715 general provisions, or to apply for an exemption. This has resulted in a situation where these terminals are governed by a patchwork of terminal codes developed by their operators, the NRAs’ guidance, and exemptions (granted under Second and subsequently Third Gas Directives), thus making it very difficult to judge whether there is a level playing field between the terminals. This paper argues that the development of a dedicated stand-alone LNG-specific regulatory framework on the EU level, which could build on the LNG-related provisions of the Third Gas Directive and Gas Regulation 715, different terminal codes and exemptions, would establish a level playing field for all terminals.

### Third party access

The Third Gas Directive outlines several provisions for LNG terminals. In contrast with the Directive’s unbundling requirement for transmission system operators (TSOs), it does not require unbundling of LNG terminal operators with the LNG function being allowed to remain part of a vertically integrated undertaking (VIU) together with the functions of production or supply. The Third Gas Directive (as well as the Second Gas Directive) mandated regulated TPA to LNG import terminals. Regulation 715 obliged the terminal operator to implement and publish non-discriminatory and transparent capacity allocation mechanisms in line with specific criteria, which would ‘provide appropriate economic signals for the efficient and maximum use of capacity and facilitate investment in new infrastructure’. However, it has not mandated any specific capacity allocation mechanisms, thus providing the operator with a significant degree of discretion in designing such mechanisms.<sup>244</sup> Regulation 715 has also mandated that any LNG contract must include ‘measures to prevent capacity hoarding’, stating that in the event of contractual congestion the terminal operator must offer unused LNG capacity on the primary market without delay and that users willing to re-sell their contracted capacity on the secondary market must be entitled to do so. However, Regulation 715 did not mandate any specific UIOLI procedures, thus leaving their design to the terminal operator. Regulation 715 also obliged the terminal operator to develop harmonised LNG contracts and procedures on the primary market to facilitate trade in

<sup>243</sup> The latter had no LNG-related provisions.

<sup>244</sup> Notably, the CAM NC does not apply to the entry points from LNG import terminals into the transmission system.





secondary capacity and to recognise transfer of primary capacity rights, with such contracts and procedures to be notified to the NRA. Neither the Third Gas Directive nor Regulation 715 have mandated any quota for short-term capacity reservations to be applied to LNG terminals, which is the case for transmission capacity under the Capacity Allocation Mechanisms (CAM) Network Code, which mandated that at least 20% must be reserved in respect of existing capacity and at least 10% – in respect of incremental capacity (Art. 8 and Art. 30).<sup>245</sup>

### **Tariffs for LNG Terminal Services and Connection to the Transmission Network**

The Third Gas Directive stipulated that TPA to LNG terminals must be based on published tariffs, applied objectively and without discrimination between users, with tariffs (or their methodologies) must be approved by the NRA prior to their entry into force. Tariffs (methodologies) must allow for making the necessary investments in LNG terminals to be viable, with the NRA being empowered to modify them to ensure proportionality and non-discrimination. Regulation 715 has stipulated that LNG terminal operators or relevant regulatory authorities must make public 'sufficiently detailed information on tariff derivation, the methodologies and the structure of tariffs'. It has further stipulated that contracts for capacity with non-standard start dates or of shorter duration than a standard annual contract must not result in arbitrarily higher tariffs.

The Third Gas Directive has also obliged the TSO to establish and publish transparent and efficient procedures and tariffs for non-discriminatory connection of LNG terminals to the transmission network, with such procedures to be approved by the NRA. Specifically, the Directive has prohibited the TSO from refusing the connection on the grounds of additional costs, linked with a necessary capacity increase or possible future limitations to capacities.

Importantly, the Third Gas Directive prohibits cross-subsidization between *inter alia* LNG and transmission activities (Art. 31). However, the Tariffs Network Code stipulates that at entry points from LNG terminals into the national transmission system, 'a discount may be applied to the respective capacity-based transmission tariff for the purposes of increasing security of supply'. Notably, the Tariffs NC neither sets an upper limit of such discount nor specific circumstances under which such discount could be applied, thus leaving a decision to the NRA. This suggests that, other things being equal, an LNG supplier could have a commercial advantage compared to a pipeline gas supplier due to a potentially lower tariff applied at an entry point from an LNG terminal. It is therefore possible that this provision might be found discriminatory and hence problematic under WTO law. Furthermore, the NRAs in several member states also have allowed recovery of some part of their LNG terminals' costs through transmission exit tariffs. It is possible that this could constitute cross-subsidisation between LNG service and transmission service prohibited under the Third Gas Directive.

### **Exemption Regime under Third and Second Gas Directives: similarities and differences**

The Third Gas Directive has provided for a possibility for an LNG import terminal to be exempted from the Directive's provisions on TPA and tariffs (Art. 36). As the majority of exempted terminals have been granted their exemptions under the Second Gas Directive (Art. 22), rather than under the Third Gas Directive,<sup>246</sup> it is important to understand the similarities and differences between the two. The Second Gas Directive was very similar to the Third Gas Directive as far as LNG-related provisions were concerned. It contained the same requirement of TPA based on published tariffs (methodologies) ex ante approved and published by the NRA. It also provided the same possibility for LNG terminals to apply for an exemption from TPA and tariff provisions (Art. 22), with the exemption criteria being identical to those of the Third Gas Directive.

However, there also are important differences. The major difference is that prior to granting an exemption under the Third Gas Directive, the NRA is obliged to 'decide upon the rules and mechanisms for management and allocation of capacity' which would apply to the exempted new capacity (Art. 36.6), whereas the Second Gas Directive imposed no such obligation and allowed the NRA to decide whether or not to stipulate such rules (Art. 22.3(c)). This means that if an exemption is applied for under the Third Gas Directive, it is the NRA, rather than the LNG terminal operator (as stipulated by Gas Regulation 715), that is obliged to set the rules. Therefore, it is fair to say that as far as capacity allocation rules are concerned, the regulatory treatment of the terminals exempted under the Third Gas

<sup>245</sup> Reservation quota cannot exceed 20% for incremental capacity where an alternative allocation rule is applied.

<sup>246</sup> Only Grain 4 LNG was granted an exemption under the Third Gas Directive.



Directive could be less lenient than that of the regulated terminals, as an operator of an exempted terminal would not be able to decide on capacity allocation mechanisms whereas an operator of a regulated terminal would be able to do so. It is worth noting, though, that the majority of exempted terminals were exempted under the Second Gas Directive, which allowed but did not oblige NRAs to decide on capacity allocation rules, thus making it possible for an exempted terminal operator decide on such rules on its own.

All exempted terminals, irrespective of whether they were exempted under the Second or the Third Gas Directives, are obliged to comply with Gas Regulation 715 insofar as such compliance is not in conflict with the terms of their exemptions or their contracts were concluded prior to the Regulation becoming applicable.

### Regulated terminals

The paper has demonstrated that terminal operators (and the NRAs of those EU member states where these terminals are located) have chosen different ways of complying with the provisions of the Third Gas Directive and Gas Regulation 715. In so doing they have fully exercised a significant degree of discretion in respect of designing and implementing capacity allocation mechanisms, including UIOLI procedures, and tariffs. Consequently, the regulated EU terminals are characterised by significant differences in respect of how their capacity is allocated and charged for.

While the majority of terminals have historically allocated their primary capacity on a 'first come, first served' (FCFS) basis, many terminals have increasingly started to use open seasons (OS) to allocate new (expansion) capacity (Fos Tonkin, Montoir-de-Bretagne), whereas some terminals have also introduced auctions (Panigaglia, Toscana). Capacity allocation procedures differ across the terminals with some offering capacity only during specific periods of time through subscription windows or through *ad hoc* Open Seasons (both at Zeebrugge), whereas others doing so on a continuous basis (Fos Cavaou, Fos Tonkin, Montoir-de-Bretagne). Allowable duration of capacity bookings also differs widely. The majority of the terminals offer capacity on long-term and short-term bases, but their definitions differ. Some terminals do not have an upper limit on how long their capacity can be booked for (Zeebrugge, Revithoussa). Others specify maximum durations of their long-term contracts, the longest being 15 years (Panigaglia, Toscana) as well as minimum durations of their long-term contracts, the shortest being one year (Fos Tonkin, Montoir-de-Bretagne). Some terminals only offer capacity on an annual basis (Klaipeda). All terminals offer spot capacity. Design and implementation of UIOLI procedures also differ across the terminals. Only one terminal has introduced a short-term capacity reservation quota - Fos Cavaou applied a 10% quota which was abolished in 2017. At some terminals (Panigaglia) allocation of regasification capacity implies allocation of capacity in the national transmission network. The level of capacity bookings also differs significantly between terminals with some terminals' primary capacity being fully booked for 15 (Świnoujście) or even 25 (Zeebrugge) years ahead, with only secondary capacity being available. However, some (French) terminals still have primary capacity available and offer it for the next 10 to 15 years.

The paper has concurred with an earlier CEER finding that regulated tariffs differ significantly between terminals, both in terms of structure and value, thus making meaningful comparison very difficult. Some terminals have very simple structures having just one tariff e.g. a fixed component term applied per cargo (Zeebrugge) or a variable part applied to the amount of delivered LNG (Klaipeda). Other terminals have more complex structures with both fixed and variable parts (Świnoujście, Revithoussa), where a fixed part applies to send-out capacity and a variable part to the volume of regasified LNG. French tariffs consist of fixed and variable parts, where a fixed part is applied to the number of cargos received (instead of regasification capacity). Where a tariff structure might be the same for all terminals in one member state, their levels might differ (French and Spanish terminals).

### Exempted terminals

The Second Gas Directive mandated regulated TPA to LNG import terminals based on tariffs (or methodologies), which had to be approved by the NRA prior to their entry into force; tariffs (or methodologies) had to be published. All six exempted LNG terminals in the EU (Isle of Grain, South Hook, Dragon in the UK, Gate in the Netherlands, Adriatic LNG in Italy, and Dunkerque in France) sought – and received – exemptions from the Directive's TPA and tariff provisions. Our analysis of the exemptions granted to these terminals shows that in all cases the exempted capacity was allocated by



means of an open season (OS) and appears to have matched the capacity booked under long term contracts (both by volume and duration). At the majority of the exempted terminals the exempted primary capacity has been fully booked (Grain 1 – 3, South Hook, Dragon, Adriatic LNG) while some terminals have some exempted primary capacity available (Gate, Dunkerque).

In all cases the NRAs have left the development and the implementation of UIOLI procedures to the terminal operators. More recent exemption decisions required an *ex ante* approval of these procedures by the NRAs, whereas earlier decisions only required an *ex post* implementation monitoring by the NRAs. UIOLI procedures differ significantly between all six exempted terminals.

For example, the Isle of Grain terminal has two types of anti-hoarding measures, one administered by primary capacity holders themselves (bilateral trading of cargoes, within-terminal trading of capacity rights, and secondary capacity mechanisms), and another administered by the terminal operator offering capacity to the market in an auction.

The South Hook terminal arrangements allow for secondary capacity to be booked in the form of a South Hook Bundle (SHB) by means of agreement with the base user (South Hook Gas Company), participation in a capacity auction or capacity transfers with other additional users. Alternatively the base user can offer services for periods when it is not using all the capacity itself under (unspecified) arrangements not covered by the terminal's guidance for secondary capacity allocation.

The Dragon terminal allows third parties to access capacity by either concluding a bilateral agreement with one of the primary shippers or an ex-ship agreement with one of the primary shippers, or (if both methods fail) using an anti-hoarding mechanism (based on an auction) whereby the primary shipper receives an LNG cargo at the terminal from the third party and redelivers gas to it at the NBP.

At the Adriatic LNG terminal, unsubscribed exempted (foundation) capacity is annually re-classified as unsubscribed non-exempted capacity. This is offered with all other available capacity annually for a period between one and 10 gas years, and monthly until the end of a gas year in an auction where capacity requests are ranked according to the type of applicant, volume of gas to be sold at the VTP, type of supplier, share of capacity booked at the national transmission system and duration. It is also offered as a spot capacity on a FCFS basis.

As far as tariff provisions are concerned, in all exemption cases the NRAs decided to allow the terminal operators not to publish tariffs for accessing the terminals (as far as exempted capacity is concerned) but reserved the right to require provision of such information. Given that they were not obliged to do so, all six exempted terminals decided not to publish their tariffs.

All but one of the exemptions were granted from 2004 to 2010:

- Grain 1, 2 in 2004,
- Grain 3 in 2007,
- South Hook in 2004,
- Dragon in 2005,
- Gate in 2006,
- Adriatic LNG in 2005,
- Dunkerque in 2010.

Since then, EU gas regulation has developed further as both the Third Gas Directive and Gas Regulation 715 were adopted and subsequently became applicable from 3 March 2011. Grain 4 exemption, granted in 2013, was the first (and so far, the only) exemption granted under the Third Gas Directive (but has since been withdrawn).

Overall, regulatory treatment of LNG terminals under the Third Gas Directive and Gas Regulation 715 is more specific and strict, compared to that under the Second Gas Directive, under which the majority of exemptions for LNG terminals were granted.



### **New Regulatory Framework: development of an LNG Network Code, amendment of the CAM NC to apply to LNG, and/or amending the exemption decisions?**

Clearly, the Third Gas Directive and especially Gas Regulation 715 – which introduced significant transparency requirements in respect of capacity allocation and tariffs – have significantly strengthened the EU regulatory regime in respect of LNG import terminals. This raises a question of their impact on the level-playing field between exempted and regulated terminals, as regulated terminals must comply with Gas Regulation 715 whereas exempted terminals are (but only to a degree) shielded insofar as such compliance is in conflict with their exemptions and/or capacity contracts signed prior to the Regulation becoming applicable. Comparing the regulatory treatment of exempted terminals (prescribed by the NRAs and the EC as part of the exemptions) with regulatory treatment of non-exempted terminals (prescribed by the Third Gas Directive and Gas Regulation 715) would appear to suggest that the former operate under more favourable conditions, although there could be a different interpretation for individual terminals.

Further legislative initiatives on the part of the EC to amend the regulatory framework for LNG import terminals cannot be ruled out, as well as further actions by NRAs in respect of already granted (and new) exemptions. These could take the form of either developing a new LNG Network Code, amending the existing CAM NC (which does not apply to LNG terminals at present), and/or amending the existing exemption decisions.

Our analysis of the exemptions granted to six EU LNG import terminals demonstrates that more recent decisions tended to impose conditions on exempted terminals similar to those that are contained in Gas Regulation 715. It is possible that some changes, particularly in respect of increasing transparency of UIOLI arrangements and tariffs, could be made in the future. However, ensuring a level playing field between regulated and exempted terminals might prove to be a legally difficult balancing act, as it would have to be done without violating the principles of contractual certainty and legitimate investor expectations associated with the already exempted terminals.

## Annex 1

### The GGPLNG: provisions on access and tariffs

#### Tariffs for access to LNG import terminals

The GGPLNG stated that tariffs for access to LNG terminals must be 'transparent and reflect actual costs incurred, insofar as such costs correspond to those of an efficient and structurally comparable LNG system operator, whilst including appropriate return on investments, and where appropriate, taking account of the benchmarking of tariffs by the regulatory authorities'.<sup>247</sup> The GGPLNG further stated that 'tariffs, or methodologies used to calculate them, shall be applied in a non-discriminatory manner'.

Gas Regulation 1775 did not contain an obligation for tariffs for access to LNG terminals to be cost-reflective. Similarly, Gas Regulation 715 also does not contain such an obligation, only stating that transmission tariffs (thus including transmission tariffs at entry points from LNG terminals) should be cost-reflective (Art. 29, Recitals 7-8). However, the Third Gas Directive contains an obligation for tariffs for access to LNG terminals to be cost-reflective by stipulating that such tariffs must 'allow the necessary investments in [...] LNG facilities to be carried out in a manner allowing those investments to ensure' their viability (Art. 41.6).

The GGPLNG recommended that the regime setting tariffs for access to LNG terminals should: (a) contain a detailed description of its objectives and priorities; (b) be cost-reflective; (c) contain the methodology for the calculation of tariffs and LNG system operator revenues; (d) in case of market based capacity allocation, specify the allocation of the extra revenues from congestion; (e) specify the competent authority for tariff setting and for appeal; (f) provide indications on when and how the tariffs should be published.<sup>248</sup>

It also recommended that the tariff structure should: (a) facilitate efficient commercialisation and provide an incentive for the efficient use of the system; (b) be reviewed, when necessary, taking into account developments in the market, without prejudice to long term regulated tariffs, with the review to be performed in a transparent way and its frequency being balanced between ensuring cost-reflectivity and the need for tariff stability; (c) contain an appropriate split between capacity and commodity charges.

#### LNG terminal TPA services

GGPLNG suggests that *the LNG system operators should have the following responsibilities*: (a) operate and maintain 'secure, reliable and efficient LNG facilities' while guaranteeing contracted firm services; (b) offer 'all the available capacity not excluded from TPA' to potential and existing network users 'under published and equivalent contractual terms and conditions supportive of competition and trade, according to transparent TPA rules set or approved by the relevant national authority'; (c) offer services aiming to accommodate market demand, 'taking into account the technical capacities of the LNG facility and congestion management procedures'; (d) provide the interconnected system operators with the necessary information to ensure that transport and storage of natural gas takes place in a compatible manner; (e) make the data on the use and availability of services public, in a time frame compatible with the LNG facility users' reasonable commercial needs; (f) preserve the confidentiality of information supplied by each capacity user; (g) establish and implement rules 'to discourage capacity hoarding, maximise the use of available capacity and offer unused capacity'; (h) put relevant IT systems in place that could be easily accessed by the terminal users.<sup>249</sup>

While stipulating the LNG system operator's responsibilities, GGPLNG also stipulated *responsibilities of the terminals' existing and prospective users*.<sup>250</sup> In particular, it suggested that users should (a) provide the LNG system operators with all the necessary data as specified in the access contract and/or terminal code; (b) ensure that unloaded LNG facilities comply with the quality specifications; (c) refrain from distorting or preventing competition through capacity hoarding; (d) establish relevant IT systems to communicate with the LNG system operator.

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<sup>247</sup> CEER (2017), p. 5.

<sup>248</sup> Ibid, p. 5.

<sup>249</sup> CEER 2017.

<sup>250</sup> CEER 2017.



As far as *services* were concerned, GGPLNG suggested that the LNG system operators should offer standard 'bundled' services, including 'at least the temporary LNG storage and regasification capacity required to withdraw the shipment'. It also suggested that the LNG system operators should offer separate 'non bundled' services, 'if available and consistent' with the arrangements related to the standard bundled services, such as reception capacity (comprising ship berthing and unloading), LNG storage capacity, and regasification (send-out). It suggested that both long- and short-term services as well as firm and interruptible services should be offered.

As far as the LNG system operator's *relationship with interconnected system operators* is concerned, GGPLNG recommended cooperation 'aiming at ensuring interoperability between the systems', with the LNG system operators to make 'reasonable endeavours' to offer services that are compatible with the use of the interconnected systems and facilitate access through cooperation with the TSO. Notably, GGPLNG advised against granting priority terminal access rights to the downstream transmission system operator, suggesting these should only be possible for system integrity reasons, subject to the NRA approval.

### **Capacity Allocation Mechanisms (CAM) and Congestion Management Procedures (CMP)**

GGPLNG stipulated that the maximum capacity must be made available to the market, taking into account system integrity and operation, security of supply and the constraints imposed by the downstream network. It required the methodology for calculating available capacity to be transparent, public, approved by the NRA; it should be calculated in respect of each service provided separately. GGPLNG requested LNG system operators to develop capacity allocation mechanisms (CAM) and congestion management procedures (CMP). While GGPLNG did not prescribe any specific CAM and CMP, it required that these must facilitate the development of competition and capacity trading, must 'neither hamper the entry of new market participants nor create undue barriers to market entry', and must not prevent effective competition. In particular, they must not 'impose thresholds on the amount of booked capacity or long durations for the service contracts, unless these requirements are approved by the NRA', and must also provide 'appropriate signals for efficient and maximum use of capacity to foster investment in new infrastructure'. It stated that 'non-discriminatory, transparent, market-based' methods should be used to allocate primary and secondary capacity, whereas pro-rata or FCFS mechanisms 'may be considered if they ensure equivalence in terms of non-discriminatory and competitive access'. GGPLNG allowed the LNG system operators to prioritize allocation of standard bundled services over non bundled services.

In respect of CMP, GGPLNG stated that when the initial (primary) holder of capacity is unable to use capacity, and has not released it to the market and when there is contractual congestion, the LNG system operator must offer such capacity to the market as firm capacity. CMP procedures, established by LNG system operator, approved by the NRA, and described in the terminal code, must encourage the holder to offer unused capacity on the secondary market at a reasonable price.

As far as reallocation of unused capacity is concerned, GGPLNG recommended that when short term capacity is scarce on the primary market whereas contracted capacity is unused, unused capacity should be made available on the primary market on a short term basis.<sup>251</sup> When a particular standard bundled service is considered unused, it is to be offered as firm, and once it is no longer possible to buy and nominate an unused bundled service its components can be offered separately. Resulting revenues could be used to 'provide economic incentives' to both the primary capacity holder and the LNG system operator.

GGPLNG recommended that systematically underutilized capacity is to be released under CAM in line with 'transparent, non-discriminatory national procedures'. Such procedures were to outline the respective roles of the LNG system operator, the regulatory authority (or any other authority) in respect of: (a) criteria used to evaluate if systematic underutilisation of capacity takes place; (b) the responsible institution for deciding if systematic underutilization of capacity is taking place;<sup>252</sup> (c) the way the terminal users are consulted; (d) underutilized capacity to be released; (e) the responsible institution

<sup>251</sup> It specifies that 'for a particular unloading window to be considered unused because the holder of capacity has not confirmed its effective use' the notice period (defined by the regulatory authority) must be 'long enough to allow for another user to organise the shipment and short enough to allow a capacity holder to determine the capacity it is not using'.

<sup>252</sup> Taking into consideration technical features of the LNG terminal, market environment and national regulation in force.



for withdrawing underutilized capacity; (f) the appeal procedure. The capacity holder could lose its capacity right, partly or fully, for a given period of time or for the remaining term of contract, if all of the following conditions are met: (a) there occurs systematic underutilization of all or part of the allocated capacity; (b) there is contractual congestion at the LNG terminal; (c) the capacity owner 'has not sold or offered, in due time and at a reasonable price, the unused capacity' and is unable to justify it 'satisfactorily'. Once the capacity is transferred to another user, the initial holder, who is no longer entitled to nominate, is no longer required to pay for the corresponding capacity.

As far as *transparency* is concerned, GGPLNG requested the LNG system operator to publish: (a) the terminal code, outlining the terminal's services, CAM and CMP, secondary capacity trading rules; (b) existing and future capacity, contracted and available firm and interruptible capacity; (c) short term available capacity and spot services; (d) evolution of contracted capacity until the expiry of the last contract; (e) historical range of monthly capacity utilisation and annual average flows over the last three years; (f) cooperation/coordination agreements with other system operators; (g) ex ante tariffs and tariff methodologies for each service as well as tariff calculator;<sup>253</sup> (h) standard service contracts.


As far as trading of capacity rights is concerned, GGPLNG stated that LNG system operators should 'treat equally' capacity acquired on the secondary market and capacity already held by the terminal user (as long as it is compatible with the kind of services available on the primary market). Once the NRA has confirmed there is a market demand, the LNG system operators are recommended to facilitate (a) secondary capacity trading and associated transfer of capacity rights between terminal users; (b) sale or swap of LNG in storage among terminal users, by means of an electronic platform or bulletin board.

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<sup>253</sup> A tariff methodology should specify a regulatory involvement in tariff setting and including, subject to the NRA decision, the definition of the regulated assets base, the asset valuation and the depreciation principles.

## Annex 2

### EU LNG terminals transparency template

 <b>LNG Terminals Transparency Template</b>		
	Macro Area	Submenu
1	CONTACT	Contact
2	TERMINAL CHARACTERISTICS	Facilities main characteristics
		Service Description
		LNG Quality
3	HOW TO BECOME A CUSTOMER / USER	Main steps for applying for access
		Contract information
		TSO information
		Ship procedures
4	CAPACITIES	Primary market
		Secondary market
5	TARIFF	Regulated terminals
		Exempted terminals
6	LEGAL DOCUMENTATION	Contracts/Codes
		Regulation/Legislation
7	OPERATIONAL DATA	Historical data
		Operational data
8	MISCELLANEOUS	Projects

Source: GLE, March 2012



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