

## MOL Group response to the “Consultation on an EU strategy for liquefied natural gas and gas storage”

MOL Group welcomes the opportunity to respond to DG Energy’s public consultation, and agrees that its response will be published on the Commission’s website. The below answers focus on the Central Eastern European region.

### Introduction: LNG in the EU today

***Q1: 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?***

We agree with the assessment of the European Commission that security, affordability and sustainability of the EU gas system is critical to the success of the Energy Union. The EU needs both new gas supply sources (incl. access to LNG) and to develop its indigenous gas production as well.

We believe that more LNG in Europe could reduce the risk of a supply crisis in the mid-term via diversification of supply sources. It could provide **access to a global gas market** and **limit the price-setting power** of dominant suppliers (e.g. Russia in the CEE region). New LNG volumes would likely create downward pressure on regional prices and enhance the bargaining power vis-à-vis the dominant supplier, including in negotiating Long Term Contracts. Overall, a **price competition** is likely to develop between traditional suppliers (Russian in the CEE region) and new, international LNG suppliers.

However, the **precondition** of any of these developments is a **flexible infrastructure** that allows different supply options to reach all regions. This is not the case in the CEE region yet, making it vulnerable to security of supply disruptions. In order to facilitate the market development in the CEE region, we wish to highlight the following:

- **Infrastructure bottlenecks** (the lack of LNG import terminals and sufficient interconnections to the West-East pipeline system) prevent CEE countries from accessing any additional source from LNG today. The biggest obstacle is not direct access to LNG but the lack of sufficient bidirectional connection to liquid Western European markets where LNG is already present. Consequently, **the flexibility of the entire European system** to allow gas flows to and from each region – irrespective of the origin of the gas – should be the focus of policy makers.
- For the CEE region, ensuring **sufficient uninterrupted reverse flow capacities on the North-South corridor** entails the following:
  - Finalization of the interconnections of the Central Eastern and South Eastern Priority Corridor by building the Stork II interconnection between PL and CZ;
  - Implementing the physical reverse flow on the Croatian side of the HU-HR interconnector and on the HU-RO interconnector and prohibiting discriminatory export tariffs;
  - Once interconnectors are in place and their efficient use is ensured, building a scalable LNG import terminal in Krk, Croatia.
- It is imperative to properly link the North-South interconnector system **to the liquid Western European markets**.

We do **not believe there is optimal share of LNG** for a region or a Member State. The key is supply diversity, which requires efficient interconnection infrastructures. Any such ‘optimal’ level should then be governed by market mechanisms. LNG must also be competitive in price – but pipeline gas could remain more competitive in inland countries where existing suppliers use strategic pricing to prevent market penetration of LNG.

In sum, **the primary objective** should be a well interconnected CEE regional market where there are no barriers to trade, and which is linked to the liquid Western European market.

***Q2: 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)favour new LNG investments in new locations as opposed to pipeline investments to connect existing LNG terminals to those new markets?***

We note that there are large underutilized regasification capacities in Western Europe. With proper interconnections to these regions, CEE countries could, even without direct access to LNG, enjoy the benefits of more liquid European markets. **Interconnectivity of the European gas system should therefore be prioritized over investments into a new terminal as a general rule. Altering this logic is only permissible to defend against strategic security of supply disruptions in the CEE region, in which case public participation in investments would be required (see below).**

For new LNG terminals to be commercially viable in the region, regional interconnectors, lifting barriers to cross-border trade and access to gas hubs should be ensured first.

The principle of ‘**interconnections first, new terminals after**’ is also justified from the perspective of potential investors, who are less likely to invest in new LNG terminals that are ‘paralyzed’, i.e. their supply is limited to the local market instead of functioning commercially throughout the whole region. Once the necessary interconnectivity is in place, investors will be able to see where the new gas can go both physically and commercially.

These **gas flows must be however efficient**, because high fees (for regasification and transmission) or infrastructure bottlenecks can still make distant LNG facilities an uncompetitive option. For example, limited reverse flow capacities and high fees on Italian-Austrian interconnectors prevent LNG imports from reaching the CESEC countries despite abundant regasification capacities in Italy.

Lack of political will and financial barriers are a further problem. While the CEE region has significantly developed its gas infrastructure in recent years (Hungary in particular is well connected: since July 2015, it has increased access to Western European markets via the commercially operational Slovakia-Hungary interconnector), the region still lags behind Western Europe both in terms of LNG terminals and interconnectivity. These above-mentioned **problems complicate certain ongoing projects** which in turn prevent the region from catching up to Western European interconnectivity levels.

Regarding the longer term, if a new supply source emerges, new physical routes or capacity increases on existing ones are necessary to deliver it further. These are more cost-effective and quicker alternatives than new LNG infrastructure. **Marked mechanisms are best to determine** whether and when new terminals should be build. According to our assessment, new sources and routes may appear in the CEE region in the 2020s (among others Caspian gas via TANAP-TAP, Romanian offshore production, Russian gas via North Stream or Turkish Stream, etc.).

However, **strategic security of supply analyses indicate** that in case of a complete termination of supply of Russian gas to Europe through Ukraine, the CEE and SEE regions may need both new LNG terminals and access to enhanced West-East connections. The **cost of these strategic investments** must not be borne by market participants alone. As an additional means of strengthening the strategic security of supply (i.e. competition among international suppliers and trading of LNG), a temporary, limited and market neutral obligatory **procurement share** of LNG-sourced gas (in the form of ticketing) might be considered.

**Q3: Do you think, in addition to the already existing TEN-E Regulation, any further EU action is needed in this regard? Do you think the use of LNG gas and existing LNG infrastructure could be improved e.g. by better storage possibilities, better network cooperation of TSOs or other measures? Please give examples**

Cross-border cost allocation (CBCA) rules under the TEN-E Regulation and specified by ENTSOG and ACER recommendations – applicable to projects which are economically not viable and have significant cross-border net benefit to other countries – are critical.

MOL Group actively follows these cost-benefit analysis requirements because the new mechanisms (e.g. the CBCA) lack enough precedents. In our view, modelling results today often disregard important elements when analyzing net or overall benefits of the projects. We recommend the following:

- CBCA decisions should be better harmonized. ENTSOG and ACER should give clear guidance on new methodologies **and help TSOs and project promoters**, as the regulation is not explicit on the methodology. The **EU should monitor the national level and ACER rules and methodologies** which were required to be elaborated by the NRAs and reviewed by ACER so that project promoters can progress with the PCI projects.
- ENTSOG and ACER should **only accept cost-benefit analyses that** are methodologically sound and take into account not only consumers' but producers' (i.e. several entities) costs and benefits.
- If a country/TSO/project promoter has already invested on its territory but the project cannot be realized due of the other parties' reluctance and lack of investment, no extra cost allocation should be used. In general, **parties should be responsible for their own part** in the project, especially when the phases of construction greatly differ between the parties (e.g. the Hungarian-Croatian interconnector).
- Projects **benefiting from EU financial support should also be monitored** better by the European Commission, in particular pertaining to analyzing cross-border cost allocations.
- **ENTSOG and ACER guidance notwithstanding**, Member State national regulatory authorities should be able to agree on cost allocations. CESEC can be mentioned as a good example of regional cooperation framework to solve problematic issues.

In the context of disputed cost benefit analyses, the planned LNG terminal on the island of Krk is an example of a project facing challenges. The terminal aims to supply the CEE region with natural gas from an alternative, competitive source to the Russian supplies – and while the key barrier is the lack of adequate interconnections towards the CEE region, inefficient communication and lack of preliminary consultations between interested parties (EU, ACER, NRAs, TSOs, project promoters) delays agreement on the recently issued CBA.

**Q4: What in your view explains the low use rates in some regions? Given uncertainties over future gas demand, how would you assess the risk of stranded assets and lock-in effects (and the risk of diverting investments from low carbon technologies such as renewables and delaying a true change in energy systems) and weigh those against risks to gas security and resilience? What options exist in your view to reduce and/or address the risk of stranded assets?**

Besides **lack of coordination and overinvestment**, it is **high LNG prices and the collapse of gas fuelled power generation** that resulted in low capacity utilization. In some cases infrastructure bottlenecks prevent evacuation of the gas to markets further away.

Looking forward, improving supply-demand balance may reduce LNG prices. However, strategic pricing of low-cost inland suppliers might prevent market penetration of LNG. This might result in stranded assets from the investors' point of view. However, the regasification terminals – even if idle – make the European gas markets contestable and deliver benefits in the form of lower prices. Socializing the costs of the investment via EU financial assistance (grants) might help to overcome the financial gap problem.

In order to reduce the risk of stranded assets and the introduction of obligatory use of LNG in a form of ticketing might be considered as a market neutral, limited and temporary promoting measure.

***Q5: The Energy Union commits the EU to meeting ambitious targets on greenhouse gas emissions, renewable energy and energy efficiency, and also to reducing its dependency on imported fossil fuels and hence exposure to price spikes. Moderating energy demand and fuel-switching to low carbon sources such as renewables, particularly in the heating and cooling sector, can be highly cost-effective solutions to such challenges, and ones that Member States will wish to consider carefully alongside decisions on LNG infrastructure. In this context, do you have any evidence on the most cost-efficient balance between these different options in different areas, including over the long term (i.e. up to 2050)?***

In the context of fuel-switching in power and heat generation, natural gas delivers large benefits in carbon intensity when compared to various forms of coal. The carbon intensity advantage of natural gas over coal is typically more than 40% (41-45%, bases on IPCC default values). A wider coal-to-gas switch in Europe's power sector would significantly contribute to delivering the GHG reduction targets of the EU for 2030.

The potential of domestic EU natural gas production to supply the resulting demand must be fully exploited besides imported LNG.

### **Entry barriers for LNG**

***Q6: What in your view are the most critical regulatory barriers by Member State to the optimal use of and access to LNG, and what policy options do you see to overcome those barriers? Have you encountered or are you aware of any problems in accessing existing LNG terminal infrastructure, either because of regulatory provisions or as a result of company behaviour? Please describe in detail.***

In addition to infrastructure bottlenecks, the CEE region faces **various regulatory barriers** prohibiting access to existing and future potential LNG terminals. These problems are not LNG-specific but have general character, and they are best illustrated by the **incomplete implementation of internal energy market legislation**. Security of supply concerns are typically addressed individually in the CEE region's countries.

Price regulations, gas trading restrictions and transmission tariff systems **hinder gas flows** between member states. Regulated prices are often below the market price together with establishing a predefined, regulated supply chain that prohibit new sources such as LNG from entering the regulated segment of the market. In some countries, the export of domestic gas to another member state is also restricted by law. This variety of rules is only partly explained by the fact that countries in the CEE region significantly differ (in terms of size of total gas consumption, the share of residential gas consumption, their share of domestic production and resulting import need, the availability of storage facilities or interconnectors).

As regards tariffs, the current EU gas legislation **fails to provide for a harmonised tariff system** or for sufficient transparency as to how the tariffs are set. This lack of regulation for harmonizing tariffs at EU level tends to create barriers to trade. The differences between current tariffs may also imply a certain degree of discrimination between network users, especially between domestic and cross-border network users. Drafting a new regulation as put forward by ENTSOG is a good opportunity to address this problem.

As regards access to LNG terminals: although the CEE region does not currently have direct access to existing LNG import terminals, such a facility is proposed on the Croatian island of Krk. It is advisable to prepare national legislation well in advance to help the future LNG market effectively through predictable regulation and incentive rules. In this regard timely discussions and agreements should be promoted between the interested stakeholders (project promoters, authorities, EU).

**Q7: 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?**

The main barriers for LNG deployment are high relative price, large upfront development cost and existing appropriate gas supply (in the form of long term contracts, via existing pipelines).

In the CEE region, **regulatory barriers to trade and lack of bi-directional interconnectors** also restrict the regional cumulation of national gas demands. This prevents a local LNG terminal from being commercially viable. Specifically, the incomplete implementation of Internal Energy Market rules (with emphasis on interconnectors and their pricing schemes) means that the free flow of hydrocarbons, especially of natural gas, is still not a reality in the CEE/SEE region (e.g. from Croatia or Romania). Due to the overall demand thus limited today, the development of a new large LNG terminal in the CEE region would only be viable as a security of supply investment.

Once interconnectors are completed and barriers to trade removed, we expect LNG (through connected Western European markets) to become **the new price setter** in the CEE region –without physically entering the region in large volumes. As LNG exporters will have more cost elements than pipeline suppliers, they are unlikely to compete for the baseload demand in CEE. Their price will likely be matched by the Russian pipeline supply, and actual volumes would still be supplied via traditional pipelines, but at the new, lower prices.

The resulting lower price level may however **undercut investment decisions in Europe's domestic natural gas production**. This effect on Europe's security of supply should be examined.

**Q8: More specifically, do you consider that ongoing EU policy initiatives and/or existing legislation can adequately tackle the outstanding issues, or there is more the EU should do?**

The EU should **first and foremost enforce existing rules** to fully complete the Internal Energy Market (with special regard to 3<sup>rd</sup> Energy Package rules). Specifically regarding reverse flows obligations, exemptions from Regulation on Security of Gas Supply should not be allowed.

The EU should also focus on the facilitator role it is playing in e.g. the CESEC.

We support current efforts for harmonizing tariff systems as more harmonization in this field is both important and necessary.

We find the current practice of establishing Interconnection an Operational Agreements (which that neighbouring transmission system operators have to conclude at all system-interconnection points) to be often slow and inefficient. The recently concluded Interconnection Agreement between the Hungarian and Ukrainian TSOs should be the standards for further agreements where they are missing. The European Commission should assist this process.

## **International LNG markets**

**Q9: How do you see worldwide LNG markets evolving over the next decade and what effects do you expect this to have on EU gas markets? Do you expect a shift away from oil-indexed LNG contracts, and if so under what conditions?**

We agree with the assessment in the consultation paper. MOL expects global oversupply of LNG in the mid-term, where Europe will be the swing market that might result in increased price volatility in European hub prices.

More liquid, globalized (L)NG markets will likely develop, with spot pricing that moves away from oil-indexed price formulas. The share of spot and short contracts is increasing rapidly, and will expand further as non-contracted volumes come online and portfolio buyers will trade more actively. In Europe,

residual LNG volumes can be placed at hub prices. This will facilitate gas-to-gas pricing worldwide.

***Q10: What problems if any do you see with the functioning of the international LNG market, particularly at times of stress? Are there specific actions the EU should take, in dialogue with our international partners, including in trade negotiations, to improve its functioning and/or to make the EU market more attractive as a destination for LNG? Could voluntary demand aggregation be helpful in some way?***

Demand aggregation is useful in markets where there are only few suppliers with significant market power. This is not the case on the LNG market; moreover, we expect the market to become more and more competitive as it moves towards a spot-price driven market structure. Therefore, **we do not see the benefits of or the need for demand aggregation**. We see however the costs of such a model: inflexibility of import volumes and restriction of free competition that tends to result in higher prices.

### **LNG technology issues, LNG in transport**

***Q11: 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?***

LNG in road transport is a **relatively mature** technology, while its use in maritime or inland waterway transport is less advanced from a technological point of view. Given the low the replacement rate of ships, the fast penetration of LNG vessels is unlikely even in an environment supportive of LNG.

In terms of **infrastructure**, the EU's Alternative fuels infrastructure directive which mandates a minimum refuelling infrastructure for LNG (by 2025 at certain maritime ports and by 2030 at certain inland ports) is sufficient.

The long-term penetration of LNG will be defined by the **diesel-LNG fuel price spread** (since 60% of the truck's TCO is fuel cost). Due to this, coastal areas will see faster penetration as LNG is cheap and physically present there, and regulatory backgrounds also tend to be more supportive. The spread of maritime emission control areas will also incentivize scrubbers and/or less polluting fuels, which include LNG.

The development of LNG in transport in the **landlocked CEE region is expected to be slower**, due to (i) higher price of LNG (as there are logistics cost from coast or own production), (ii) less ambitious and uncertain regulatory background, (iii) higher relative upfront cost, and (iv) complete current lack of refuelling infrastructure.

On the EU level, the differing excise duty levels are a hindering factor. Regarding further EU action, the creation and enforcement of **EU-wide technology standards** (as foreseen in the Alternative fuels infrastructure directive) will assist the development of the LNG market.



## II. STORAGE RELATED QUESTIONS

### Internal market constraints and challenges for storage

*Q13: 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?*

LNG supply may contribute to tackling seasonality of gas demand and can to an extent replace the role of storages where traders today have storage obligation for security of supply considerations. LNG and storages will compete with each other and storages will be more competitive only if the gas price with the storage costs and transportation costs is below LNG prices.

The different characteristics of the two will however be important. An LNG regasification terminal would offer very high withdrawal capacity, but only for few days – thereby could essentially shave off the peak volumes on the market. This potential may be limited by any existing bottleneck on the transportation system and cross-border capacities. Domestic and pipeline sources using local storage capacities would on the other hand be better at providing a solid basis in a country's gas supply.

*Q14: 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)?*

For inland countries with no direct access to LNG, storage obligations for traders in the public service sector might be maintained. Such storage obligations must be competition neutral, and non-compliance must be properly sanctioned. As a general rule, the amount of gas stored should be sufficient to guarantee uninterrupted supply for small consumers (up to 20 cubic metres per hour, possibly up to 100 cubic metres per hour) and also for consumers providing social services (e.g. hospitals, schools, district heating centres) for the entirety of the heating season even during extreme cold spells or in case of interrupted supply from the largest supplier.

Storage obligation is not warranted for other consumer groups.

Cross-border strategic storage is a further option to consider, while noting that strategic storages are unlikely to significantly increase transit volumes since they only open up in times of crisis.

In our view, strategic storages – which may complement commercial storages for specific consumer groups – can be market-based instruments if they are neutral from a competition point of view and have equal effect on market players. It follows that storage obligation (mandatory reserves) on suppliers of protected consumers can be market based instruments if the following are fulfilled:

- costs related to ensuring reserves are paid by consumers as tax-like fees;
- the functioning of the internal market and trade between member states is not disturbed (the price paid for gas from strategic stocks is equal to the market price at the time of sale and refill happens also at market price).

The use of strategic stocks on market price would work similarly as a potential new source entering the market and becoming accessible quickly if needed.

*Q15: As an alternative to mandatory reserves, how could market based instruments ensure adequate minimum reserves?*

**Strict consumer protection** measures may be an example of such market based instruments. If a gas trader does not fulfil their contractual obligations, the indemnity to be paid must not be smaller than the value of the gas not shipped, even if the non-fulfilment is due to supply disruption.

It must also be noted that the **standard “take or pay” penalties** of commercial contracts already provide minimum reserves at traders at all times. In a competitive market, where a supplier is selling

gas to an industrial customer, certain penalties are introduced in the contracts in order to force the trader to deliver and the consumer to take over the gas – all under normal market circumstances. That means that for each supplier it is commercially reasonable to keep a sufficient natural gas stock and always comply with the terms in its sales contracts.

## Storage Infrastructure

**Q16: 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?**

An optimal storage level should **not be defined by regulation but developed by market mechanisms**, as long as gas supply restrictions are not likely if the biggest supplier is lost. Nevertheless, if an 'optimal level' is sought, the level of analysis should be regional and not national in order to allow the cost-effective utilization of existing storage infrastructures. For example, large storage capacities remain unused in Hungary whereas neighbouring countries have very low available capacities.

Additionally, several market characteristics would have to be assessed when attempting to estimate the 'optimal level' of storage: security of supply conditions, access to resources, the number of major suppliers active on the market. The optimal level might clearly be different for each region.

As a general rule, the amount of gas stored should be sufficient to guarantee uninterrupted supply for small consumers (up to 20 cubic metres per hour, possibly up to 100 cubic metres per hour) for predetermined period or time during extreme cold spells or in case of interrupted supply from the largest supplier.

**Q18: 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?**

In such a question, timing is important. Long term natural gas demand above all depends on emerging new technologies, which are hard to predict. The short and medium-run demand – for which an LNG terminal should be constructed – seems to be more predictable. The continuation of the downward trend in European gas demand depends on strategic decisions and prices. Stable and low prices may be able reverse the trend temporarily.

In such an uncertain environment, **flexibility is key**. Wherever possible, the most flexible options should be implemented that are able to cope with changing demand for gas. Those projects that impose smaller up-front costs are clearly preferable, as the project bears a smaller loss if demand falls. Floating regasification units and alternative forms of ownership can also offer refuge against the risk of stranded assets: leasing instead of owning the asset means that if demand falls, the owner can move the unit to another place where demand made it profitable.

## Regulatory framework and barriers for storage

**Q19: What do you think are the most critical regulatory barriers to the optimal use of storage in a regional setting?**

**High exit tariffs** on cross border points are a typical regulatory obstacle in this regard. Extremely high and discriminatory exit tariffs are in place in certain cross-border points in the CEE region, which makes the utilization of storages in neighbouring countries commercially uneconomical.

Regulatory barriers that should be eliminated **can take further forms** as well. Access to storage can be discriminated when using a predetermined part of the storage's capacity is a privilege assigned to specific market participants. A regulator may also limit the price of gas that is removed from the storage, thereby causing financial damage to the owner of said gas. The regulator can also restrict free



disposition over the gas in the storage – including prohibiting export – in special circumstances (extreme cold period or a supply crisis).

***Q20:** 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?*

**Regional utilization of gas storages** should be fostered by, among others, the proper enforcement of obligations under the current Regulation on Security of Gas Supply regarding the establishment of reverse flows on interconnectors.

In addition, a new EU-wide regulation to harmonize access to gas storages (modeled after the Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks) combined with a prohibition of discriminatory cross-border tariffs that aim to prevent the exportation of natural gas would enhance regional use of storages and prevent restrictions on the free disposition over stored gas.

***Q22:** 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.*

**In Croatia, free access to the gas storage facility is restricted** for most market participants today. The country has insufficient storage capacity in the form of one small underground gas storage facility. The current regulatory framework – introduced suddenly in early 2014 – mandates the storage system operator to maintain 70% from the overall storage capacity for the gas market wholesale supplier (which is an entity nominated by the Government). This obligation is valid until 31<sup>st</sup> March 2017.

As a result, only 30 % of the storage capacity is commercially available. This creates a serious challenge in the functioning of the Croatian gas market, where the export of domestically produced natural gas is essentially prohibited. In that context, additional storage capacity or free cross-border trade on bi-directional interconnectors would be required today to improve the functioning of the market.