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

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Identification number in the transparency register: 18191445640-83

QUESTIONS & European Biogas Association's responses

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 neighbouring 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

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

Question 3: 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

EBA response: The use of LNG gas could be increased by attracting consumers to switch to gas. An effective way would be to introduce a European-wide CO_2 tax in the energy sector which would make high-carbon fossil fuels pay. The EU should also amend the Clean Vehicle Directive (2009/33/EC) in a way that it would divert public procurement of diesel buses and trucks, as energy-efficient vehicles (from tank to wheel point of view), to gas buses and trucks as *clean* vehicles. Since the transport sector is still today generating excessive greenhouse gas emissions and air pollution, energy efficiency should have here a minor role as an attribute when compared to the reduction of the greenhouse gas emissions. The GHG emissions of the road-freight transport sector have increased by more than 40% when compared to 1990 (UBA Germany, 2014). Liquefied gas is one of the most promising options for reducing GHG emissions in heavy duty transport vehicles, particularly when renewable methane is used. Moreover, the Clean Vehicle Directive's CO_2 calculation model is currently based on tailpipe emissions instead of well-to-wheel which clearly underrates the important emission reduction and energy efficiency of renewable energy at the generation level.

Question 4: 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?

EBA response: Gas is a low carbon fossil fuel that is used to a large extent as a heating fuel and increasingly in the transport sector to fight oil dependence and to reduce air pollution and noise levels in urban areas. Greenhouse gas emissions of gas can be further brought down by blending natural gas with biomethane. According to the German Energy Agency (*LNG in Germany: Liquefied Natural Gas and Renewable Methane in Heavy-Duty Road Transport*, 2014), LNG, at a 4 % market share, could reduce the GHG emissions of road-freight transport in Germany by 240.000 t CO_2 per year, if 20 % biomethane is admixed. Therefore, because of natural gas' capacity to reduce emissions, particularly when blended with renewable methane, the political emphasis of decarbonising the energy sector should be on phasing out other fossil fuels first.

Biomethane is continuously increasing its share on the methane market, reaching presumably a 10% share in the EU by 2030. Since renewable and fossil gases profit from the same infrastructure, the investments on gas infrastructure do not lead to stranded assets.

The low use rate is in most countries connected with the lack of infrastructure. For example in Germany more or less no filling stations for LNG in road transport exist. LNG is mainly considered for the maritime sector, but has barely been discussed on the political level so far. There are no incentives foreseen to attract first investments. Knowledge exchange seems to be missing.

Question 5: 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 costeffective 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 costefficient balance between these different options in different areas, including over the long term (i.e. up to 2050)?

EBA response: natural gas is having a 47% share as a heating fuel. Gas is a storable and flexible energy source that cannot be easily replaced by intermittent renewables. The most cost-effective way to decarbonise the sector is to gradually increase the share of renewable gas produced by anaerobic digestion, gasification and power-to-gas technologies. This together with improved gas infrastructure helps to secure gas supply in Europe.

Question 6: 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.

EBA response: in the sector of LBG (liquefied biomethane) a regulatory barrier for the real EU-wide uptake is the lack of cross-border trade. To enhance international trade, the EU Member States should recognise each other's sustainability certificates or alternatively, a system of common EU certificates should be created.

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?

EBA response: In Eastern parts of Europe, the Member States depend almost exclusively on Russian gas supplies which have an impact on security of supply as well as the commercial decisions of consumers. Additionally the gas engines are expensive. Long-term, secure availability of liquid gas should be pursued EU-wide in order to achieve optimal use of LNG. Renewable gas is locally produced increasing therefore domestic supply of gas. However, in most parts of Europe with a dense gas grid, it is more cost-effective to use the gas in the compressed form.

Question 8: 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?

Question 9: 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?

Question 10: 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?

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?

EBA response: The LNG market is slowly increasing, particularly in the countries where the gas grid is not widely spread. For example in Sweden, the first filling station for liquefied methane was opened in 2010 and in the same year the first truck powered by liquefied methane was deployed. Currently, there are around 70 trucks that run on liquefied methane and six filling stations for liquefied methane are in operation. A few Norwegian towns are also deploying public transport with busses fuelled by liquefied biomethane.

In the future, liquefied biomethane might be an interesting option for internal waterways, like Danube. One of the benefits of gaseous fuels is the intermodality: waterborne and road transport complement each other.

Question 12: Do you think there are any sustainability issues specific to LNG that should be explored as part of this strategy? What would be the environmental costs and benefits of alternative solutions to LNG? Please provide evidence in support your views.

EBA response: LNG development makes sense from the environmental point of view where gas utilisation options with high GHG emissions cannot be substituted by any other energy source. This is the situation for waterborne transport and heavy duty road transport. Both transport options are mainly based on oil/diesel and cannot be substituted by compressed natural gas or electricity today and in the foreseeable future. In both sectors LBG results in much less GHG emissions than LNG what is favoured when compared to diesel and petrol.

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?

EBA response: Better interconnections for biomethane: enable cross-border trade by amending mass-balancing requirements so that gas would be available there where there is demand.

Biomethane brings along notable GHG emission savings. A blend of natural gas and biomethane from co-digestion (50:50 manure-energy crops) at an 80:20 ratio would result in a 14 % GHG advantage over diesel fuel. A mixture of LNG and LBG at a 60:40 ratio would result in a 38 % advantage (German Energy Agency, 2014). Liquefying biomethane would make it more attractive also for long-distance road haulage applications.

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)?

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

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?

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

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?

EBA response: Regarding investments in gas distribution, storage and use, political long-term commitments on gas utilisation – including a strategy of transfer from fossil gas to renewable gas – would be crucial.

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

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?

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?

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.

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.

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