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

Responses to consultation from the Gas Storage Operators Group

Internal market constraints and challenges for storage

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?

As set out in the consultation document, natural gas will continue to have an important role in the EU's energy supply mix. Further, the fact that gas demand has a seasonal shape means mid-range storage (MRS) facilities and seasonal gas storage facilities will be vital for managing gas supplies and minimising network costs. This physical need for seasonal storage is likely to increase as indigenous sources of gas supply decline and as the demand for gas in generation increases which in turn makes reliance on imported gas via LNG or pipeline imports greater.

Similarly, the need for MRS on the network is also likely to continue to be important due to the potential increases in the volatility of gas demand within and between days due to increased need for gas-fired electricity supplies to compliment alternative sources of electricity generation.

However, despite the potential increases in global LNG supplies, and the fact that underground gas storage is generally complimentary to LNG (as it is more efficient to store gas in a gaseous rather than liquid form), the use of LNG and the increase in extra storage capacity at LNG facilities is likely to have a negative impact on spreads and volatility over the medium term. Therefore, there is a risk that increased dependence on LNG may undermine the economics of gas storage (leading to the mothballing or closure of facilities) and thereby increasing costs (eg higher network costs and increase in price required to attract cargoes when required) and reducing physical security of supply and security of price.

The reason why LNG may depress seasonal spreads is that demand for LNG during the European summer is likely to increase as LNG becomes a more important source of supply in other regions such as the Middle East (particularly Egypt) and South America, while there is no corresponding uplift in LNG demand during the European winter which means there is no corresponding increase in winter prices.

In GB, the gas market has also seen a decline in volatility, a key economic driver for MRS facilities. This is because LNG facilities tend to compete directly with MRS during the summer (i.e. when LNG facility utilisation is lower during the summer, the send out from these facilities tend to be used for meeting peak demand, rather than delivering base-load gas). In winter, when LNG acts more as base-load source of supply, the availability of LNG diminishes price spikes because the gap between base-load and peak demand is lower.

Further, the increasing storage capacity at LNG sites is contributing to decreasing volatility as a direct competitor to MRS.[1]

However, it is also important to note that the global nature of the LNG market means that there is much less certainty regarding the likelihood that the gas supplies will be available when it is required and the risk of supplies being diverted is far greater than when gas is present within the national or regional gas network. A growing increase therefore in the reliance of LNG could have the impact of weakening the economic drivers for gas storage while increasing the physical need for storage capacity to manage both security of supply and price risk (i.e. having to compete for constrained supplies on the global market when prices are higher in those competing markets).

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)?

GSOG considers that one of the key potential regulatory risks associated with operating gas storage facilities is the network charging arrangements. GSOG notes that there is significant variation in charging arrangements for storage across Europe in particular with the approach different member states take in recognising the role that storage plays.

Further, GSOG notes that there are risks in implementing the EU Network Code on Tariffs. For example, capacity for some storage facilities has a seasonal shape but the Network Codes limit the ability to book long term quarterly or monthly products making it more difficult to secure the capacity that storage facilities require.

A particular area of concern relates to network charging and the adequacy of the regulatory conditions to ensure that storage facilities can play their role in addressing supply disruptions or other unforeseen events. The GSOG is aligned with GSE in the belief that storage users should not be double charged for storing gas within the network and considers that a zero charge should be the starting point for tariffs at storage points. We have concerns within GB where the current proposals are for the recovery of network charges only through fixed and floating entry and exit capacity charges (i.e. removal of the use of commodity charges to recover the balance of allowed revenues). It is unclear how this is going to avoid double charging of storage users and how this arrangement will fully recognise the benefits that gas storage brings to the network.

GSOG also notes that recent changes to cash out arrangements in an emergency in GB could potentially result in some increase in spreads or volatility. However, to date Storage Operators have not seen this materialise in increased demand or increased premiums in customers' offer price for storage capacity. GSOG considers that the sharper cash out arrangements are only likely to impact on market behaviour if the mechanism is used (i.e. there is gas deficit emergency), and it is also likely that although such an event may result in a short term change in demand for storage, it may not change longer term demand or booking behaviour.

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

GSOG does not support mandatory reserves. GSOG considers that as long there is a sufficient spread between summer and winter prices to cover users cost of carrying capacity (i.e. the credit costs associated with holding the capacity), storage facility commodity charges and transmission charges the capacity will be filled.

[1] Spreads and volatility are generally present in competitive commodities markets and can benefit consumers through delivering lower average prices.

The challenge is that the current outlook for the spreads and volatility in the short and medium term means that it is not necessarily economically feasible to keep operating gas storage facilities. This is because the returns from storage businesses may not be sufficient to cover the capital costs and return necessary to justify the continued operation of the facility. GSOG notes that over the last two years across Europe a number of storage facilities have been mothballed or blown down and potential storage projects delayed or cancelled. Further, GSOG expects that most businesses would be carefully assessing the on-going viability of any storage facilities they currently operate.

GSOG considers that there is no perfect intervention that is likely to deliver adequate gas reserves. However, if Member States or the Commission are considering interventions, it is vital that any such measures should work with the grain of the market and seek to ensure storage capacity is available to the market so that it can be utilised. For example, providing a revenue floor that SSOs receive would ensure that capacity would be available to the market, or a Public Supply Obligation (PSO – as is common in many Northern European nations) which would underpin a certain level of storage capacity, and thus demand, in the market so long as market functioning is not distorted. GSOG notes that the challenge for the market is that once storage facilities (whether salt cavern or depleted reservoir) are blown-down or mothballed it can be physically impossible to reinstate the capacity or extremely costly to reinstate the capacity.

Storage infrastructure

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?

There is no common optimal level/ share for gas storage. There is no one common "storage prescription" as each country's energy system is unique, some main parameters can be considered when assessing the storage requirement:

- Import dependency
- Demand ratio between summer and winter
- Ability to cover seasonal modulation needs and peak demand
- Structure of national gas demand
- Gas share of the energy mix
- Characteristics of existing storage facilities

It is therefore difficult to give a formula to what would be an optimal share of storage.

In general, with a view to infrastructure development in relation to gas storage, the market conditions are not conducive to new investment and actually have already resulted in gas storage facilities being mothballed/ closed. More interconnectivity and regional cooperation could be a way forward but does not exclude the need to ensure that gas must be available when needed and thus a certain level of "market area" storage is warranted.

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

No.

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?

The costs associated with stranded assets primarily falls on consumers when the storage facilities form part of the regulated asset base. For commercially operated storages the risk and associated costs of the asset becoming stranded falls on the commercial operator.

The risk that storage assets will become stranded will depend on what, if any, measures are put in place to support storage facilities (or conversely, provide support for other energy infrastructure which makes operating storage facilities economically unviable). Such risks may be warranted on the basis of the benefits that storage brings in the form of physical security of supply as well as security of price (i.e. reducing peak prices during periods of system tightness).

However, in order to minimise the risk that storage capacity will be stranded, the following steps should be considered:

- Ensuring that there are clear, consistent policies from EU policy makers that take account of the key role natural gas plays in the future of the EU energy mix,
- Overhauling the EU ETS so that cleaner technologies such as natural gas can compete against less clean technologies such as coal on an equal footing, with external costs being taken into account.
- Eliminating subsidies for mature renewable technologies in the power generation sector as they distort the internal energy market.

Regulatory framework and potential barriers for storage

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

GSOG considers that there are three main critical regulatory barriers to the optimal use of storage at an EU level:

- Level of transmission tariffs
- Restricted access to/from storage facilities
- Ability to offer customized products

In some cases high transmission tariffs at storage-transmission interconnection points can account for a significant portion of the storage costs (whereas storage facilities provide numerous benefits to the system resulting in avoided investments and lower operational costs: see question 22). Lowering transmission tariffs for storage is a way to incentivize the use of storage.

For storages to play an effective role within the framework of SoS, adequate filling levels are required. The latter implies that the access to/from storage facilities (i.e. for respectively injection and withdrawal) is not hampered by insufficient capacity at the transmission network. In this respect, storage users should be treated on equal terms with other network users.

Finally, in order to compete with other flexibility tools that do not face the same third party access requirements (spot purchasing like virtual trading points, virtual storages or hubs), it

is crucial for storage system operators to be able to answer to their customers' needs by offering innovative products.

With regards to a regional setting, GSOG considers that supply standards can be fulfilled by booking gas storage in another Member State, but it should be taken into account that in that case also interconnection capacity is ensured and double counting (i.e. counting the gas storage capacity for more than one country) should be avoided.

20. Do you think ongoing 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?

Implementation and compliance with existing legislation is crucial before launching new initiatives.

Having said that, we recognize that Regulation 994/2010 on security of supply, needs updating to reflect practical experience gained in the past few years as well as the opinions of various stakeholders voiced in public consultations organized by the Commission.

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 measures able to meet the objective of secure gas supply?

Specific transmission tariffs for underground gas storages are needed and should be part of the tariff network code. When setting tariffs for entry/exit points to and from storage facilities, one must take into account that gas storage is not a net source of supply or demand and that users have already paid entry and exit tariffs at import/ production and at end consumption.

GSOG believes that transmission tariffs to and from storage facilities should recognize the benefits and value that storage facilities bring to the overall system.

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.

GSOG is not aware of any such issues within the GB market. Further, transparency requirements implemented under the Third Energy Package give the storage customer full knowledge about the size and utilization of storage capacity.

However, as previously noted, in some cases transmission charging arrangements can render storage capacity uncompetitive relative to other sources of supply, it is important for such impediments to be addressed.

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.

GSOG does not have a view on this issue.

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