Introduction

Gas Trade Review is a publication in which the shipping and contractual issues relevant to the global LNG trade and the European pipeline trade with natural gas are analyzed.

In this edition, you can read about the following topics:

- The Conditions For Cargo Diversion In LNG Trade

- Reporting Obligations Of The Natural Gas Producers Under REMIT

- Transparency Obligations Of The Storage System Operators In EU

- Reporting Obligations Of The Storage System Operators Under REMIT

- Transparency Obligations Of The LNG System Operators In EU

If you have any comments about the matters reviewed in this edition, please address them to **editor@commoditylaw.eu**

The Conditions For Cargo Diversion In LNG Trade

by Vlad Cioarec, International Trade Consultant

The cargo diversion in LNG trade refers to the redirection of an LNG cargo on buyer's request towards a different unloading terminal than the LNG terminal at which such LNG cargo was initially agreed (in spot transactions) or scheduled (in the Annual Delivery Programme agreed by the seller and buyer under a long-term sale contract) to be delivered[1].
The cargo diversion may be required by buyers for commercial reasons in order to gain a profit from the price differentials between the buyer's home market and another market (a highly – priced market) or for operational reasons, in case of insufficient storage capacity or unforeseen events (force majeure events) that prevent the berthing and/or unloading of LNG ships at the LNG terminal where the diverted cargo was initially agreed or scheduled to be delivered.
The contractual clauses which give the CIF and Ex Ship buyers the right to request the diversion of surplus LNG cargoes to alternative destinations are referred to as “flexible destination clauses”.
In CIF and Ex Ship sale contracts, the flexible destination clauses will usually provide a range within which the receiving terminal may be nominated prior to each shipment and give the buyers the option to demand delivery of LNG cargoes at any receiving terminal from the respective range of LNG terminals with the obligation to provide a safe berth at such receiving terminal at which the LNG ship carrying the diverted cargo can safely reach fully laden and where it can safely lie and discharge always afloat and it can safely depart from. Such clauses stipulate also the requirements for diversion of cargoes: i.e.

- the buyer must request the seller's consent for diversion;

- in case of LNG cargoes sold under fixed – term contracts, the distance and necessary time for transportation of diverted cargo to the alternative receiving terminal should allow the LNG ship to return in time for the next scheduled delivery[2];

- the buyer has the obligation to reimburse to seller the additional transportation and insurance costs, including the market value of any additional boil-off gas, arising out of cargo diversion;

- the LNG ship nominated to transport the diverted cargo is compatible with the unloading facilities of the alternative receiving terminal and has been and continues to be approved by the terminal operator. The ship carrying the diverted cargo may be scheduled for unloading at an LNG terminal only if it has been previously vetted and approved by the LNG terminal operator. If the LNG ship nominated to transport the cargo proposed for diversion has not been previously vetted and approved by the operator of the alternative receiving terminal, the seller would be entitled to refuse the diversion request due to the timescales required by the LNG terminal operators for the verification of the ship's compatibility with the unloading facilities and for the safety inspection and the risk that the LNG ship will not be able to return in time for the next scheduled delivery. The LNG terminal operators do not guarantee the approval of an LNG ship by a particular date.

1 See the definition of cargo diversion in the Japan Fair Trade Commission report “Survey on LNG Trades” (Chapter 4 – Ensuring of fair competition in LNG Trades).

2 In fixed – term sale contracts the seller's refusal of a diversion request can be considered reasonable where the distance and necessary time for transportation to the alternative receiving terminal would prevent the carrying ship to return in time for the next scheduled delivery. See the Japan Fair Trade Commission report “Survey on LNG Trades” (Chapter 4 – Ensuring of fair competition in LNG Trades).

- the LNG ship nominated to transport the diverted cargo shall be allowed to berth and unload the cargo at the alternative receiving terminal on the ETA date. This would require that the third party to whom the buyer resells the LNG cargo to obtain a slot for ship berthing and unloading of cargo on the ship's ETA date, unless the LNG terminal operator can reschedule a scheduled slot of the third party buyer.

- the cargo quality characteristics, particularly the Gross Calorific Value and Wobbe Number, are within the quality specifications of the alternative receiving terminal.

The alternative receiving terminal may have different quality specifications than the previously agreed unloading terminal. In such case the possibility of cargo diversion will depend on the capability of LNG suppliers to adjust the quality characteristics in function of the quality specifications of the alternative receiving terminal[3]. Otherwise, the receiving terminal operators will have to adjust the LNG quality characteristics to bring them within the entry specifications of the national gas grid[4] and this will be made at a cost that will make the cargo diversion less profitable.
Furthermore not all LNG terminals have quality adjustment facilities. According to GLE List of Services published by Gas Infrastructure Europe, in Europe the Wobbe Index/ GCV Correction service is currently provided only by eight LNG terminals: Gate LNG terminal from the Port of Rotterdam, Fluxys LNG terminal from the Port of Zeebrugge, Grain LNG terminal from the Isle of Grain, Elengy LNG terminals from Montoir-de-Bretagne, Fos Tonkin and Fos Cavaou, Panigaglia LNG terminal and Livorno LNG terminal[5].

The Application Of Profit Sharing Mechanisms For Diverted Cargoes

The profit-sharing mechanisms are contractual clauses which require the buyers to share with the sellers a part of the profit obtained from diversion of LNG cargoes when the buyers re-sell the LNG cargoes ouside their home market designated in the sale contract.
The question whether the profit-sharing mechanisms may be applied in the LNG sale contracts concluded with European buyers depends on the delivery terms agreed in those contracts, specifically on the time when the title (i.e. ownership) and risks for the LNG cargoes pass from the sellers to the European buyers.
The LNG cargoes are purchased by the European buyers under three Incoterms: FOB, CIF and DES[6].

3 The LNG cargoes are described either as “rich LNG” or as “lean LNG” in function of their Gross Calorific Value and Wobbe Number. The rich LNG cargoes contain a higher proportion of hydrocarbons heavier than methane (i.e. ethane, propane, butane and pentane) than lean LNG cargoes which means that the rich LNG cargoes have a higher Gross Calorific Value and Wobbe Number than lean LNG cargoes. The LNG suppliers can adjust the quality characteristics of the rich LNG by extracting the heavier hydrocarbons from the feed gas before liquefaction to reduce the Gross Calorific Value and Wobbe Number. In the case of lean LNG, the quality characteristics can be adjusted by injecting propane to increase the Gross Calorific Value and Wobbe Number. The seller's refusal of diversion request can be considered reasonable when this would require a change of the quality characteristics, i.e. a different Gross Calorific Value and Wobbe Number, of the LNG cargo proposed to be diverted. See the Japan Fair Trade Commission report “Survey on LNG Trades” (Chapter 4 – Ensuring of fair competition in LNG Trades).

4 The LNG terminal operators can adjust the quality characteristics of the rich LNG by extracting the heavier hydrocarbons, particularly propane and butane, from LNG and/or by diluting the LNG with liquid Nitrogen to reduce the concentration of heavy hydrocarbons and thereby the calorific value and Wobbe Number. In case of lean LNG, the quality characteristics can be adjusted by injecting propane and/or by blending the lean LNG with rich LNG to increase the calorific value and Wobbe Number.

5 FSRU Toscana is equipped with a Wobbe Index correction system installed onboard. See the information provided on the operator web site: https://www.oltoffshore.it/en/terminal/terminal-plus/

6 DES in Incoterms 2000 was replaced in Incoterms 2010 with DAP terms.

In FOB sale transactions, the LNG cargoes become the property of the buyers at the time of delivery at the loading terminal (once the LNG cargo is loaded on board the carrying vessel) when the title (i.e. ownership) to and risks for the LNG pass to the buyers.
In CIF sale transactions, like in FOB sale transactions, the LNG cargoes become the property of the buyers at the time of delivery at the loading terminal (once the LNG cargo is loaded on board the carrying vessel) when the title (i.e. ownership) to and risks for the LNG pass to the buyers.
Unlike the FOB sellers, CIF sellers have the additional obligation to arrange and pay for the transportation of LNG cargoes to destination. But the CIF sellers are responsible only for the costs of transporting the LNG cargoes to the receiving terminal at which the LNG cargoes were initially agreed (in spot transactions) or scheduled (in fixed-term sale contracts) to be delivered. Any other additional costs due to events occurring after the time of delivery, such as the additional costs arising from the cargo diversion to another receiving terminal, shall be borne by the buyers.
In Ex Ship sale transactions, the LNG cargoes remain the property of the sellers until the time when they are delivered to the buyers at the receiving terminal.
The European Commission considers that in FOB sale contracts the buyers should be free to re-sell and deliver the LNG cargoes to any destination they wish. Similarly in CIF sale contracts, the buyers should be free to re-sell the LNG cargoes to any destination they wish provided that they shall reimburse to sellers the additional costs arising from cargo diversion[7]. The application of profit-sharing mechanisms in FOB and CIF sale contracts is a disincentive for the buyers to divert LNG cargoes from one EU Member State to another EU Member State, thereby potentially distorting the competition within the EU gas market[8].
The European Commission considers that the profit-sharing mechanisms can be applied in the LNG sale contracts concluded with the European buyers only where the LNG is delivered on Ex Ship terms (DES Incoterms 2000 or DAP Incoterms 2010 and 2020), because in Ex Ship sale transactions the LNG cargo remains the property of the seller until the time when it is delivered to the buyer at the receiving terminal[9].
Similar views were expressed by the Japan Fair Trade Commission in a report published in June 2017[10]. Similar to the European Commission, the Japan Fair Trade Commission considers that the application of profit-sharing mechanisms in FOB sale contracts prevent the buyers from reselling the LNG freely and properly. The insertion of profit-sharing clauses in FOB sale contracts is not considered reasonable and is highly likely to be in violation of the Japan's Antimonopoly Act.
In Ex Ship sale contracts, the application of profit-sharing mechanisms is reasonable due to the difficulty for the sellers to quantify all the additional costs and risks which a diversion requested by the buyer may cause. The application of profit-sharing mechanisms is justified only where it is used as a compensation for the additional costs and risks taken by the seller that are difficult to quantify. However, when the application of profit-sharing clauses contribute to an unreasonable profit sharing with the seller, by setting a high percentage of the resale profit without properly considering the

7 See the European Commission Policy Newsletter No. 3/2007, the article “Territorial restrictions and profit sharing mechanisms in the gas sector: the Algerian case” by Eleonora Wäktare. “As soon as the buyer takes title to and bears the risks for the gas, he should be entitled to take the gas to another destination, i.e. divert the ship.”

8 In the year 2000, the European Commission had started to investigate the profit-sharing clauses in the long-term LNG sale contracts concluded by Sonatrach with the European LNG importers from the perspective of EU's competition policy. In July 2007 the European Commission had reached an agreement with the Algerian government and Sonatrach over the application of profit-sharing mechanisms in the LNG sale contracts concluded by Sonatrach with the European importers whereby Sonatrach had agreed to remove the profit-sharing clauses from the FOB and CIF sale contracts concluded with the European buyers. See the European Commission Policy Newsletter No. 3/2007, the article “Territorial restrictions and profit sharing mechanisms in the gas sector: the Algerian case” by Eleonora Wäktare.

9 See the European Commission Policy Newsletter No. 3/2007, the article “Territorial restrictions and profit sharing mechanisms in the gas sector: the Algerian case” by Eleonora Wäktare.

10 See the Japan Fair Trade Commission report “Survey on LNG Trades” (Chapter 4 – Ensuring of fair competition in LNG Trades).

seller's actual contribution to resale or by using a gross profit as a resale profit or when the profit-sharing clauses have some effects to prevent a buyer from reselling due to a seller's request of information in respect of the company to which the buyer resells the cargo or a request for the disclosure of the profit or costs structure, these are likely to be in violation of the Japan's Antimonopoly Act.

In October 2018 the Professor Kim Talus from Helsinki University published a model of cargo diversion clause which provides two options for the buyers to compensate the sellers in Ex Ship sale transactions for the additional costs and risks incurred by the sellers due to the cargo diversion:

- either to compensate the seller for all actual documented net costs and risks incurred by the seller to complete the diversion of cargo to the alternative unloading terminal; or
- by sharing with the seller the net profit realized from resale.

The resale profit should be calculated as the difference between the net proceeds obtained by the buyer from the resale of diverted cargo to the third-party purchaser based on the market price in the country where the alternative receiving terminal is located and the net value of diverted cargo on the scheduled unloading date at the originally agreed receiving terminal, less the difference between the amount of transportation and insurance costs incurred by the seller for the delivery of the diverted cargo to the third-party purchaser and the amount of costs which would have been incurred by the seller in delivering the cargo to the buyer at the receiving terminal at which the cargo was scheduled to be delivered in the Annual Delivery Programme and which were eventually avoided by the seller as a result of the fact that the cargo was not delivered to the contractual buyer.

Reporting Obligations Of The Natural Gas Producers Under REMIT

by Vlad Cioarec, International Trade Consultant

Obligation To Report Inside Information

The EU natural gas producers are explicitly mentioned as "market participants" in the Article 3(4) (b) of REMIT[1] and are therefore considered market participants if they enter into transactions in one or more wholesale energy markets for the sale of natural gas[2].
According to the Article 4(1) of REMIT, the EU natural gas producers have the obligation as "market participants" to publicly disclose in an effective and timely manner the inside information[3] which they possess in respect of their business or facilities, particularly the information relating to the planned or unplanned unavailability of their facilities for gas production.
The inside information related to the planned or unplanned unavailability of gas production facilities has to be reported to ACER in the form of Urgent Market Messages (UMMs) via web feeds on the gas producer's web site and on a platform for the disclosure of inside information[4].
The Article 10(1) of the EU Commission Implementing Regulation No. 1348/2014 stipulates that the market participants disclosing inside information on their website or service providers disclosing such information on market participants' behalf shall provide web feeds to enable the ACER to collect efficiently inside information for market monitoring purposes.
ACER shall identify the location of the web feed through the URL address provided by the natural gas producer at the time of registration as "market participant"[5].
The reporting schema for the disclosure of inside information related to the planned or unplanned unavailability of gas production facilities is presented in Annex VII of REMIT Manual of Procedures on transaction data, fundamental data and inside information reporting[6]. The schema contains 18 fields:
In the Field 1 "Message ID" must be inserted the unique identifier of the UMM.
In the Field 2 "Event Status" must be stated the status of the UMM, i.e. Active, Dismissed or Inactive. The term "Active" must be inserted when referring to an event that will occur in the future or is occurring. The term "Dismissed" refers to an UMM that was cancelled and is not valid anymore. The term "Inactive" has to be inserted when referring to an event that already occurred in the past. The UMM related to an event may be updated several times before, during or after the event, whenever the Event Status changes. However, it is not mandatory to insert the term "Inactive" when the date and time of the event have expired. The status value "Active" can be maintained for UMMs referring to past events[7].

1 EU Regulation No. 1227/2011 on wholesale energy market integrity and transparency.
2 See Sub-section 3.4 of ACER Guidance on the application of REMIT.
3 According to the Article 2(1) of REMIT, "inside information" means information of a precise nature which has not been made public, which relates, directly or indirectly, to one or more wholesale energy products and which, if it were made public, would be likely to significantly affect the prices of those wholesale energy products.
4 A platform for the disclosure of inside information is an electronic system for the delivery of information which allows multiple market participants to share information with the wide public. See Sub-section 7.1 of ACER's Manual of Procedures on transaction data, fundamental data and inside information reporting. The list of the third party inside information platforms is available on REMIT Portal: https://www.acer-remit.eu/portal/home.
5 The URL address must be provided in the Section 1 of the registration form under the field "Publication of inside information".
6 See the schema for UMMs related to "Unavailability of gas facilities".
7 See ACER Answer to Question 5.1.3 in ACER document "Frequently Asked Questions (FAQs) on REMIT fundamental data and inside information collection (6th Edition)" available on REMIT Portal: https://www.acer-

In the Field 3 “Type of Unavailability”, the natural gas producer must state whether the unavailability was planned or not, using the words “planned” or “unplanned” to indicate the type of unavailability. A planned unavailability occurs in case of scheduled maintenance or repair works. An unplanned unavailability occurs in case of unforeseen technical problems.
In the Field 4/b “Type of Event”, the natural gas producer can state the subject of the unavailability as “Gas production field unavailability” or “Gas treatment plant unavailability”, as the case may be. In case of other types of unavailability, the type of event should be stated as “Other unavailability”.
In the Field 5 “Publication date/time” it is shown the date and time when the UMM was made publicly available, i.e. when the inside information was disclosed to the public through the UMM. This information is generated automatically when the UMM is published.
In the Field 6 “Event Start”, the natural gas producer must state the expected (if it is a future event) or actual starting time and date of the relevant event. If the exact time of the “Event Start” is not known at the time of the publication of UMM, the natural gas producer should insert an estimated time rounded to the nearest hour and the UMM should be updated once the information on the event allows the natural gas producer to provide more accurate information as to the starting time.
In the Field 7 “Event Stop”, the natural gas producer must state the expected (if it is a future event) or actual time and date at which the relevant event stops. If the exact time of the “Event Stop” is not known at the time of the publication of UMM, the natural gas producer should insert an estimated time rounded to the nearest hour and the UMM should be updated once the information on the event allows the natural gas producer to provide more accurate information.
In the Field 8 “Unit of measurement”, the natural gas producer must state the measurement unit used for reporting unavailable capacity, available capacity and technical capacity of the production facility or gas treatment plant during the unavailability period. The gas production field unavailability can be reported in mcm/d.
In the Field 9 “Unavailable capacity”, the natural gas producer must state the technical capacity of the production facility or gas treatment plant that will be unavailable due to the reported event.
In the Field 10 “Available capacity”, the natural gas producer must state the technical capacity of the affected facility (production unit or gas treatment plant) that will remain available during the reported event.
In the Field 11/b “Technical capacity”, the natural gas producer must state the daily maximum net sustained flow capacity that the affected production facility can produce continuously under normal conditions and relevant security standards.
In the Field 12 “Reason for the unavailability”, the natural gas producer must provide an explanation on the cause of the unavailability. For instance, in case of shutdown of a gas processing plant for planned maintenance works, the reason could be stated as “Planned maintenance of gas treatment plant”.
In the Field 13 “Remarks”, the natural gas producer must provide more detailed information of the event to allow a full understanding of its potential impact on the wholesale energy prices. In case of planned maintenance, the producer should mention whether the production will be affected and for how long. In case of an unplanned event when an estimation of duration is not possible, the producer should mention that.
In the Field 15/b “Balancing Zone”, the natural gas producer must identify the balancing zone(s) where the production unit/gas treatment plant is located or feeds into, using the EIC Y Code for the respective balancing zone(s).
In the Field 16 “Affected Asset or Unit”, the natural gas producer must state the official name of the gas field or gas treatment plant where the event is occurring or is about to occur.
In the Field 17 “Affected Asset or Unit EIC Code”, the natural gas producer must state the EIC Code of the production unit/gas treatment plant that is or will be unavailable.

remit.eu/portal/home.

In the Field 18 “Market Participant”, it must be inserted the official name of the market participant that is responsible for the public disclosure of the inside information (i.e. natural gas producer) related to the event described in the UMM.
In the Field 19 “Market Participant Code”, the natural gas producer must provide the ACER registration code, which the natural gas producer received when it registered as “market participant” with the national regulatory authority.
The UMMs should be stored for a time period of at least 90 days after the submission via the web feeds.

Obligation To Report Gas Storage Data

The EU natural gas producers have the obligation to report to ACER, and on request, to the national regulatory authorities the volume of gas stored at the end of each gas day. This obligation is stipulated in the Article 9(9) of the EU Commission Implementing Regulation No. 1348/2014.
This information should be provided to ACER in the Storage Participant Activity Report no later than the next working day following the reported gas day.
The natural gas producers can delegate their reporting obligation to the Storage System Operators or to a third party RRM (Registered Reporting Mechanism).

Obligation To Report Gas Transaction Data

The EU natural gas producers which supply natural gas in the EU are considered to be “market participants” under REMIT and must report to ACER each sale transaction providing for the physical delivery of natural gas in EU, irrespective of the location of the delivery point in the EU[8], pursuant to the provisions of Article 8(1) of REMIT and Article 3 of the EU Commission Implementing Regulation No. 1348/2014.
The sale contracts providing for the physical delivery of natural gas produced by a gas production facility with a production capacity greater than 20MW have to be reported on a continuous basis, pursuant to the provisions of Article 3 of the EU Commission Implementing Regulation No. 1348/2014.
The sale contracts providing for the physical delivery of natural gas produced by a gas production facility with a production capacity equal to or less than 20MW are reportable to ACER only upon reasoned request of ACER and on ad-hoc basis, unless such contracts are concluded on organised market places[9].
The sale transactions concluded outside an organised market place must be reported to ACER by the market participants themselves or through the designated RRM (the registered reporting mechanism indicated at the time of registration as “market participants” with the national regulatory authority to which they delegate the responsibility of reporting on their behalf)[10].
The sale transactions concluded at an organised market place must be reported to ACER through the organised market place where the transaction was concluded, pursuant to the provisions of the Article 6(1) of the EU Commission Implementing Regulation No. 1348/2014. In such case, the organised market place concerned, as RRM, will have the responsibility for the completeness,

8 The transactions for the sale of natural gas delivered at offshore platforms situated on a continental shelf in the EU are reportable contracts. See ACER Answer to Question III.3.41 in ACER document “Questions and Answers on REMIT”, 23rd Edition. The transactions for the sale of natural gas delivered within a storage facility are reportable contracts. See ACER Answer to Question 1.1.8 in ACER document “Frequently Asked Questions (FAQs) on REMIT transaction reporting”.

9 See Article 4(1)(c) of the EU Commission Implementing Regulation No. 1348/2014.

10 According to Article 8(1) of REMIT, the information reported shall include the precise identification of the wholesale energy products bought and sold (i.e. natural gas), the price and quantity agreed, the dates and times of execution, the parties to the transaction, the beneficiaries of the transaction and any other relevant information.

accuracy and timely submission of the transaction data to ACER. The market participants concluding gas sale transactions at organised market places will be relieved of the responsibility to verify the completeness, accuracy and timely submission of the transaction data to ACER[11].
The EU natural gas producers have also the obligation to report to ACER the options, futures, swaps and any other derivatives of contracts relating to the natural gas produced and delivered in the EU. The transactions for derivatives concluded at organised market places must be reported to ACER through the organised market place where the transaction was concluded, pursuant to the provisions of the Article 6(1) of the EU Commission Implementing Regulation No. 1348/2014.

11 See ACER Answer to Question III.2.44 in ACER document “Questions and Answers on REMIT”, 23rd Edition.

Transparency Obligations Of The Storage System Operators In EU

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Pursuant to the Article 13(1) paragraph (d) of the EU Directive No. 73/2009, the Storage System Operators (SSOs) have the obligation to provide the storage facility users the necessary information for efficient access to the gas storage facilities. The transparency information provided by SSOs must include both commercial and operational information in accordance with the requirements of the EU Regulation No. 715/2009 and the Guidelines for Good TPA Practice for Storage System Operators issued by ERGEG in 2005 and subsequently amended by ERGEG and CEER in 2011[1].

Commercial Information

SSOs must publish on their website the following commercial information:

1. Tariff Information and Commercial Conditions Relating To TPA Regime

Pursuant to the Article 33 of the EU Directive No. 73/2009, the European SSOs must provide access to their storage facilities on a negotiated or regulated basis. The provisions of Article 33 of the EU Directive No. 73/2009 on access to storage apply also to the part of LNG facilities used for storage, including the LNG peak shaving facilities[2] and the part of LNG terminals which store LNG for peak shaving, e.g. FSRU OLT Offshore LNG Toscana, because the definition of "storage facility" in the Article 2(9) of the EU Directive No. 73/2009 includes also the part of LNG facilities used for storage[3].

In the case of negotiated access regime (nTPA), the SSO sets the tariffs and conditions for access to storage services without the involvement of the NRA (National Regulatory Authority). Pursuant to the Article 33(3) of the Directive No. 73/2009, in the case of negotiated access regime SSOs have the obligation to publish their main commercial conditions for the use of storage, including the prices for standard services in order to ensure that all storage facility users are equally treated and the SSOs will not charge different prices to the storage facility users.

In the case of regulated access regime (rTPA), the tariffs proposed for storage services shall be submitted first to the storage facility users for consultation and then submitted to the NRA for approval. Pursuant to the Article 33(4) of the Directive No. 73/2009, in the case of regulated access

1 See the Amendment of the Guidelines of Good Practice for Third-Party Access (TPA) for Storage System Operators published by ERGEG in February 2011; Amendment of the Guidelines of Good Practice for Third-Party Access (TPA) for Storage System Operators – Guidelines for CAM and CMP, published by the Council of European Energy Regulators (CEER) in July 2011.

2 But excluding the LNG peak shaving facilities used exclusively by TSOs in carrying out their functions, e.g. the LNG storage faciltiy operated by Gasunie, Dutch TSO, at the Maasvlakte site in the Port of Rotterdam.

3 See the European Commission Staff Working Paper "Interpretative Note On Directive 2009/73/EC Concerning Common Rules For The Internal Market In Natural Gas – Third – Party Access To Storage Facilities." The Directive No. 73/2009 makes a distinction between the temporary storage of LNG necessary for the regasification process (operational storage) and the LNG storage services for other purposes. An LNG terminal that provides only the temporary LNG storage service necessary for the regasification process is considered only an LNG facility. See Article 2(11) of the Directive No. 73/2009. An LNG terminal that in addition to the temporary LNG storage service necessary for the regasification process provides also other LNG storage services is considered not only an LNG facility but also a storage facility. See Article 2(9) of the Directive No. 73/2009. Therefore the LNG terminal operators could be considered not only LNG system operators but also storage system operators if in addition to the operational storage they provide additional storage services such as the LNG storage for peak shaving, LNG storage for reloading, LNG storage for berth-to-berth transshipment and LNG storage for loading of LNG bunkering vessels.

regime SSOs have the obligation to publish the tariffs for storage services upon the approval of NRA.
The obligation to publish tariff information is also stipulated in the Article 19(5) of the EU Regulation No. 715/2009. GGPSSO require SSOs to provide on their website user-friendly instruments for calculating charges for a specific service, e.g. tariff calculator.

2. Services Offered

GGPSSO and Article 15(2) of the EU Regulation No. 715/2009 stipulate that the SSOs must offer on the primary market the following services:
- bundled services of storage space, injectability and deliverability;
- injection, storage and withdrawal services offered separately as unbundled services; the unbundled services can be offered to capacity holders as additional services (e.g. additional injection service, additional storage service, additional withdrawal service) when the bundled services need to be combined with unbundled services for the proper utilisation;
- both firm and interruptible storage services, e.g. firm injection capacity, firm storage capacity, firm withdrawal capacity, interruptible injection capacity, interruptible storage capacity, interruptible withdrawal capacity.
The storage services offered by SSOs shall be developed after a proper consultation of the storage facility users to take into account the market demand.
Pursuant to the Article 19(1) of the EU Regulation No. 715/2009, the SSOs have the obligation to make public a detailed information regarding the services they offer, i.e.
- injection, storage and withdrawal services offered under the form of Standard Bundled Units (SBUs) and the composition of the Standard Bundled Units (i.e. whether the SBUs are composed of firm services only or includes also the interruptible services);
- the additional injection, storage and withdrawal services offered separately as unbundled services.

3. Storage Access Code

The Storage Access Code shall describe
- the main standard conditions for each service outlining the rights and responsibilities of the SSO and storage facility users,
- the storage capacity allocation rules,
- the congestion management mechanisms,
- the rules for storage capacity trade on the secondary market,
- the rules and charges applicable to storage penalties from storage users and compensation payments from the SSO to storage users,
- the quality specifications for the natural gas injected into the storage facility.

Storage Capacity Allocation Rules

The Article 17(2) of the EU Regulation No. 715/2009 stipulates the SSOs' obligation to implement and publish non-discriminatory and transparent capacity allocation rules.
In order to ensure a non-discriminatory and transparent participation of all interested storage customers in the subsequent allocation procedure, the allocation process shall always start with an open subscription period (OSP) to determine the market demand for the offered storage services. The actual capacity allocation mechanism applied shall be determined by SSO following the open subscription procedure based on the market demand.

If the demand exceeds the offer, and unless the national legislation provides otherwise, auctions should be implemented for allocation of all of the capacity offered[4].
If the demand is less than or equal to offer, the allocation shall be made straightforward. In such a case, the allocation shall be made by auction or a transparent CAM "which best considers the market conditions".
Prior to each allocation window, the SSO shall publish on its website the offered storage services, including the contract period and the date when the storage users can start to use the subscribed capacity, and the mechanism applied for the allocation of storage services offered. After the allocation procedure, the SSO shall confirm the results of the allocation procedure to the participants.
The SSOs shall use their best efforts to ensure the compatibility of storage services with the related transport services of the connected TSOs in respect of the contract duration. A combined storage and transport service should be offered if there is market demand for such a service and SSO can cooperate in this regard with the connected TSO(s).

Congestion Management Mechanisms

The Article 2 of the EU Regulation No. 715/2009 makes a difference between the "physical congestion" and "contractual congestion".
The "physical congestion" occurs when the capacity is fully booked, it is being used but any additional demand cannot be accommodated.
The "contractual congestion" occurs when the capacity is fully booked, but a proportion of it remains unused (it is not nominated) while there is still demand for capacity.
In order to maximise the amount of capacity available to the market and avoid the contractual congestion, SSOs should adopt measures to facilitate the trade of capacity rights on the secondary market[5].
The Article 22 of the EU Regulation No. 715/2009 stipulates the obligation of SSOs to take reasonable steps to allow the capacity rights to be freely tradable and to facilitate such trade in a transparent and non-discriminatory manner. Therefore, the SSOs should give the storage facility users the possibility to sell or acquire storage services on the secondary market by providing an online bulletin board, where the storage facility users can post the services they wish to sell or buy on the secondary market, and a web-based trading platform where the storage facility users can trade the storage services on the secondary market.
A secondary market platform should be set up for each storage facility and eventually a national platform where all storage capacity in the market can be traded. SSO shall keep a record of all transactions on the secondary market. The collected information shall be communicated to the NRA on request.
Another measure recommended to avoid the contractual congestion is to offer the unused capacity (non-nominated injection capacity and withdrawal capacity) on the primary market. SSO must offer the unused capacity at least on a day-ahead and on interruptible basis. In such case the unused capacity is not lost permanently by the original capacity holder, but falls back to the original capacity holder at the moment he nominates it for use.
SSOs should publish the procedure applicable in the event of an interruption of interruptible capacity, including the timing, extent and ranking of individual interruptions.
The storage facility users should use their best efforts to make timely nominations to the SSO on the capacity that will be used, "timely" meaning earlier than the latest possible official nomination time which is usually the day preceding the gas flow day. The storage facility users should therefore

4 In EU Member States with public service obligation on storage, SSOs may be required to use alternative allocation arrangements to meet the public service obligations.
5 See the Article 17(3) of the EU Regulation No. 715/2009.

make initial non-binding nominations on weekly basis and if possible also on monthly basis. This will allow the SSO to make a timely prediction of any unused capacity.
SSO should publish on a website the information on the amount of nominated and non-nominated storage capacity on an aggregated level.
The data relating to the nominated storage capacity should be provided by SSO on a day-ahead basis.
The data relating to the non-nominated storage capacity should be updated due to the possibility that the original capacity holders can make re-nominations at short notice.
SSOs should provide on their website user-friendly instruments for verifying online the level of available and/or unused storage capacity.

Operational Information

The operational information must be provided by SSO for a given storage facility or for a group of storage facilities in the same balancing zone where the access to this group is provided via an online information system. SSOs must publish the following operational information:

1. A map indicating the location of the storage facility and the connecting point(s) of the storage facility to the transmission network.

2. Type of storage facility (i.e. salt caverns, depleted gas fields, aquifer structures, LNG storage facility)

3. Technical capacity
- in the case of underground gas storage facilities: working gas volume, injection capacity, withdrawal capacity;
- in the case of LNG storage facilities: LNG storage capacity, daily send-out capacity, injection capacity. The information about the injection capacity can be provided only by the LNG terminals that have a liquefaction plant. In the case of LNG terminals that do not have a liquefaction plant, the physical injection of natural gas from the transmission system is not possible due to the fact that the gas cannot be liquefied.

4. Capacity available for TPA: working gas volume, injection capacity, withdrawal capacity.

5. Capacity not available for TPA pursuant to the provisions of the Article 2(9) of the EU Directive No. 73/2009: working gas volume, injection capacity, withdrawal capacity.

6. Contracted and available storage capacities: i.e.
- number of SBUs subscribed by the storage facility users;
- number of SBUs available on the primary market;
- contracted working gas volume, injection capacity and withdrawal capacity;
- available working gas volume, injection capacity and withdrawal capacity (firm and interruptible).

Pursuant to the Article 19(2) of EU Regulation No. 715/2009, this information must be provided on a regular and rolling basis (i.e. daily, monthly, quarterly and annually) and in a user-friendly standardised manner.
SSOs should also publish on their website the method used for the determination of the available storage capacity.

7. Daily Storage Data

The Article 19(4) of the EU Regulation No. 715/2009 require SSOs to provide daily updates on the gas stock level in each storage facility or group of storage facilities, inflows (quantity of gas injected in storage facility) and outflows (quantity of gas withdrawn from the storage facility) and the available storage facility capacity (i.e. available working gas volume, injection capacity and withdrawal capacity). This requirement applies to all storage facilities, including to storage facilities exempted from third-party access.

8. Historical capacity utilisation rates
- gas stock level;
- quantity of gas injected in the storage facility;
- quantity of gas withdrawn from the storage facility;
- available working gas volume, injection capacity and withdrawal capacity[6].

9. Maintenance Information

SSO should publish the planned maintenance periods over the year that might affect the storage facility users' rights from the storage contracts and the corresponding operational information with adequate advance notice. During the maintenance period, the SSO should publish regularly updated information on the details, expected duration and effect of the maintenance.
Where unplanned disruptions in access to the storage services occur, the SSO shall ensure that the storage facility users are notified as soon as possible (through UMMs).

6 See AGSI/GIE Transparency Platform for Storage at www.gie.eu

Reporting Obligations Of The Storage System Operators Under REMIT

by Vlad Cioarec, International Trade Consultant

Who Would Qualify As SSO ?

Pursuant to the Article 2(10) of the EU Directive No. 73/2009, "storage system operator" means a natural or legal person who carries out the function of storage and is responsible for operating a storage facility. The Article 2(9) of the EU Directive No. 73/2009 stipulates that "storage facility" means a facility used for the stocking of natural gas and owned and/or operated by a natural gas undertaking, *including the part of LNG facilities used for storage* but excluding the portion used for production operations, and excluding facilities reserved exclusively for transmission system operators in carrying out their functions.
This means that not only **the operators of underground gas storage facilities**, such as salt caverns, depleted gas fields and aquifer structures, would qualify as storage system operators, but also **the operators of LNG peak shaving facilities**, with the exception of the LNG peak shaving facilities used exclusively by TSOs in carrying out their functions, and **the LNG terminal operators** who provide LNG storage services other than the temporary storage necessary for the regasification process, e.g. LNG storage for peak shaving, LNG storage for reloading service, berth-to-berth transshipment service and loading of LNG bunkering vessels.

Obligation To Report Inside Information

The Storage System Operators or SSOs are explicitly mentioned as "market participants" in the Article 3(4)(b) of REMIT[1] and are therefore considered market participants if they enter into transactions in one or more wholesale energy markets for the sale or purchase of natural gas[2].
According to the Article 4(1) of REMIT, the Storage System Operators have the obligation as "market participants" to publicly disclose in an effective and timely manner the inside information[3] which they possess in respect of their business or facilities, particularly the information related to the planned or unplanned unavailability of their gas storage facilities.
The inside information related to the planned or unplanned unavailability of gas storage facilities has to be reported in the form of Urgent Market Messages (UMMs) via web feeds on the Storage System Operator's website and on a platform for the disclosure of inside information[4].
The Article 10(1) of the EU Commission Implementing Regulation No. 1348/2014 stipulates that the market participants disclosing inside information on their website or service providers disclosing such information on market participants' behalf shall provide web feeds to enable the ACER to collect efficiently inside information for market monitoring purposes.
ACER shall identify the location of the web feed through the URL address provided by the Storage System Operator at the time of registration as "market participant"[5].

1 EU Regulation No. 1227/2011 on wholesale energy market integrity and transparency.
2 See Sub-section 3.4 of ACER Guidance on the application of REMIT.
3 According to the Article 2(1) of REMIT, "inside information" means information of a precise nature which has not been made public, which relates, directly or indirectly, to one or more wholesale energy products and which, if it were made public, would be likely to significantly affect the prices of those wholesale energy products.
4 A platform for the disclosure of inside information is an electronic system for the delivery of information which allows multiple market participants to share information with the wide public. See Sub-section 7.1 of ACER's Manual of Procedures on transaction data, fundamental data and inside information reporting. The list of the third party inside information platforms is available on REMIT Portal: https://www.acer-remit.eu/portal/home.
5 The URL address must be provided in the Section 1 of the registration form under the field "Publication of inside information".

The reporting schema for the disclosure of inside information related to the planned or unplanned unavailability of gas storage facilities is presented in Annex VII of REMIT Manual of Procedures on transaction data, fundamental data and inside information reporting[6]. The schema contains 18 fields:
In the Field 1 “Message ID” must be inserted the unique identifier of the UMM.
In the Field 2 “Event Status” must be stated the status of the UMM, i.e. Active, Dismissed or Inactive. The term “Active” must be inserted when referring to an event that will occur in the future or is occurring. The term “Dismissed” refers to an UMM that was cancelled and is not valid anymore. The term “Inactive” has to be inserted when referring to an event that already occurred in the past. The UMM related to an event may be updated several times before, during or after the event, whenever the Event Status changes. However, it is not mandatory to insert the term “Inactive” when the date and time of the event have expired. The status value “Active” can be maintained for UMMs referring to past events[7].
In the Field 3 “Type of Unavailability”, the Storage System Operator must state whether the unavailability was planned or not, using the words “planned” or “unplanned” to indicate the type of unavailability. A planned unavailability occurs in case of scheduled maintenance or repair works. An unplanned unavailability occurs in case of unforeseen technical problems.
In the Field 4/b “Type of Event”, the Storage System Operator can state the type of event as “Storage unavailability”, “Injection unavailability”, “Withdrawal unavailability”, “Compressor station unavailability” or “Gas treatment plant unavailability”, as the case may be. In case of other types of unavailability, the type of event should be stated as “Other unavailability”.
In the Field 5 “Publication date/time” it is shown the date and time when the UMM was made publicly available, i.e. when the inside information was disclosed to the public through the UMM. This information is generated automatically when the UMM is published.
In the Field 6 “Event Start”, the Storage System Operator must state the expected (if it is a future event) or actual starting time and date of the relevant event. If the exact time of the “Event Start” is not known at the time of the publication of UMM, the Storage System Operator should insert an estimated time rounded to the nearest hour and the UMM should be updated once the information on the event allows the Storage System Operator to provide more accurate information as to the starting time.
In the Field 7 “Event Stop”, the Storage System Operator must state the expected (if it is a future event) or actual time and date at which the relevant event stops. If the exact time of the “Event Stop” is not known at the time of the publication of UMM, the Storage System Operator should insert an estimated time rounded to the nearest hour and the UMM should be updated once the information on the event allows the Storage System Operator to provide more accurate information.
In the Field 8 “Unit of measurement”, the Storage System Operator must state the unit used for reporting unavailable capacity, available capacity and technical capacity of the storage facility affected by the reported event during the unavailability period.
In case of “Storage unavailability”, the SSO can state the working gas capacity in TWh.
In case of “Injection unavailability”, the SSO should state the injection capacity (rate) in GWh/d.
In case of “Withdrawal unavailability”, the SSO should state the withdrawal capacity in GWh/d.
In case of “Compressor station unavailability”, the SSO should state the compressor capacity in GWh/d.
In case of “Gas treatment plant unavailability”, the SSO should state the gas processing plant capacity in GWh/d.

6 See the schema for UMMs related to “Unavailability of gas facilities”.
7 See ACER Answer to Question 5.1.3 in ACER document “Frequently Asked Questions (FAQs) on REMIT fundamental data and inside information collection (6th Edition)” available on REMIT Portal: https://www.acer-remit.eu/portal/home.

In the Field 9 “Unavailable capacity”, the Storage System Operator must state the technical capacity of the affected unit that will be unavailable due to the event.
In case of a limitation of the storage capacity, the Storage System Operator must state the working gas capacity of the storage facility that will be unavailable during to the reported event.
In case of a limitation of the injection capacity, the Storage System Operator must state how much the injection rate of the storage facility will be reduced during the reported event.
In case of a limitation of the withdrawal capacity, the Storage System Operator must state how much the withdrawal rate of the storage facility will be reduced during the reported event.
In the Field 10 “Available capacity”, the Storage System Operator must state the technical capacity of the affected unit that will remain available during the reported event.
In case of a limitation of the storage capacity, the Storage System Operator must state the working gas capacity of the storage facility that will remain available during to the reported event.
In case of a limitation of the injection capacity, the Storage System Operator must state the available injection capacity (rate) of the storage facility during the reported event.
In case of a limitation of the withdrawal capacity, the Storage System Operator must state the available withdrawal capacity (rate) of the storage facility during the reported event.
In the Field 11/b “Technical capacity”, the Storage System Operator must state the capacity of the storage facility in a gas day in normal conditions.
In case of storage facility unavailability, the Storage System Operator must state the working gas capacity of the storage facility, i.e. the total gas storage capacity minus the cushion gas.
In case of injection unavailability, the Storage System Operator must state the injection capacity (rate) of the storage facility, i.e. the amount of gas that can be injected into the storage facility on a daily basis.
In case of withdrawal unavailability, the Storage System Operator must state the withdrawal capacity (rate) of the storage facility, i.e. the amount of gas that can be withdrawn from the storage facility on a daily basis.
In the Field 12 “Reason for the unavailability”, the Storage System Operator must provide an explanation on the cause of the unavailability, such as “Planned maintenance of the storage facility”.
In the Field 13 “Remarks”, the Storage System Operator must provide more detailed information of the event to allow a full understanding of its potential impact on the wholesale energy prices. For instance, “Reduction of working gas capacity by up to 40%”, “Reduction of injection rate by up to 40%”, “Reduction of withdrawal rate by up to 40%”.
In the Field 15/b “Balancing Zone”, the Storage System Operator must identify the balancing zone where the gas storage facility is located, using the EIC Y Code for the respective balancing zone.
If the storage facility is connected to two or more balancing zones, the Storage System Operator must indicate the EIC Y codes for each of the respective balancing zones. The first EIC Y Code should refer to the entry point where the flow starts, whilst the second and the following EIC Y Code(s) should refer to the exit point(s) where the flow ends. If the outage is related to the flow from the storage facility towards the gas transmission system, the first EIC Y Code should be that of the balancing zone where the gas storage facility is located, whilst the second should be the EIC Y Code of the exit point.
In the Field 16 “Affected Asset or Unit”, the Storage System Operator must state the official name of the gas storage facility where the event is about to occur.
In the Field 17 “Affected Asset or Unit EIC Code”, the Storage System Operator must state the EIC W Code of the gas storage facility that is unavailable.
In the Field 18 “Market Participant”, it must be inserted the official name of the market participant that is responsible for the public disclosure of the inside information (i.e. Storage System Operator) related to the event described in the UMM.

In the Field 19 “Market Participant Code”, the Storage System Operator must provide the EIC X Code assigned by ENTSOG or the ACER registration code, which the Storage System Operator received when it registered as “market participant” with the national regulatory authority.
The UMMs should be stored for a time period of at least 90 days after the submission via the web feeds.

Obligation To Report Fundamental Data Relating To Gas Storage

The Storage System Operators have the obligation to report to ACER, and on request, to the national regulatory authorities the information relating to the capacity and use of gas storage facilities they operate, including any planned or unplanned unavailability of these facilities.
The Article 9(7) of the EU Commission Implementing Regulation No. 1348/2014 stipulates that the Storage System Operators must report to ACER, and on request, to the national regulatory authorities for each gas storage facility and in case of facilities operated in groups, for each group of gas storage facilities the following information through a joint platform:
(a) the technical, contracted and available capacity of the gas storage facility;
(b) volume of gas in stock at the end of the gas day, inflows (injections) and outflows (withdrawals) for each gas day;
(c) the planned and unplanned unavailability announcements of the gas storage facility, including the time of the announcement and the capacities concerned.
This information is referred to as “fundamental data” in Article 2(1) of the EU Commission Implementing Regulation No. 1348/2014.
The purpose of fundamental data reporting under REMIT is to enable ACER and national regulatory authorities in the EU Member States to monitor trading activity in wholesale energy markets.
The details of how to report fundamental data related to gas storage are provided in ACER's REMIT Storage Reporting Schema Usage Guidelines and ACER's Manual of Procedures on transaction data, fundamental data and inside information reporting. According to ACER's Manual of Procedures on transaction data, fundamental data and inside information reporting, the Storage System Operators must provide to ACER, and on request, to the national regulatory authority the following reports:
- **the Storage Facility Report**; and
- **the Storage Unavailability Report**.

In **the Storage Facility Report**, the Storage System Operators must provide the information required in Article 9(7)(a) and (b) of the EU Commission Implementing Regulation No. 1348/2014, i.e. daily updates with regard to the technical, contracted and available capacity of the gas storage facility, the volume of gas in stock and the volume of gas injected and withdrawn from the gas storage facility. This information must be reported no later than the next working day following the reported gas day.

“Technical Capacity” is the working gas capacity of the storage facility, i.e. the total gas storage capacity minus the cushion gas. In the case of a LNG storage facility, the technical capacity is the workable capacity of LNG storage tanks. The technical capacity must be reported in TWh.

“Injection Capacity” is the maximum amount of gas that can be injected into the storage facility per day.

“Withdrawal Capacity” is the maximum amount of gas that can be withdrawn from the storage facility per day.

“Contracted Capacity” is the storage capacity that the reporting Storage System Operator has allocated to market participants by means of a contract. The contracted capacity must be reported in TWh.

“Available Capacity” is the storage capacity that has not been allocated to market participants and is still available. The available capacity must be reported in TWh.

The volume of gas in stock on the reported gas day must be reported in TWh.
The volume of gas injected into and withdrawn from the gas storage facility must be reported in GWh/day.

The Storage Facility Report should also mention:
- the Storage Facility Identifier – EIC W Code assigned by ENTSOG to the storage facility;
- the Storage Facility Operator Identifier - EIC X Code assigned by ENTSOG to the Storage System Operator;
- the type of storage facility to be indicated as one of the following types:
(DSR) Underground Storage in a Depleted Gas Reservoir
(ASR) Underground Storage in an Aquifer Gas Reservoir
(ASF) Underground Storage in a Salt Formation
(SGL) in the case of LNG storage facilities (LNG peak shaving facilities or LNG terminals which store LNG for peak shaving or for other purposes than operational storage)
(PPC) Storage in Existing Pipeline Capacity
(GHT) Above Ground Storage in a Gas Holder
(SRC) Underground Storage in a Rock Cavern

The Storage Unavailability Report should be used by the Storage System Operators to report any planned or unplanned unavailability of a storage facility for a gas day or period within a gas day in accordance with the Article 9(7)(c) of the EU Commission Implementing Regulation No. 1348/2014.
The Storage System Operator must provide in the Storage Unavailability Report the following information:
- the Storage Facility Identifier – EIC W Code assigned by ENTSOG to the storage facility;
- the Storage Facility Operator Identifier - EIC X Code assigned by ENTSOG to the Storage System Operator;
- the unavailable storage capacity to be reported in TWh;
- the unavailable injection capacity to be reported in GWh/day;
- the unavailable withdrawal capacity to be reported in GWh/day;
- the unavailability type, i.e. whether the outage was planned or unplanned;
- the date(s) and period(s) of time when the planned or unplanned outage(s) of the storage facility will occur;
- the cause of the unavailability.
The Storage Unavailability Report must be sent as soon as the relevant information becomes available.

Transparency Obligations Of The LNG System Operators In EU

by Vlad Cioarec, International Trade Consultant

Most LNG facilities in European Union are operated under a regulated TPA regime based on published tariffs approved by NRA (National Regulatory Authority), pursuant to the requirements of Article 32 of the Directive No. 73/2009. The transparency requirements for LNG facilities operating under a regulated third party access regime are provided in the Guidelines for Good Third Party Access Practice for LNG System Operators (GGPLNG) issued by ERGEG in 2008 and EU Regulation No. 715/2009.

Commercial Information

The LNG System Operators (LSOs) must publish on their website the following commercial information:

1. LNG Services Offered And Related Tariffs

GGPLNG require LSOs to offer to the terminal users both bundled and unbundled services.

A **standard bundled service** offered by a LSO shall consist, at least, of a right to berth an LNG ship during a certain window of time, the right to unload the LNG, a temporary LNG storage capacity and a regasification service with the corresponding send-out capacity.
The bundled services are commonly offered by LSOs under the form of slots which give the terminal users the right to berth the approved ships and unload their cargoes, the right to store a specified LNG volume unloaded from ships during the regasification process and the right to regasify the specified LNG volume and to have the gas delivered into the gas transmission system.
LSOs could also offer to slot holders the services that constitute the slot separately as **unbundled services**. The unbundled services can be offered to slot holders as additional services, e.g. additional berthing right, additional storage capacity, additional send-out capacity, ship reloading, LNG transshipment by ship-to-ship transfer, LNG transshipment by berth-to-berth transfer, road tanker loading.
The services offered by LSOs shall be developed after the proper consultation with the terminal users and other market participants in order to meet, as much as feasible, the market demands.
The Article 19(1) and (5) of the EU Regulation No. 715/2009 require the LSOs to make public a detailed information regarding the services they offer and related tariffs. LSOs should also provide on their website user-friendly instruments for calculating charges for a specific service, e.g. a tariff calculator.

2. Terminal Access Code

The terminal access code shall describe
- the main standard conditions for each service outlining the rights and responsibilities of the LSO and terminal users,
- the capacity allocation rules,
- the congestion management mechanisms,
- the rules for the resale of subscribed slots on the secondary market,
- the quality specifications for LNG unloaded,

- the procedures for determination of volume and composition of LNG unloaded,
- LNG ship approval procedure,
- the connection point(s) with the gas transmission system.

Capacity Allocation Rules

The Article 17(2) of the EU Regulation No. 715/2009 stipulates the LSOs' obligation to implement and publish non-discriminatory and transparent capacity allocation rules.
Prior to each allocation window, the LSO shall publish on its website the offered LNG services, including the contract period and the date when the terminal users can start to use the subscribed capacity, and the mechanism applied for the allocation of LNG services offered. After the allocation procedure, the LSO shall confirm the results of the allocation procedure to the participants.

Congestion Management Mechanisms

The Article 2 of the EU Regulation No. 715/2009 makes a difference between the “physical congestion” and “contractual congestion”.
The “physical congestion” occurs when the capacity is fully booked, it is being used but any additional demand cannot be accommodated[1].
The “contractual congestion” occurs when the capacity is fully booked, but a proportion of it remains unused (it is not nominated) while there is still demand for capacity.
In order to maximise the amount of capacity available to the market and avoid the contractual congestion, LSOs should adopt measures to facilitate the trade of capacity rights on the secondary market[2].
The Article 22 of the EU Regulation No. 715/2009 stipulates the obligation of LSOs to take reasonable steps to allow the capacity rights to be freely tradable and to facilitate such trade in a transparent and non-discriminatory manner. Therefore, LSOs should give the terminal users the possibility to sell or acquire LNG services on the secondary market by providing an online bulletin board, where the terminal users can post the services they wish to sell or buy on the secondary market, and a web-based trading platform where the terminal users can trade the LNG services on the secondary market.
Another measure recommended to avoid the contractual congestion is to offer the unused capacity on the primary market. Whenever a terminal user is considered no longer able to use an allocated slot, has not released the slot on the secondary market and there is contractual congestion, LSO shall offer the unused slot on the primary market as firm capacity at the regulated tariff[3].
The congestion management procedures should provide the obligation of the terminal users to notify the LSO about the slots which they do not intend to use. The notice period shall be defined by NRA taking into account the opinion of the terminal users and other market participants in the public consultation.

Operational Information

For each LNG facility they operate, LSOs must publish the following operational information:

1. A map indicating the location of the LNG facility, a description of its infrastructures and the connection points of the LNG facility with the gas transmission grid.

1 See ERGEG study on congestion management procedures & anti-hoarding mechanisms in the European LNG terminals.
2 See the Article 17(3) of the EU Regulation No. 715/2009.
3 See the Article 17(3) of the EU Regulation No. 715/2009.

2. LNG facility characteristics

- nominal annual regasification capacity;
- daily or hourly maximum regasification capacity;
- LNG storage capacity;
- number of berths and LNG storage tanks;
- LNG ship specifications: i.e. the maximum and minimum total cargo tank capacity, length overall, beam, allowable draught alongside the berth, maximum unloading rate, maximum loading rate, maximum transshipment rate;
- List of Approved Ships.

3. Contracted and available capacities

- contracted regasification capacity
- available regasification capacity

The Article 19(2) of the EU Regulation No. 715/2009 stipulates LSO's obligation to make public this information on a regular and rolling basis.

4. Daily LNG Data

The Article 19(4) of the EU Regulation No. 715/2009 requires LSOs to provide [in web-based platforms] daily updates on the LNG stock level in each LNG facility, inflows (i.e. unloaded volumes) and outflows (i.e. send-out gas) and the available LNG facility capacities (i.e. LNG storage capacity and send-out capacity). This requirement applies to all LNG facilities, including to the LNG facilities exempted from third-party access.

5. Historical data on monthly capacity utilisation rates

- LNG stock level
- LNG storage capacity
- Send-out gas
- Send-out capacity[4].

6. Maintenance Information

LSO should publish the planned maintenance periods over the year that might affect the terminal users' rights and the corresponding operational information with adequate advance notice. During the maintenance period, the LSO should publish regularly updated information on the details, expected duration and effect of the maintenance.
Where unplanned disruptions in access to the LNG terminal services occur, the LSOs shall ensure that the LNG terminal users are notified as soon as possible (through UMMs).

4 See ALSI/GIE Transparency Platform for LNG at www.gie.eu