

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

National Grid Response

30-Sep 2015

About National Grid

National Grid (www.nationalgrid.com) is the UK's principal Electricity and Gas Transmission System Operator and one of the largest energy network companies in the world.

We own and operate the high voltage electricity transmission system in England and Wales and, as National Electricity Transmission System Operator (NETSO), we operate the Scottish high voltage transmission system. We are also the Transmission System Operator for gas in Great Britain, owning and operating the high pressure gas network.

In addition to our electricity and gas transmission activities in the UK, we also have a gas distribution business, delivering gas to around 11 million users in England. We have also developed significant Carbon, Capture and Storage activities (CCS) and are involved in a number of electricity interconnection projects with our European partners. We own and operate the Isle of Grain LNG terminal in South-East England. National Grid also owns and operates significant electricity and gas assets in the US.

We are a member of ENTSO-E and ENTSO-G and are actively engaged in the work to implement the internal energy market.

National Grid has established a Brussels office and is a signatory of the EU Transparency register (identification number 56039866688-26).

Responses to Questions

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*

The assessment of the importance of LNG in providing diversity, especially where current sources are restricted to one or two suppliers, is sound. The GB market is fortunate in having a diverse range of supplies but has seen lower levels of indigenous traditional gas production over recent years. There will be a requirement for imported gas but it is very hard to say what proportion of this will be provided by LNG or by pipeline imports.

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?

We have not carried out any analysis like this.

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*

The GB market has a diverse range of supplies. The market functions well and choices between import options can be made on economic grounds. It is not obvious that any further regulation is needed.

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?*

In a well-functioning market low utilisation is indicative of competition between sources. The market price has not been high enough in recent years to attract LNG cargoes away from other markets, principally in East Asia. The requirement for imported gas is expected to rise significantly over the next 20 years although it is not clear what proportion of these imports would be in the form of LNG or pipeline gas.

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 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 National Grid's Gone Green scenario all UK environmental targets are met. Using a cost optimisation model gas is still part of the energy mix in Gone Green in 2050, though only at around 40% of the 2014 level.

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.

We are not aware of any particular regulatory barriers to the use of and access to LNG in the GB market.

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?*

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?*

Q7 and Q8 answered together: In well-functioning markets like GB, LNG can compete with other sources of gas. However, it is possible that future EU security of supply could be enhanced through ensuring consistent but flexible standards for gas imports/exports (for example, where there may currently be ballasting requirements for LNG and/or interconnector flows).

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?*

Commercial intelligence suggests that the LNG market will be well supplied for at least the next five years, with anticipated future supplies increasing from the US, Australia and other emerging markets outside the EU. This should result in lower prices, allowing LNG to compete effectively with other sources of gas.

We have no direct knowledge of LNG contracts beyond what is available in the specialist press. We understand that some LNG exports from the US may be linked to Henry Hub prices rather than oil.

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?*

We consider that the international LNG market functions reasonably well. LNG switches freely between the markets of North West Europe and East Asia depending on the price.

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?

National Grid's Future Energy Scenarios include predictions for gas powered vehicles, particularly in the commercial fleet. Some of these will be powered by LNG. In the most optimistic scenario transport make up 4% of GB gas demand. We also expect the development of marine transportation and fuelling to continue. Both markets are likely to require increasing stable and constant supplies over time.

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.*

We have not performed any analysis on the sustainability of LNG

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?*

We believe that gas storage can play a useful role in supporting security of supply and providing flexibility in the operation of the gas network. The GB market is very well supplied with a diverse range of sources, with a large surplus of supply capacity over demand. With so much capacity available it appears that the economic conditions for storage, particularly development of new seasonal storage, are challenging. For example, National Grid has reluctantly taken the decision to close its last remaining LNG storage site operations in the UK at Avonmouth, Bristol, in 2016 following stakeholder consultation. There may be a case for operators to develop storage to support their operations, for example to make best use of shale gas, which is expected to be produced at a constant rate throughout the year.

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)?*

We consider that markets can provide suitable incentives to maintain security of supply in normal market conditions, but we are not convinced that market arrangements will secure supplies in extreme market conditions or provide signals for longer term investment. Therefore, we would like to see measures implemented that provide clarity on how the industry plans to meet their short, medium and long term security of supply requirements

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

The GB market rules require a quantity of gas known as Operating Margins which covers short term supply problems and, in the extreme case, the safe and orderly run-down of the system. Operating Margins is provided by commercial tender rather than being a mandatory reserve.

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?*

We have not carried out any analysis on an optimal level of storage.

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

In this regards, we do not think that further EU action would be of any benefit to the GB market

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?*

We have not carried out any analysis on stranded storage assets. In some of our Future Energy Scenarios we are expecting gas demand to decline but still expecting a diverse range of supply sources. Under these circumstances conditions for seasonal storage may be challenging.

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?*

Q19-21 answered together: We would expect that the review of the Gas Security of Supply Regulation would seek to ensure that there are no barriers to prevent stored gas in one member state being accessed by market participants in another member state.

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.*

Not applicable.

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.*

Not applicable.