

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

Ministry of Economy of the Slovak Republic

Question 1: Do you agree with the assessment for the above regions in terms of infrastructure development challenges and needs to allow potential access for all Member States, in particular the most vulnerable ones, to LNG supplies either directly or through neighboring countries? Do you have any analysis or view on what an optimal level/share of LNG in a region or Member State would be from a diversification / security of supply perspective? Please answer by Member state / region

Answer 1: *We consider as important to realize all the assessment and development decisions taking into account already existing infrastructure as well as regional and national specificities. Another aspect which should be considered is the fact that infrastructure only without physical availability of gas may decrease the benefits of the infrastructure as the gas may not be available when most needed. From the current perspective LNG may be an interesting alternative mainly for countries with direct access to onshore LNG terminals and only limited alternative for landlocked (neighboring) countries.*

Question 2: Do you have any analysis (cost/benefit) that helps identify the most cost-efficient options for demand reduction or infrastructure development and use, either through better interconnections to existing LNG terminals and/or new LNG infrastructure for the most vulnerable Member States? What, in your view, are reasons, circumstances to (dis)favor new LNG investments in new locations as opposed to pipeline investments to connect existing LNG terminals to those new markets?

Answer 2: *As mentioned in answer to the Question 1, the investment into new projects (including LNG) should be based on cost benefit analysis taking into consideration already existing infrastructure and their benefit for the region therefore the well situated interconnectors with interconnected storage capacity could in our opinion add the highest value from security of supply point of view this could in our region include e.g. the project of Eastring pipeline.*

Question 7: What do you think are the most critical commercial, including territorial restrictions and financial barriers at national and regional level to the optimal use and access to LNG?

Answer 7: *As an inland country we consider the lack of sufficient infrastructure including the cross border interconnections between the countries as the most critical barrier the access to LNG. In this respect in our region e.g. the project of Eastring could be beneficial.*

Question 11: What technological developments do you anticipate over the medium term in the field of LNG and how do you see the market for LNG in transport developing? Is there a need for additional EU action in this area to reduce barriers to uptake, for example on technology or standards, including for quality and safety?

Answer 11: *In the medium term we expect technological development to progress especially with regard to the new technology of vehicles. Low capacity of engines (up to 340 horse powers) is one of big disadvantages of the current EURO VI LNG models. For development of LNG use in transport new models with capacity above 450 horse powers should be introduced to the market. This capacity is technologically achievable for example by HPDI technology, development of which we suggest to support.*

EU should consider that very long lifetime of ship engines (up to 35 years) may influence willingness of shippers to renew their fleets. Without introducing proper incentive schemes, shipping companies will not be motivated to invest in modern LNG vessels or to technological improve older vessels, due to the higher acquisition costs. Therefore, in order to develop the use of LNG in ship transport, we propose to consider introducing stricter emission standards, particularly in terms of the limits of solid particles and sulphur oxides emission, discounts in administrative fee and port fees depending on the environmental friendliness of the operation of the vessel. We also propose to support the construction of basic network of inland LNG filling stations (TEN-T Core), particularly along the whole corridor Rhine-Main-Danube.

Limited offer of trucks (so far Iveco and Scania only) is main factor that hinders the development of LNG in the road cargo transport. Poorly developed infrastructure of LNG fuel stations and related lower demand for LNG trucks also causes that the tractor manufacturers have no incentive to invest in development of new, more efficient models powered by LNG. Given the above, it is extremely important to further support the development of LNG infrastructure and use of LNG vehicles for example by reduced direct and indirect taxes, toll payments and other means connected to the use of LNG.

In terms of standards, we consider that the definition of minimum value of the methane number in LNG is necessary, since a methane number varies according to source LNG and fuel with low methane numbers may cause irreversible damage to some engines. We also propose to prepare uniform standards for each of the LNG chain components - production of LNG, LNG storage, infrastructure, engines and fuel tanks. The same applies to the quality and safety standards. We also propose to redefine obligations of Member States according to EU Directive No. 2014/94/EU on the introduction of alternative fuels infrastructure. Development of minimum LNG infrastructure is one of the goals of this Directive, however such infrastructure should be compatible as much as possible across the EU to facilitate and promote its use by consumers across the EU. Too loosely defined obligations of Member States may cause that this goal will not be achieved. EU should consider to redefine more strictly the obligations on standards, national frameworks and support schemes for development of alternative fuels infrastructure.

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?

Answer 13: *Storage operators have been met with more challenges than opportunities in past couple of years. As the main reason behind this situation we see the decreasing appetite for storage, caused mainly by the collapse of summer-winter spread and an abundance of*

flexibility on the market. The drivers of this development can be categorized into those on the demand side (decreasing gas consumption and consumption swing), and those on the supply side (spot market sourcing, LNG supplies, storage capacity increase, gas grid expansion, production decline. The supply side drivers provide flexibility to the market. Storage suffers from newly developed surplus of flexibility from competing sources.

Europe's domestic production of natural gas has been steadily decreasing. Prospects for future supply diversification, however, seem more optimistic than they were a couple years ago, and the projected loss in domestic production is being outweighed by new potential supply sources, be it from east Mediterranean, Azeri gas, Iran, most importantly, the imminent new LNG shipments to Europe from all over the world.

As crude price has lost 60% of its value within a year, Asian LNG, priced mainly with crude-oil-indexed formulas, followed suit and got on par with European gas hub prices. Europe is now open to supplies from all major production zones around the world, LNG shipments are expected to rise and so is the utilization of European regasification facilities.

Diversification of supply sources by LNG and market interconnection can increase the liquidity on the market and hence support commercial trading with storage. More pressure on already low summer-winter spread and another growth of flexibility supply will, however, render storage booking unprofitable for gas traders seeking mainly short-term storage value.

As sourcing gas on hubs and exchanges gains in popularity, some market players are beginning to rely completely on gas hubs and storage lost its position as number one tool to cover demand swings. Although this may bring financial benefits in years with mild winters, during more severe winters or winters with cold spells this strategy can prove dangerous not only to the given supplier, but mainly for customers. In times of crisis situations the spot price of gas can almost double and not every supplier can afford to purchase such expensive gas for increased outtakes of customers during these days. Risk of default on supply obligations can be, however, significantly reduced with gas storage.

Gas storage is, in our opinion, a much more reliable provider of flexibility also due to its proximity to the point of consumption. Geographical distance should be taken into account when making decisions on a European level. In times of crisis, extra supplies of LNG may not be prompt enough neither for countries at the seaside, nor those in the mainland. Gas storage has an undisputable value for mainland countries exposed to supply risk from the security point of view, and no amount of LNG at the coast can replace it.

On the other hand, things may also turn positive for gas storage in terms of gas consumption. Even though it is continuously falling due to increased efficiency and economic downturn, recent system interventions in the renewables field may have rather positive effect on demand for gas. Coal and nuclear power plants phase-out in Germany will have to be compensated by either CCGT power plants consuming gas directly, or by more renewable sources, whose intermittency needs to be smoothed out by natural gas. New gas import routes into Europe will also require more storage capacities as support infrastructure.

Advancements in energy systems, such as Power to Gas or hydrogen generation, open new possibilities for gas storage, too.

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)?

Answer 14: *We consider important to have a regulatory framework which enables to secure at least part of the storage capacities on long – term basis in order to create stability for long-term investments into infrastructure projects which will at the end enhance security of supply. Furthermore all the regulatory measures should respect and not endanger the most important and basic storage role in providing security of supply.*

We would like to point out that there is no “one size fits all” approach possible, and the countries should be allowed to take into account some national specificities related to the way they want to ensure security of supply and to implement the corresponding legislative measures.

Last but not least, we would like to stress, that the primary responsibility for security of supply lies on the shoulders of market participants directly providing the gas supply, whereas the storages are the best measure to achieve that security.

While designing the regulatory conditions to answer security of supply question, particular mix between domestic gas production, consumption vs. storage capacity ratio, level of transportation routes diversification, market maturity and regional specificities including regional energy mix should be considered.

Moreover, from the regulatory point of view it is also very important to create a regulatory framework which would provide a level playing field for storages with other flexibility tools and allow storages to provide new, innovative services as only booked and properly utilized storages can fully play their role in addressing security of supply issues.

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

Answer 15: *In our opinion, in an effort to ensure adequate minimum reserves, national or at least regional specificities should be taken into consideration. It is complicated to determine the appropriate volume of reserves, since it depends on a number of variables, such as the country’s gas consumption, diversification of routes and supplies, possibility to switch to other fuels etc. All of these differ between regions and from country to country. Nevertheless we are of the opinion that sufficient controlling mechanisms together with a possible sanctioning mechanism for a case that a market participant responsible for security of supply should fail to fulfill its obligations, could facilitate the achievement of the questioned target. In cases of the high dependency on one gas supply source (as is the case of our country) the storage should play the most important role in security of gas supply.*

Fully functioning liberalized interconnected market with sufficient amount of market participants that can freely trade the commodity and services related to the commodity delivery can be market based alternative to mandatory reserves. Reducing and/or removal of potential infrastructure bottlenecks and diversification of transportation routes in order to provide the gas sourcing alternatives and arbitrage opportunities between the markets could contribute to optimal usage of storages with sufficient level of stocks physically available close to the consumption area at the given time. Innovative and market demanded storage product development from the side of SSOs can support the optimal balance between utilization of currently available flexibility tools. Considering current status of regional infrastructure development, supply/demand balance and market maturity, suitable mix between market based and regulatory measures for providing the security of gas supplies seem to be an answer.

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?

Answer 16: *In order to get an idea about the optimal level of storage in the given Member State, we compared yearly gas consumption with storage volume and storage usage history in Slovakia with those in the United Kingdom. The data show that the UK, with its immense gas consumption of 71.5 bcm per year survives winters with only 4.65 bcm of storage. On the other hand, Slovakia, who consumed 4.3 bcm of gas in 2014 - only a fraction of the UK's consumption, uses approx. 3.2 bcm storage – not much smaller than the UK. Working volume of the Slovakia's storages is able to cover 77% of the country's yearly gas consumption. Other factors – such as market development and possibility to get gas from various sources – have to be taken into account when trying to find out optimal level of storage for respective region/s.*

Hence, the “optimal level of storage” issue is another one where one-size-fits-all approach cannot be applied. The United Kingdom has access to a diversified range of supply options – its own gas production, LNG terminals and pipeline connections to continental Europe. Slovakia, on the other hand, is dependent on one gas supply source. It's storage capacities are utilized, so the 77% storage/consumption coverage is justified. Of course, not all the stored gas ends up on the Slovak market, but the level of storage in Slovakia ensures that the country is less vulnerable in times of crisis situations. That would imply that the optimal level of storage is just “as high as possible.” However, such approach should only apply for countries with strong supply dependency. In countries with easy access to a variety of flexibility tools, support for more storage development would be unnecessary, or even harmful for storages, since the first cases of storage closures in Europe already happened.

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

Answer 17: *At the moment we see no need to take further EU action in this respect.*

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 weigh those against risks to gas security and resilience? What options exist in your view to reduce the risk of stranded assets?

Answer 18: *We consider the physical availability of gas as very important from security of supply point of view, especially in countries with high dependency on one supply source or low level of interconnection (low level of diversification of supply routes). Any risk of stranded assets, lock-in effects, diverting investments from low carbon technologies, but also from storage infrastructure where needed, can have negative consequences on gas storages and thus jeopardize the security of supply. Therefore a regulatory framework which would provide a level playing field for storages with other flexibility tools and allow storages to provide new, innovative services to attract market players to book and utilize storages could help to prevent the mentioned risks. Nevertheless there should be a possibility to use non market based measures if necessary in order to avoid these risks and to ensure the security of supply if depending on national basis considered as necessary.*

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

Answer 19: *Regulated prices for access to storage from/to transmission network domestically or cross-border set at unreasonable high level may cause a barrier to the optimal usage of storage infrastructure. In our opinion it is important to create a regulatory framework which would provide a level playing field for storages with other flexibility tools and allow storages to provide new, innovative services. Also a regional cooperation between Member States could be enhanced.*

Question 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?

Answer 20: *Regulatory framework which would provide a level playing field for storages with other flexibility tools and allow storages to provide new, innovative services is an important matter.*

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 measures able to meet the objective of secure gas supply?

Answer 21: *Definition of specific tariff regimes for storages should be made on a national level and only in respect of strategic storages controlled by the government. However, we*

see no need for price regulation of commercial storages with third party access, especially on markets with access to other domestic or storages in other countries.

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.

Answer 22: Both storage system operators in Slovakia are providing effective and innovative services developed in close cooperation with the gas market participants reflecting their needs. All the necessary information needed to the effective access to storage facilities are available on respective SSO's website (in accordance with GSE transparency template). SSOs provide the access to storage in TPA regime in transparent and non-discriminatory basis. Based on above mentioned facts we believe no gas market participants should encounter such a situation. Ministry of Economy is not aware of any such situation from gas market participants. No complaints received.