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Consultation on an EU strategy for liquefied natural gas and gas storage

Introduction

Initiative Erdgasspeicher e.V. (INES) has been founded in 2014 to voice the interests of German gas storage operators in the context of liberalised EU gas markets. With its current 16 members INES represents more than 95% of total gas storage capacities operated in Germany.

Summary

INES agrees with the Commission that natural gas will continue to play an important role in the EU energy system even during and after the transition to a low carbon future. Gas storage plays a key role for the well-functioning of the gas market and particularly serves as an important and indispensable backbone for security of supply.

INES welcomes the initiative of the Commission to develop an EU strategy for liquefied natural gas and gas storage as key part of the Energy Union. Given the shrinking domestic supplies and increased need for diversification of gas supplies to the European Union, INES considers LNG and gas storage to be complementary to ensure a reliable and economically feasible gas supply mix in the future.

Before answering the specific questions raised by the Commission, INES would like to make the following more general remarks, which we consider to be of major importance for European security and economy of gas supplies:

- Other than gas storage facilities, LNG terminals are usually located far from the centres of demand. High load factors are therefore a key factor for the efficient use of LNG terminals and related long distant pipeline infrastructure. Thus, market design should foster LNG as yet another source of base load gas supplies rather than as a source of flexibility.
- Once the LNG infrastructure has been built, flexible gas supplies from LNG may compete with flexibility provided from gas storage. While this may be sufficient to meet gas demand during normal situations, LNG supplies are not able to effectively replace peak supplies from gas storage in case of high demand.
- The use of gas storage is currently discriminated against the use of other flexible supplies. Double charging for transport to/from gas storage as well as prevalent restrictions in accessing gas hubs frequently lead to gas storage being considered only as second-best solution by market participants.
- Gas storage becomes more and more uneconomic and decommissioning of storage sites is imminent. As a consequence, cost efficiency and security of European gas supplies will be jeopardized.

In this context INES would like to answer the storage related questions raised by the Commission in its consultation document as follows:

7. Storage

Question 13: What opportunities or challenges do the supply projections for different sources, in particular LNG and pipeline gas and low carbon indigenous sources, present for the use of gas storage / for gas storage operators?

Response:

INES strongly believes that with the hastening decline of the domestic production in North-West-Europe (NWE), storage facilities will play an even more significant role for the security, affordability and sustainability of the EU gas system. This comes especially true due to the fact that in some countries, namely in the Netherlands, indigenous production traditionally serves as an important flexibility source.

Additional gas supplied by pipeline from ever more distant sources needs to be supplied at high load factor in order to use the related infrastructure more efficiently. In addition, the exposure of EU countries to supply disruptions (be it of technical or political nature) will increase with said imports. Given the seasonality of gas demand, gas storage will therefore become even more important in the future to balance seasonal demand with base load pipeline supplies as well as to ensure security of supply.

As regards LNG, INES sees the role of gas storage as complementary to LNG rather than competitive. In order to use the existing LNG infrastructure more efficiently, LNG supplies should not be seen as peak shaver in times of high demand. In fact, only the use of gas storage can provide such a peak shaving function. In combination, storage and LNG would allow a higher load factor of existing LNG terminals and more LNG volumes to be imported when (global) gas demand and prices are low.

With the continuous development of renewable energy sources (RES), INES expects gas storage to play an even more important role in providing physical gas flexibility to gas-fired power plants used as a backup for intermittent RES.

Question 14: Are, in your view, current market and regulatory conditions adequate to ensure that storages can fully play their role in addressing supply disruptions or other unforeseen events (e.g. extreme cold spells)?

Response:

The storage market is currently facing challenging times. Winter/summer spreads, the main indicator used by storage users to value storage capacity, continue to remain at historically low levels. Gas price volatility, another value driver for storage capacity, has also decreased significantly. As indicated by the Commission (cf. Art. 7.4 of the consultation document), the current willingness to pay for gas storage capacity in some cases is already insufficient to cover the marginal cost of storage operations.

In the German market, long-term storage contracts have so far made a great contribution to security of supply. Capacity charges for those contracts have to be considered as “sunk cost” by respective storage users and storage use can be valued against marginal cost only. Thus, to the extent such long-term contracts still exist, storage filling levels can be observed as being high in spite of low winter/summer spreads as long as the marginal cost can be recovered by the storage user.

However, according to the latest monitoring report of Bundesnetzagentur on recent developments in the electricity and gas markets in Germany¹, about 25% of gas storage capacities (6.1 bcm of working gas volume) were available on 31 Dec 2013 for re-marketing as from 1 April 2016. Given the current market and regulatory environment for storage, said capacities will merely be subscribed at storage fees that are below the costs of storage operators to operate and maintain their facilities. INES therefore expects significant storage capacity in Germany to be decommissioned in the mid-term.

Regarding the role of gas storage in addressing supply disruptions or other unforeseen events (e.g. extreme cold spells) it becomes more and more evident that the market will not take precautionary measures for this type of incidents anymore. Gas stocks are fixed capital that has to be refinanced during the winter. Storage users will therefore not be intrinsically motivated to create expensive gas stocks for such unlikely events. In order to ensure that gas storage can continue to play its key role in addressing said unforeseen events, INES therefore considers the following market and regulatory conditions to be improved:

- the full value of storage including the insurance value – be it through market-based instruments (cf. question 15), strategic storage or storage obligations –and the system value (cf. questions 19 and 21) should be adequately rewarded
- a level playing field between different flexibility sources should be ensured (cf. question 19)

Question 15: As an alternative to mandatory reserves, how could market based instruments ensure adequate minimum reserves?

Response:

As an alternative to mandatory reserves, storage users could be commercially incentivized to keep adequate minimum gas reserves in storage. In a market like Germany where effective storage competition exists, the compensation to be paid to storage users - and to be ultimately borne by the beneficiary gas consumers - shall be limited to the respective opportunity cost of keeping said minimum reserves in storage. Thus, the additional cost for keeping minimum reserves in gas storages can be considered to be either negligible (if the market already anticipates higher gas prices towards the end of winter) or a true indicator for the “insurance value” of gas storage (as price signals would rather have incentivised an early withdrawal).

Adjustments regarding the grid access regime for storage (e.g. transmission tariffs and availability of firm transport capacity) to ensure a level playing field in comparison to other flexibility sources (cf. questions 19 and 21) would generate further market incentives for the use of storage and, consequently, would offer potentials to further minimize above mentioned opportunity costs of storage reserves.

Storage Infrastructure

Question 16: Do you have any analysis or view on what an optimal level/share of storage in a Member State or region would be? What kind of initiatives, if any, do you consider necessary in terms of infrastructure development in relation to storage?

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http://www.bundesnetzagentur.de/DE/Sachgebiete/ElektrizitaetundGas/Unternehmen_Institutionen/DatenautauschundMonitoring/Monitoring/Monitoringberichte/Monitoring_Berichte_node.html

Response:

When considering the optimal level/share of storage capacity the different exposure levels of Member States or regions to security of supply risks have to be duly taken into account. While there are Member States or regions where additional storage capacity might be required, INES considers this not to be the case for Germany.

As regards further initiatives in terms of infrastructure development in relation to storage, INES particularly welcomes the view of the Commission that setting specific transmission tariffs for storage may be required to adequately reward the role of storage for security of supply and for the efficient operation of the gas transmission system (cf. Art. 7.12 of the consultation document). We also believe that fostering seasonal equalized imports by specific seasonal tariffication of the grid would also enhance security of supply and reduce grid costs.

Question 17: Do you think, in addition to the existing, TEN-E Regulation any further EU action is needed in this regard?

Response:

No, in the view of INES the regulatory framework of the TEN-E Regulation is sufficient for the coordination of priority corridors or projects of common interest.

Question 18: Given uncertainties over future gas demand, how would you assess the risk of stranded assets (and hence unnecessary costs), lock-in effects, the risk of diverting investments from low carbon technologies such as renewables, delaying a transition in energy systems and how would you and weigh those against risks to gas security and resilience? What options exist in your view to reduce the risk of stranded assets?

Response:

Given the current uncertainties of future gas demand and in order to limit the risk of stranded investments, INES considers it most important that priority is given to the use of existing infrastructure before any funding for investment into additional infrastructure is granted by the Commission. To this end, the regulatory framework for storage should be adjusted to explore the full value of storage including its insurance and system value (cf. question 19) with beneficial effects to all gas consumers.

Regulatory framework and potential barriers for storage

Question 19: What do you think are the most critical regulatory barriers to the optimal use of storage in a regional setting?

Response:

INES sees the following most critical barriers to the optimal use of storage in the current regulatory framework:

- level of transmission tariffs for storage
- insufficient seasonality of transmission tariffs to foster base load gas imports
- constrained grid access capacities for storage

In spite of the various benefits that storage provides to the network (cf. question 21) transmission tariffs for storage currently account for a significant part of the storage cost from a storage user's perspective. Thus, lowering transmission tariffs for storage accordingly would incentivise the use of storage.

Seasonal factors as contemplated in the network code on harmonized transmission tariff structures (NC TAR) should be imposed at cross-border entry points for LNG and pipeline gas. By this means, the import of gas during seasons of less demand would be incentivised accordingly. As a result, the efficient use of LNG and long-distant pipeline infrastructure would be fostered, while at the same time gas injections into storage become more attractive.

Access of storage to the transmission grid in Germany is partly provided on an interruptible basis only or limited to a seasonal demand pattern. Hence, unconstrained access of storage to the transmission grid should be provided to ensure that storage users can compete on an equal footing with other flexibility sources.

In a regional setting, gas storages in one Member State can also positively affect the security of supply situation in neighbouring countries and consequently offer ample room for regional coordination. Yet, in order to guarantee that the full potential of storage facilities connected to multiple market areas can be efficiently used, the access of storage facilities to necessary cross-border capacities needs to be ensured.

In this regard, INES believes that particularly the current obligations under the EU-regulation 984/2013 (NC CAM) create regulatory barriers for the optimal use of storage in a regional setting. The NC CAM states that all available transport capacities at interconnection points (as defined in NC CAM) need to be put up for auction taking into account system integrity and efficient network operation. As a consequence, for neighbouring storage facilities, which are physically connected to the same "backbone" as the auction points, this can lead to situations where capacity at interconnection points is still available to the market (not-booked), but the demand of transport capacity for storage facilities can nevertheless not be met by the respective TSO. INES therefore likes to advise the Commission, under the premise of security of supply, that available capacity at interconnection points should be offered also to storage facilities with access to multiple market areas.

Question 20: Do you think on-going initiatives and existing legislation can tackle the remaining outstanding issues or is there more the EU could do? Do initiatives need to include additional issues further to the ones described here?

Response:

First and foremost, INES considers it as crucial that existing legislation is fully implemented and complied with before new initiatives are being launched. However, INES acknowledges that certain adjustments of regulation 994/2010 may be required to reflect practical experience gained from the different implementation in Member States in the past (e.g. harmonization of the definition of "protected customers").

As regards Germany, we welcome the recent initiatives to introduce discounted transport tariffs for storage (BEATE) or the regular consultation of the national grid development plan (NEP). As mentioned above, we still think the current regulatory environment does not sufficiently compensate the system value and insurance value of storages. This will ultimately lead to the decrease of the

number of storage facilities within the market, as the market price currently only reflects the arbitrage value of storage capacity. Hence, the national legislation should give further incentives to support the efficient and secure use of existing infrastructure assets, instead of allowing for the construction of more transmission capacity to connect additional flexibility from other sources.

Question 21: Do you consider EU-level rules necessary to define specific tariff regimes for storage only or should such assessment be made rather on a national level in view of available to meet the objective of secure gas supply?

Response:

Specific tariff regimes for storage should be implemented as part of the respective network code on harmonized transmission tariff structures (NC TAR) in order to adequately reflect the benefits that storage provides to the overall system. Gas storages usually are located close to the physical demand, are filled up during times of low network load and withdraw in times of peak demand. This results in more efficient network utilization. Furthermore, when setting transmission tariffs for storage it has to be taken into account that storage is not a net source of supply or demand and that stored gas is already entry paid and will be subject to an exit tariff at the point of end consumption.

INES therefore considers a zero tariff as being an adequate starting point for setting entry and exit tariffs from/to storage.

In a multiple TSO market area environment like in Germany it has to be further ensured that the tariff level of the respective TSOs within a single market area is harmonized so as to avoid any market distortion in the storage market.

Question 22: Have you ever encountered, or are you aware of, difficulties in accessing storage facilities? Has this concerned off-site or on-site storage facilities? Please describe the nature of the difficulties in detail.

Response:

INES considers access to storage facilities in Germany as being fully transparent and non-discriminatory. Hence, there should not be any difficulty for market participants to access any amount of storage capacity they might require. As described above (cf. question 19), we consider a persistent lack of firm transport capacity for connection of storage facilities to the grid as one of the main obstacles for an efficient access to storage.

Question 23: Have you ever encountered, or are you aware of, difficulties related to feeding LNG gas from the storage site back into the gas network? If so please describe the nature of these difficulties (regulatory provisions, company behaviour, technical problems) in detail.

Response:

No comment.

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