SHV Energy

Small-Scale LNG, Large Scale Benefits

SHV Energy response to the European Commission "Consultation on an EU strategy for liquefied natural gas and gas storage"

23 September 2015

SHV Energy welcomes the Commission's initiative to produce an EU Strategy to "explore the full potential of LNG" and especially to "look into the necessary transport infrastructure linking LNG access points with the internal market".

SHV Energy fully acknowledges the benefits of LNG for security of gas supply in Europe and would like to call on the Strategy to acknowledge the potential for development of **small-scale LNG**.

Responding to the public consultation, SHV would like to highlight the following:

- **Small-scale LNG opens new markets and applications for LNG across Europe:** Small-scale LNG enables natural gas to be used by businesses, transport providers and, through microgrids, to be brought to areas without access to the main gas grid. The gas itself is delivered in liquid form via road, rail or inland waterway to bulk storage tanks sited on or near to the customers' premises. LNG is then converted to 'normal' natural gas via vaporizers.

- **Development of small-scale LNG will bring large benefits:** The small-scale LNG market has great potential for development, mainly in light of the environmental benefits of LNG versus more polluting fuels used in off-grid areas. This is particularly true for industrial installations and for LNG use in heavy-duty vehicles. Converting to LNG, industrial sites can reduce dramatically their CO_2 and air pollutant emissions. Customers who choose small-scale LNG can enjoy all the benefits of highly efficient natural gas appliances even if they are located hundreds of kilometres away from the gas grid.

SHV Energy operates in the small-scale LNG market supplying customers in France, Belgium, the Netherlands, Germany, Poland, UK, Spain and Italy.

Please find below SHV Energy's contribution to the Public Consultation on LNG.

LNG IN THE EU TODAY

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 (CEE), 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

Answer:

SHV Energy agrees that all Member States and especially the most vulnerable countries should benefit from the environmental and security potential of LNG. Developing additional markets in Europe, including developing new LNG ports is therefore crucial. The LNG option strengthens the negotiating position of European gas buyers vis-à-vis pipeline exporters, while at the same time acting as a trigger for market creation and price reduction. Unfortunately, the overall downward trend for LNG imports in Europe has given critics ammunition to highlight its vulnerabilities. To address this issue, a concerted effort and unreserved commitment to LNG are needed on the part of the EU, its Member States and terminal operators, especially in countries such as Poland, where the impact of the first Eastern European LNG terminal will largely depend on the transition of the domestic gas market.

While the EU is currently looking into extending the transportation routes as well as developing new terminals, an equal importance should be given to **creating an internal market for LNG applications** across Europe. SHV Energy would like to stress the potential for development of small-scale LNG, which allows businesses located off the natural gas grid to utilize LNG in industrial processes for energy and heat processes. It can also be used as a fuel alternative to diesel or heavy fuel oil in truck and maritime markets. Customers who choose small-scale LNG can enjoy all the benefits of highly efficient natural gas appliances even if they are located hundreds of kilometers away from the natural gas grid.

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?

Answer :

SHV Energy would like to stress the potential for development of small-scale LNG in Europe. Alternatively to the distribution of LNG through gas pipelines, small-scale LNG can represent a truly cost-efficient option. In fact, it would enable natural gas to be used by businesses, transport providers and through microgrids, it could be brought to areas where pipeline investments would be too costly or difficult to realise.

SHV Energy believes new investments, for example building of additional jetties of truck-loading stations, are needed to allow LNG terminals to develop into hubs for small-scale LNG and to take LNG downstream. LNG truck loading services have become widely available at LNG terminals (e.g. since 2010 they are present in Zeebrugge, with a capacity of 4,000 loadings per year) and the number of truck loadings has vastly increased (in Zeebrugge, from 65 in 2011 to 1,847 in 2014).

We would also like to underline that higher purchase cost for CNG/LNG trucks and buses are compensated by return of investment due to a favorable or more stable fuel price, if the proper, steadily favorable fiscal policy is kept in place (Benelux: 15 ct/lit cheaper than diesel).

Furthermore, developing small-scale LNG services would offer a greater flexibility in supply options for the local market close to the terminal area, resulting in greater competition and better economics for the end users.

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

Answer :

SHV Energy believes the use of LNG can be further improved by the development of small-scale LNG for industrial applications and as a fuel in the heavy transport sector. The small-scale market has potential in these sectors, particularly in light of the environmental benefits of LNG versus more polluting fuels used in off-grid areas (fuel oil in particular). Therefore, just like the EU has been supporting projects for the roll-out of LNG in transport (LNG Blue Corridors project, TEN-T projects, etc.), SHV Energy calls on the European Commission to **support the growth of small-scale LNG through any pilot projects aiming to encourage the development of LNG supply to off-grid industrial sites**.

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?

Answer :

To reduce the risk of stranded assets, SHV Energy believes all technologies and sustainable options should be considered. Small-scale LNG represents a way to increase the sustainability of the transport and heating sector, as it would encourage the switch from heating or heavy oil to gas, resulting in reduction in CO2 combustion of over 30%. The low LNG use rates are linked to the stable, low cost of pipeline supplies and high market prices for LNG in Asia over the last few years. The demand peak in Asia is now declining and, with the advent of shale gas and LNG exports for US, there should be greater arbitrage in the LNG market going forward. This should increase the utilization rates of EU terminals in the coming years. Having the infrastructure available to use LNG for both grid insertion and small scale applications allows greater options for customers to switch to LNG and build a baseline LNG requirement going forward.

POTENTIAL ENTRY BARRIERS FOR LNG

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.

Answer:

SHV Energy believes two main barriers need to be overcome to boost the development of small-scale LNG: the availability of the infrastructure and the legal framework.

<u>Infrastructure:</u>

The current value chain of LNG is built up to deliver full sized LNG carrier cargoes, about 150.000 m^3, to

receiving terminals for re-gasification and distribution through gas pipelines. In general, the infrastructure for small scale LNG is not developed enough to supply ships, trucks and buses with the quantity they require. At the geographical locations they need to have a secure and efficient supply.

Terminals need support to develop greater infrastructure to allow the movement of LNG as a product rather than solely acting as re-gasifiers. In this context, existing related infrastructures (i.e. LNG plants, gas pipelines) should be integrated, as much as possible, into the supply chain of alternative fuels (natural gas) in order to avoid unnecessary investments which would be reflected on the final price assumed by customers. Although investments in small-scale services have been growing at European terminals, the **LNG value chain needs innovation and further investment in order to be able to increase small scale LNG volumes.**

Legal framework:

Favorable fuel taxation and customer awareness would both be crucial for broader market acceptance. CNG and LNG are sold in kg therefore the related cost advantage of natural gas vs. liquid fuels is not transparent due to a wrong labeling.

In general, LNG has not been handled in small quantities in populated areas and near the general public. Consequently, there has been no need to develop legislation that governs this type of operation. In most countries, this means that project specific risk analysis, operational procedures, etc. need to be developed. This is an extra burden on a project, and may often be time consuming, especially because most authorities will have quite a steep learning curve to climb before they can make sound judgments on the matter. Having an EU-wide or a national position on LNG relating to risk assessments and separation distances would allow simpler and quicker customer conversions.

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:**

In order to optimize the use of LNG, one of the most critical financial barriers is the relatively high capital installation costs of switching to small-scale LNG from solid/oil fuel. **Customer focused incentives should hence be considered to offset the capital installation costs**. In addition, territorial barriers have been encountered. In terms of rules for road haulage of products, a better harmonization of regulation across borders should be looked into. The transportation of LNG by road should be covered by pan-European regulations to enable safe and easy cross-border deliveries.

An example on this could be the weight limit on European roads. Whilst it is permissible to drive vehicles with a total gross weight of 44mT in France, Belgium and Italy, it is only possible to cross the border with France with a maximum weight of 40mT. As a result, moving LNG from the terminal in Belgium to France or from the terminal in France (Fos sur mer) to Italy is sub optimal.

LNG TECHNOLOGY ISSUES INCLUDING LNG USE IN TRANSPORT

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:**

SHV Energy believes that there is a need for additional EU action. In particular, **consistent, simplified and efficient regulatory regimes should be in place to both ensure excellent safety standards and a rapid installation process for the benefit of customers.**

Concerning the use of LNG as a fuel for transport, SHV Energy believes that developing standards for refueling equipment, pressures and engines would allow a simpler, more cost effective entry for LNG as a fuel. Additionally, having type approval for engines across the EU, rather than country specific regulations, can also assist in bringing more vehicles to market.

SHV Energy also believes that favorable fuel taxation would be essential and customer awareness crucial for broader market acceptance.

LNG SUSTAINABILITY ISSUES

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.

- **Answer:**

Based on the current low oil prices, it is difficult to give a cost benefit position related solely to the switch of energy source. For information, see the attached information paper produced by Atlantic Consulting which covers the CO_2 benefits of the switch.

A switch to LNG technology can enable gas to replace more polluting fuels, either in certain forms of transport or I heat and power generation especially in isolated areas.

About SHV Energy

SHV Energy is a family-owned multinational organisation that consists of a group of specialised energy companies. These companies provide people and businesses with decentralised personalised energy solutions and services. Their customers often live or work in areas beyond the natural gas grid and rely on our companies for their most important energy sources.

Today, SHV Energy is servicing the needs of over 30 million customers over three continents that use our energy for hundreds of applications.

Prima LNG is the LNG distribution company within SHV Energy. It currently supplies customers in France, Belgium, Netherlands, Germany, Poland and Italy from terminals in Northwestern Europe (i.e. Fluxys terminal in Zeebrugge, Belgium and GATE terminal in Rotterdam, NL)

For further information on SHV Energy and LPG please visit http://www.shvenergy.com/.