

1 Global LNG market

1.1 Introduction

The share of LNG in global gas production is increasing. In recent years the share of LNG in worldwide gas production has grown to 8%, whereas it was still 6% in 2004.¹ The share of LNG in global gas trade is much higher, and increasing: it was 25% in 2006.² Worldwide trade in LNG has increased at a rate of 7.7% per year between 1996 and 2006, and LNG trade to the EU grew even higher over the same period, at a rate of 10.6%.³ For the European Union, the importance of LNG varies widely among Member States, as Spain relies for over 70% of its gas consumption on LNG whereas other countries import no LNG at all. LNG is bringing new sources of gas to the EU, which is beneficial for competition and security of supply.

The global LNG market is characterised by excess demand relative to available supplies. This situation is only expected to aggravate as several countries have made high investments in LNG trains in the past and now want to wait before increasing investment (the moratorium in Qatar on development of new production sites), or they have put a stop on export development as domestic demand is increasing.

The global LNG market is characterised by an overcapacity of regasification compared to liquefaction. The total LNG production capacity in the world is 268 bcm/year, and in 2007 the total production was 235 bcm. The worldwide total send-out capacity at regasification-terminals is 588 bcm/year. The average load-factor of a liquefaction plant is 93% whereas for regasification terminals this is 41%.⁴ In the EU in 2007 there were 13 LNG regasification terminals in 7 EU Member States with a total regasification capacity of 96 bcm/year. It is estimated that another 7 terminals could be operative in Europe before the end of the current decade, adding some additional 57 bcm/year of regasification capacity. However, this number is uncertain since many plans to construct LNG-terminals exist.⁵

There is also an increase in availability of ships required to transport LNG from the liquefaction to the regasification site. Comparing 2007 to 2006 shows that shipping capacity grew by 20% compared to a growth in liquefaction capacity of 4%. As more ships are under construction shipping rates are declining.⁶

¹ "Interoperability of LNG Facilities and Interchangeability of Gas and Advice on the Opportunity to set up an Action Plan for the Promotion of LNG Chain Investments", MVV Consulting, May 2008; IEA statistics, natural gas information 2007, OECD/IEA, 2007

² IEA statistics, natural gas information 2007, OECD/IEA, 2007

³ "Interoperability of LNG Facilities and Interchangeability of Gas and Advice on the Opportunity to set up an Action Plan for the Promotion of LNG Chain Investments", MVV Consulting, May 2008

⁴ Global Gas – LNG: the tightest of all commodity markets, Societe Generale, Equity Research, 15 May 2008

⁵ "Interoperability of LNG Facilities and Interchangeability of Gas and Advice on the Opportunity to set up an Action Plan for the Promotion of LNG Chain Investments", MVV Consulting, May 2008

⁶ Global Gas – LNG: the tightest of all commodity markets, Societe Generale, Equity Research, 15 May 2008

1.2 ***Business Models***

There is a wide variety of companies active in the LNG business. Among the obvious categories of producers, regasifiers and shippers, the following types can be distinguished related to the form of value optimisation:

- Companies that are involved in the whole value chain of LNG, participating in production, shipping and regasification terminal capacity in the two (USA and EU) or three major markets (USA, EU and Asia). The participation in these segments does not necessarily need to be through ownership;(long-term) contracts to buy LNG at the production facility, as well as access to shipping and regasification capacity on a fixed contract basis can have a similar effect.
- Companies that have ensured long-term access to production capacity (normally through ownership but also through back-to-back long-term output contracts) and to un-contracted additional cargoes that are produced from these facilities, which they can trade on the spot market. These companies usually also have contracted regasification capacity in at least one of the three major markets.
- Companies that have ensured (or are looking to ensure) access to LNG through long-term contracts to diversify their supply sources for a particular downstream market for which they have secured regasification capacity.
- Traders who have neither long-term access to production nor regasification capacity but operate in between.

Different types of companies have different possibilities to create value, which leads to different arbitrage possibilities. The upstream /midstream-integrated companies will optimise LNG-flows within their own group over two or three continents, whereas companies with access to spot cargoes will arbitrage between these markets on the spot market, as will companies that have LNG to supply downstream if they can replace that LNG by pipeline gas (or any type of flexibility).

Traditionally, LNG-production was sold in long-term contracts, but as more LNG comes on stream, projects optimise their output, and demand for LNG increases, there is a tendency to sell some LNG in contracts of intermediate or short-term duration. It is estimated that 13% of global gas supply is 'flexible' and that by the end of 2009 this share can grow to 21%. Of the new supplies becoming operational worldwide in 2008-2009, nearly 40% can be considered as 'flexible', more than half of which is situated in the Middle East and with easy access to all LNG markets.⁷

As LNG markets develop, short-term trading is also developing. In 2007 it accounted for 20% of global LNG sales compared to 16% in 2006. As these percentages do not show the arbitrage opportunities taken by integrated companies that can divert flows within their overall portfolio, these numbers are likely to underestimate the flexibility of LNG-trading. Moreover, there is a tendency for LNG producers to contract less of the output in fixed long-term contracts in order to profit from market opportunities.

Whereas previous years saw mainly arbitration in the Atlantic basin between the US and Europe, at times linking the gas price in Spain and the UK with each other and with the Henry

⁷ "Interoperability of LNG Facilities and Interchangeability of Gas and Advice on the Opportunity to set up an Action Plan for the Promotion of LNG Chain Investments", MVV Consulting, May 2008

Hub in the USA, this year the high prices in Asia have led to a diversion of cargoes towards Asia.

Not all parties can profit from these opportunities, both for contractual reasons that ties LNG to downstream supply contracts, as for physical reasons, since diversion from the Atlantic basin to Asia is possible only for a few players (such as Qatar) that are in reach of all three markets, in particular Algeria, Nigeria and Qatar.

For a world-wide trader, contracting shipping and re-gasification capacity is usually not the problem once an LNG-cargo is contracted (although it can be a problem for actors targeting a specific market). What is difficult is obtaining the cargo. The trading of LNG happens either at the exit of the train (spot production of LNG sold at the liquefaction plant) or at sea (arbitrage between different markets). If the gas price in the downstream market is higher than in other markets, a party that has access to a re-gasification terminal will use the re-gasification capacity itself to bring in gas. If it does not have gas to ship in, than it will be triggered to sell the capacity to another party that will bring in the gas. If the market circumstances are such that it is more profitable to bring gas to another market, the capacity holder will leave his capacity idle because it can obtain a higher price for its cargo somewhere else. However, when a capacity holder has other goals related to its downstream market besides optimising the value of its LNG capacity, such as optimising the value of all gas it holds in the downstream market, there is a risk of capacity hoarding, since such behaviour could benefit the overall interests of the capacity holder.

Current market circumstances are not favourable to arbitrage within the EU, as any sufficiently flexible ship will tend to go to Asia. But there have been spot trades taking place between Spain and the UK (including through regasification capacity in Zeebrugge), although incidentally. With increasing regasification capacity in the EU, in markets that are not yet fully linked, such opportunities should be expected to increase. However, this requires that rules and conditions applied by LSOs for access to their terminals do not hinder such optimisation, and that capacity hoarding is prevented.

LNG can play a role in enhancing an accessible, integrated, competitive EU market. A flexible market for LNG within the EU will also enhance short-term security of supply, since ships can easily be diverted to terminals that can serve the market that faces the supply problem. For that to happen, any LNG cargo should be able to go to any EU country served by an LNG terminal.

1.3 Access to EU LNG-terminals

1.3.1 Long-term contracts for LNG-capacity

Many LNG terminals in the EU have their capacity fully, or very largely, booked in long-term contracts. This goes for terminals that are exempted under Article 22 of the Directive 2003/55/EC, such as the Isle of Grain terminal in the UK, and terminals under construction, such as Teesside in the UK and GATE in the Netherlands. It also goes for regulated terminals without exemption under Art 22 such as the Zeebrugge-terminal in Belgium and Fos Cavou and Montoir de Bretagne in France or Panigaglia in Italy. LNG terminals in Spain, which are all regulated (without exemption under Art 22), have short-term capacity available through regulated access. The exempted Rovigo terminal in Italy which is currently under construction has the obligation to reserve 20% of the capacity for short-term contracts.

Many terminals are therefore, once constructed, closed to parties which are interested in making a long-term capacity booking. Such parties need to seek access through enhancements of current terminals (e.g. based on open season procedures) or by participating in or promoting new terminals, all of which options face significant practical obstacles and risks, e.g. long lead times for construction and high failure rates of projects.

The Commission has recognised for specific circumstances long-term contracts in its exemption decisions.. In exemption decisions the Commission has acknowledged that new LNG-terminals, also when operated under long-term contracts, can allow new market entry and/or diversification of supply.

However, the fact that capacity is committed in long-term capacity contracts does not necessarily mean that this capacity is used all the time, in particular since there is an overcapacity of regasification in the world. The portfolio of the user of the capacity and its company structure will determine how it will use his capacity in the LNG-terminal, and how it can optimise the value of its LNG cargoes in the global market.

1.3.2 Capacity trade in the shorter term

Access to short-term capacity is needed as a(n often imperfect) substitute for scarce long-term capacity contracts and as a means of utilising short term trading opportunities.

Such short term access to terminals should, on principle, be possible in a situation in which many terminals are only utilised at less than 50 percent of their capacity if capacity hoarding is prevented and secondary and primary short term capacity trading is encouraged. This goes both for regulated terminals (where availability of short-term capacity can be arranged through regulation) and for exempted terminals (anti-hoarding mechanisms).

However, unused capacity is not always indicative of capacity hoarding, in particular in a situation in which other geographic natural gas markets offer more attractive prices. There is no incentive for capacity hoarding if the regasification capacity, valued at its own merits, is used in an economic way. Therefore prevention of hoarding is only needed as a backstop measure, so that it is not hoarded by parties who have more opportunities to import gas in their market and have an interest in blocking entrance to the market through LNG.

The creation of a flexible market in short-term capacity requires that parties are able to trade their capacity easily and that they are able to extract the maximum value out of such a trade, even though the price setting for secondary capacity allocation needs further discussion and upward deviations from the regulated reference price could be problematic in particular for capacity holders which are dominant on the downstream market. Trading parties need to know exactly what they are trading, and they benefit from the maximum flexibility in the terminal. This requires at least transparency on the services offered and tariffs charged at an LNG-terminal, but it may also require a certain alignment of minimum services to be offered, at the same time being comparable and allowing for flexibility to choose those services required.

2 Regulatory framework for investments in LNG-terminals

Following Directive 2003/55/EC on the internal market for natural gas, LNG-terminals are part of the regulated infrastructure, and therefore require third party access and approval of access terms and conditions, including tariffs, by the national regulatory authority. There is however the possibility to exempt LNG-terminals from (a part of) these rules, in case the conditions in Article 22 are met.

Regasification vessels⁸ that have the possibility to regasify LNG, and can send it out into the transmission network without a fixed terminal, are not covered by the Directive. Therefore they are not part of the regulated infrastructure. These vessels of course will normally need the possibility to connect to the regulated network. Currently there is only one possible dock for such vessel to send gas into the transmission system, which is located in the UK and built at the request of Exceleerate Energy LLC.

Directive 2003/55/EC stipulates that only in case of an Article 22 exemption, LNG-terminals have the obligation to be legally separated from the infrastructure operator they are connected to. Accordingly terminals can therefore be an integrated part of a supply undertaking, but also of a TSO in case the access to the terminal is regulated. Moreover Art 17.3 requires LSOs to keep unbundled accounts (Art 17.3). Under the emerging 3rd Package legislation no new obligations are foreseen regarding the legal status of LSOs. This allows for the continued co-existence of basically three categories of LNG-terminal System Operators: LSOs that are independent of any supply company and of any TSO, LSOs that are owned by supply undertakings (in which case they are usually in a legally separated entity) and LSOs that are owned by TSOs (in which case they are either part of a combined system operator that has no supply interests or they are in a separate legal entity). Within these three categories terminals are either regulated or exempted under Article 22 of Directive 2003/55/EC.

With respect to an investment friendly regulatory framework for LNG terminals and a level-playing field for these investments across the EU, the Commission, on a preliminary basis, considers that the co-existence of regulated and exempted terminals as such is not a problem. As more terminals are built both regulators and exempted terminals (absent market power on the downstream market by terminal operators or capacity holders, which is part of the exemption assessment) have an interest in ensuring that LNG will be unloaded at these terminals and subsequently flow to the connected downstream market(s).

In this regard the interface between TSOs and LSOs is important. LSOs that are independent of the TSO may face a different situation from those who are part of the same company. In particular in Member States where different parties plan to develop LNG-terminals the well-functioning of this interface is highly relevant for preventing uneven playing fields. In any event, this interface is most important for an undistorted investment climate. Discrimination between different terminal operators needs to be prevented. Independence of the TSO of supply interests is (once again) of utmost importance and the requirements to ensure effective unbundling under the 3rd package legislation are expected to achieve this.

⁸ Regasification Vessels are LNG carriers which are modified in order to enable the vessel to discharge regasified LNG to a subsea pipeline, through an internal turret arrangement connected to an offshore mooring buoy.

The investment climate for terminals is also influenced by how access to capacity is arranged. Rules on capacity allocation influence the way in which the terminal operator can offer its product, and therefore influence the price its customers are willing to pay for it. Although exempted terminals may have more flexibility in the products they offer, the national authorities in cooperation with the Commission have so far ensured that these terminals also are subject to rules preventing hoarding of capacity.

The current "anti-hoarding" requirements in LNG-terminals in the EU vary widely, for both regulated and exempted terminals, in particular as regards the notification periods before primary rights to use the capacity are affected, but also in the way in which these primary capacity rights are affected. The anti-hoarding requirements (often referred to as Use-It-Or-Lose-It) influence the value of the capacity for its holders, as they influence their ability to trade their cargos, and thereby also influence the value of the investment. Differences in anti-hoarding requirements throughout the EU, in particular when exempted terminals are concerned, may therefore lead to regulatory competition between Member States.

3 Commission position on issues covered in the GGPLNG⁹

Validating the desired "fair level playing field" for terminal access across European LSOs is challenging in practice. The recent Commission study on LNG¹⁰ of May 2008 was not conclusive in its assessment of the impact of the different LSO models on the provision of effective access to LNG terminals.

Clearly the commercial potential of the short-term and secondary market for LNG play an important role in this regard. The Commission is committed towards a European LNG policy which fully captures this potential whilst preventing capacity hoarding.

The Commission is convinced that the right regulatory balance can be struck across the various types of LNG-terminals in the EU so as to achieve a fair level playing field for terminal access and investment in terminals. In this regard the Regulation amending Regulation 1775/2005/EC in the 3rd package is expected to provide a number of important changes for LSOs. These relate to the Third Party Access under Art. 4a), the capacity allocation provisions under Art. 5a), the requirements for transparency under Art. 6a), the requirements for record keeping under Art. 6b), and the obligations for trading of capacity rights under Art 8). All these changes are meant to align LSOs to principles which are equivalent to those applied already to TSOs. The proposed new Regulation is also based on the Guidelines of Good Practice of LNG-terminal System Operators as prepared by ERGEG.

Nevertheless, there remain areas where the Commission sees a need for more assessment as to whether or not action beyond the guidelines and the 3rd package is needed. The general rules are defined in the Regulation, but the Commission in this paper addresses the question if more detailed rules are needed for the areas covered there.

⁹ Guidelines for Good Third Party Access Practice for LNG System Operators

¹⁰ "Interoperability of LNG Facilities and Interchangeability of Gas and Advice on the Opportunity to set up an Action Plan for the Promotion of LNG Chain Investments", MVV Consulting, May 2008

In view of this, the Commission considers that at this moment the monitoring of the GGPLNG by ERGEG is the right way forward as it can be expected to lead to further discussion and consensus-building on what works satisfactorily and what does not. In parallel additional reflection and work needs to be undertaken in the areas identified in this paper which are outside or go beyond the GGPLNG.

- *Action point 1): ERGEG to monitor GGPLNG*

3.1 Commercial and technical rules

As a general principle, the analysis focuses on commercial rules regarding access to the terminals. The Commission takes the view that technical rules regarding access should not be covered by European legislation.

First of all, if the commercial incentives are set right, then the right technical rules will be applied automatically. By contrast, detailed technical rules, which the EU legislative and regulatory authorities are less well equipped to develop than the industry itself, cannot fully compensate for problems arising on the level of commercial incentives and translating to the erection of technical barriers.

Secondly, the transport of LNG is a non-regulated business not covered by Regulation 1775/2005/EC and different parties are active in the shipping market. Different types and sizes of ships exist that will not be able to go to all regasification terminals, as is for example the case for the large ships designed for Qatar and ExxonMobil to ship LNG to the Teeside terminal in the UK.¹¹

Thirdly, the LNG industry is a relatively young industry and innovations should be promoted in all aspects of the LNG chain, including shipping and regasification. Detailed technical requirements will block innovation.

A special case of technical requirements is the rules regarding differences in gas quality. The topic is addressed further down.

3.2 Terminal access: tariffs and services

The guidelines provide somewhat more precision on the regime and structure for tariff setting by LSOs based on the provisions of Art. 18 and 25 of the Directive. The requirements for LSOs to set non-discriminatory access rules (e.g. equivalent contractual terms and conditions) and to inform all market participants on the access conditions (transparency) are considered to be fully adequate for creating a fair level playing field for LSOs. In practice it is however very challenging to compare for example applied tariffs of LSOs and to draw meaningful conclusions.

In its study the Commission asked for a comparison of the various access tariffs applied by

¹¹ This does not change our goal to enable any LNG cargo to go to any EU Member State, as trades of LNG contracts as well as pipeline-gas contracts should be possible to divert cargoes commercially.

the European LSOs. However, the study was not sufficiently conclusive. It also elaborated as to why different local conditions (e.g. size of LNG vessels, send-out requirements, flexibility margins included into TPA tariffs, gas qualities, etc.) would make it difficult to define standard services which would accommodate all local terminal conditions. Moreover, increasing costs of raw materials and human capital over the last years, in particular in the construction phase, make it difficult to compare tariffs or revenues alone, without taking into account the terminal costs. The study concluded that a meaningful horizontal comparison would be very difficult. It therefore seems necessary to further assess the nature of the addressed local differences and the (technical) feasibility in tariff setting. With respect to standard services and tariffs the relevance of chapters 3, 4.1 and 4.2 of the GGPLNG need more analysis.

- **Action Point 2):** *further analysis of the tariffs and revenue regulation applied to regasification terminals in the EU is needed.*

3.3 TPA Services

Even under the 3rd Package legislation the range of TPA services to be offered by LSOs is not proposed to be defined to the same level of detail as this is the case for TSOs and SSOs. This is expected to leave LSOs also in future more flexibility in defining TPA services. To enable market parties to trade regasification capacity the services of different terminals, however, need to be aligned as much as possible. As stated above, it may not be possible to define this in detailed rules as there is no desire to harmonise technical characteristics. However, to optimise the value of terminal capacity for the EU there may be a need to set minimum requirements of how regasification capacity is offered, in particular with respect to the different aspects of the regasification process.

The language developed in the GGPLNG on “Necessary TPA services” can already give useful guidance in this area. But clearly some issues are of such crucial importance that more work and research is needed.

Ø Standard contracts

The regulation in place does not require LSO to apply standard contracts to be set or approved by the NRA relying mainly on “behavioural” principles (i.e. non-discrimination) to be followed by LSOs. The new Regulation is expected to be more prescriptive requiring LSOs to offer the same service to different customers under “equivalent contractual terms and conditions”. However, if there remains a need to further assess the feasibility and benefits of requiring LSOs to offer for the same services offered by different LSOs standard contracts (leaving apart the question as to whether or not LSOs shall anyway offer standard services).

- **Action Point 3):** *Assess the benefits of defining detailed requirements for the tradability of terminal access services, and assess the possibilities and the benefits standard contracts for the same services offered by LSOs.*

∅ **Distinction between bundled/unbundled services**

With the goal of optimising trading possibilities between terminals, and optimising value of regasification services, the capacity offered should be as flexible as technically possible.

The proposed amendments to the Regulation do not oblige LNG-terminal operators to offer unbundled services. ERGEG guidelines for good practice are soft insofar as they provide only that LSOs “could” offer a number of unbundled services which are mentioned in the text. The list is probably an illustrative rather than an exhaustive one. It seems that more useful work can be done to explore this question further in order to thoroughly assess the commercial relevance of bundled vs. unbundled services including other parameters of such services. Such further analysis should demonstrate also the benefits or not of more harmonisation for these fundamental design parameters of the TPA services offered by LSOs.

- **Action Point 4):** *Identification of all technically possible and commercially relevant “unbundled services”.*

∅ **Gas quality**

Differences in gas quality requirements at the entry of LNG terminals pose a problem to trading of LNG cargoes. It is fully recognised that the issue of gas quality is of crucial importance for the development of a more harmonised TPA access regime across European LSOs. It is desirable that also for LSOs the widest possible range of LNG quality parameters will need to be agreed which would be acceptable from a technical and safety point of view. This should ensure maximum interoperability of terminals and maximum trading possibilities.

When addressing the fair level playing field for LSOs it is important to remember that a lack of progress or delays in setting necessary standards for non-refusable LNG qualities prolong a key terminal access constraint. Besides facilitating competition, it is also from a security-of-supply point of view that neither Member States nor companies have an interest in refusing certain types of gas qualities.

The Commission has issued a mandate to CEN, the organisation for European Normalisation, to develop European standards for gas qualities.

The costs and benefits of harmonising gas quality at the entrance of a terminal depend very much on the contracted capacity. If specific LNG-liquefaction plants are linked to specific regasification terminals, even with short-term changes and trades of cargoes, there will be a dominant gas quality inflow to which the LNG-regasification process is economically optimised. Obliging terminal operators to accept any possible gas quality will impose investment costs that are not necessarily commercially viable.

- **Action Point 5)** *Address the costs and benefits of establishing minimum gas quality requirements at the entrance of LNG terminals in*

the development of standards issued to CEN.

Ø Cooperation with TSO; LSO/TSO interconnection issues

The GGPLNG specify areas where LSOs should make "reasonable endeavours" to cooperate with integrated system operators. Such cooperation is important in order to facilitate the interoperability of LNG facilities and their connection to the grid. The 3rd package legislation is expected to bring a number of improvements already with the alignment of LSOs' TPA principles to those existing already for TSOs. However more research is necessary to identify steps by which such cooperation between TSOs and LSOs could be made more effective

- **Action Point 6):** *Assess steps to improve cooperation between LSOs and interconnected TSOs*

3.4 Capacity allocation mechanisms

Across the EU terminals there exist a broad range of different systems for capacity allocation. The GGPLNG are providing the right principles which are expected to be well captured by the emerging 3rd package legislation. From the new Regulation ambitious and sufficiently detailed provisions on CAM are expected to emerge making further action in this area for the time being less urgent. However, issues with regard to CAM may persist in particular regarding past capacity allocation fort individual terminals operated by incumbents.

- **Action Point 7)** *After adoption of the new Regulation, implementation needs to be monitored and evaluated. Application of CAM principles to past capacity bookings needs to be ensured.*

3.5 Congestion management and anti-hoarding rules

The Commission study argues that LNG plays different roles in various European markets, so the concept of capacity hoarding has to be considered in a different way than for pipelines. Rules applicable in case of systematic underutilization or capacity hoarding have to be specifically designed for LNG facilities in order to protect the option value of capacity holders: effective use of the contracted and booked capacity is viewed as an option not an obligation for LNG suppliers as they operate in a competitive global market with large price fluctuations that may render uneconomic the unloading of a cargo at a specific LNG terminal at a given point in time. At the same time, the rules have to be effective in offering unused capacity sufficiently well in advance to be useful to other suppliers. The NRAs should apply the rules after open dialogue with primary capacity holders to know the conditions that prevented the use of booked capacity.

The legislation in force (and the third package even more) provides the tools for the LSO to accommodate the request of shippers, to seek for the cooperation of other LSO where feasible

or to propose the expansion of the terminal capacity. But this fact does not always guarantee relieve of contractual congestion problems because of insufficient transparency, mix of interests or both. In any case the key objective for the congestion management procedures remains the prevention of capacity hoarding. The proposed amendments to the Regulation, based on the GGPLNG, are expected to provide an appropriate framework for effective CMP providing for the right principles, offering unused capacity on the secondary market at a reasonable price.

Regarding the anti-hoarding rules there are two issues that need to be examined in depth namely the notice period before anti-hoarding principles apply. It also needs to be further investigated what happens with the rights of the original capacity holder once he has surpassed the notification period without nominating capacity. For example, does a capacity holder fully lose the capacity if he has not notified that he wants to use it, without any compensation for his loss (Use-It-Or-Lose-It in the strict sense), or does he maintain his rights until another party has requested to use it, possibly with a compensation if another user wants it (which would be more like Use-It-Or-Sell-It or Use-It-Or-Lend-It). This does not necessarily mean that there is a need for imposing a common notice time at EU level which may not be justified by local conditions. However there is a case for assessing the benefits for establishing common principles for setting the notice period and the rights of the original capacity holder boosting more harmonised terminal access across Europe, as well as ensuring a level-playing field for investments.

- **Action Point 8):** *analysis of the need for harmonisation of anti-hoarding notification periods and anti-hoarding rules regarding the effect on capacity rights*
- **Action Point 9):** *(if the analysis under 7) concludes that harmonisation is needed): make recommendation on what such notification period and anti-hoarding rules should be.*

3.6 Transparency

The third package puts emphasis on transparency, which is reflected in the proposed regulation by requiring publication of LNG-system operators to publish information regarding the services they offer, the use and the available capacity in LNG-terminals

What is not addressed yet is the usefulness of “prospective” transparency in which information on planned use of terminal capacity, in the form of nominations would be made available to market participants. Time frames for nominations are different for LNG-terminals than for pipelines, and it needs to be analysed if this merits a different treatment. The topic is not addressed in the GGPLNG.

In relation to a minimum harmonisation of the way services are offered, as mentioned above, this can also be addressed through transparency measures, in particular by requiring LNG-terminal operators to be very precise on the access terms and conditions as well as the tariffs charged for making use of these services.

- **Action Point 10):** *analysis of the need for rules on prospective transparency*
- **Action Point 11):** *analysis of the need for detailed rules on transparency with regards to services offered.*