



GROUPE INTERNATIONAL DES IMPORTATEURS DE GAZ NATUREL LIQUEFIE

8 rue de l'Hôtel de Ville - 92200 Neuilly-sur-Seine Tel : 33 (0) 1 56 65 51 60 E-mail : central-office@giignl.org

Neuilly-sur-Seine, July 7, 2015

**Mr. Brian CHUNG**  
**U.S. Government Accountability Office**  
Seattle Field Office | Physical Infrastructure Issues  
701 Fifth Avenue, Suite 2700  
Seattle, Washington 98104  
U.S.A.

**RE: U.S. Government Accountability Office (GAO) study on Liquefied Natural Gas Vessels - Questions for the International Group of Liquefied Natural Gas Importers (GIIGNL)**

Dear Mr. Chung,

On June 1, 2015, the U.S Government Accountability Office asked GIIGNL for specific feedback on LNG carriers and shipping. We are pleased to provide responses below for your consideration.

**Questions:**

**1. Please describe GIIGNL's role in LNG shipping.**

GIIGNL (International Group of LNG Importers) is the worldwide association of LNG importers. It is a non profit organization and its resources only come from the membership fees.

Founded in 1971, at the outset of the LNG industry, its membership has grown to 75 companies worldwide, comprising nearly all companies active in LNG imports or in the operation of LNG terminals. GIIGNL members are coming from 25 countries located in the main three regions: Americas, 9 members, Asia, 35, Europe, 31.

The association constitutes a forum for exchange of experience among its members, with a view to enhance safety, reliability and efficiency of LNG import activities, including shipping.



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A large number of GIIGNL members either own or charter LNG tankers in order to import LNG.

GIIGNL has developed master agreements for the sale and purchase of LNG. The association has also drafted a Voyage Charter Agreement for LNG ships in order to accompany the development of short-term and spot LNG trading.

Every year, GIIGNL conducts a wide survey amongst its members and publishes a statistical report entitled "The LNG Industry". (see attached appendix: *The LNG Industry in 2014, GIIGNL, April 2015*)

GIIGNL collects data on LNG deliveries from its members and publishes them in an aggregated form. GIIGNL does not elaborate any scenarios and does not publish any forecasts.

## **2. What is the current inventory of worldwide LNG vessels, including those on order?**

GIIGNL annually publishes the state of the tanker fleet, the number of existing ships, ships that were scrapped and newly delivered during the past year and the state of the order book at the time of publication as well as the distribution according to the containment system, the cargo capacity and the age of the ships (see pages 13 to 18 of "The LNG industry in 2014").

At the end of 2014, the total LNG tanker fleet consisted of 421 vessels, including 5 Floating Storage and Regasification Units (FSRUs), 15 Regasification Vessels and 24 ships of less than 50,000 cubic meters.

The order book at the end of the year included 163 vessels (source: Clarkson Research 2015).

### **a. How does this compare with the forecasted need for LNG vessels?**

GIIGNL does not produce any forecasts and therefore is not in a position to answer this question.

## **3. What type and size of LNG carriers are currently being built for global LNG trade?**

In 2014, the average capacity of new vessels delivered during the year reached about 161 000 m<sup>3</sup>.

For more information, please see data from the annual report "The LNG Industry in 2014" (page 14)

## **4. Has GIIGNL made any forecasts of U.S. LNG exports and the number of LNG carriers needed to serve this market?**

As mentioned above, GIIGNL does not produce any forecasts and is not in a position to answer this question.



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**a. If no, are there other forecasts that GIIGNL relies on?**

Shipping associations, special gas/LNG press or consultants can be consulted (SIGTTO, Clarkson Research, Poten, IHS, LNG Journal, ICIS Heren, Argus, Platts, TradeWinds,...)

**5. Please discuss how LNG shipping contracts are generally structured, including (if possible):**

**a. Rate structure**

**b. Length of contract**

**c. What are per-day LNG carrier rates, and how much have rates fluctuated recently?**

GIIGNL does not statutorily collect data on commercial matters including shipping contracts or charter rates; therefore we are not in a position to answer the above question.

Generally speaking, shipping contracts are evolving according to the new ways in which LNG flows are moving... LNG flows are no longer based solely on long term agreements, and players (producers as well as sellers / traders) are evolving towards a greater flexibility of voyages and contracts.

**6. What are LNG shipping costs as a percentage of total purchase prices to buyers?**

Shipping costs largely depend on charter rates which could be highly volatile ... In the range of 25 to 30 000 USD/d today compared to more than 150 000 USD/d at the end of 2011 – beginning of 2012 (following the Fukushima incident). The share of shipping costs as a percentage of total purchase prices may vary according to a wide variety of factors including: the level of oil prices, of gas and LNG prices, availability of uncommitted LNG tankers, level of charter rates, voyage distances, ship capacity and age, type of propulsion, amount of boil-off gas, transit fees associated to the canals...etc.

**a. How does this vary between various markets?**

(Please see above.)

**b. To what extent do shipping costs make U.S. LNG more or less competitive than LNG from other countries?**

LNG competitiveness can only be assessed case by case, depending on the value of gas on the import market. In this context, U.S. LNG may be competitive for one market environment and not for another.



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**7. Some members of the U.S. Congress have proposed a requirement that U.S. export of LNG be on U.S. flagged and built vessels. If such legislation were passed, what affects could that have on LNG carrier owners/operators, if any?**

From the standpoint of LNG buyers, we have serious concerns that there are lots of LNG buyers who have already ordered new LNG vessels dedicated to the U.S LNG Projects and fixed operators for them. Therefore, if new regulations are introduced, those may have considerable effects on the LNG buyers and related companies from US LNG projects.

In addition, the requirement that U.S exports of LNG be on U.S flagged and built vessels is likely to set a precedent that will possibly be followed by other countries, including existing LNG shipbuilding nations such as Japan, South Korea and China, as well as prospective LNG shipbuilding nations such as Russia.

**a. Would you expect the cost of building LNG carriers in the U.S. to be higher than building elsewhere? If so, to what extent?**

This additional cost is unknown, because the U.S. has not built an LNG vessel in recent history. However, based upon experience with other vessels, construction in the United States is likely to be significantly more expensive than in an overseas yard. There are currently no U.S. yards that have the ability to build LNG vessels, which require specialized construction techniques and there would be a lead-time in to develop this capability.

Considering that at least two LNG vessels per million tonnes per annum (mtpa) of LNG exported will be required and over 50 mtpa of production capacity is already under construction in the U.S. some 100 LNG vessels are already required for the forthcoming exports. It will take the U.S. some time to develop the capacity to build this quantity of vessels. Most of the vessels associated with these volumes have in any case already been ordered or are under construction given the lead time associated with LNG vessel ordering and construction.

Generally speaking, given the fact that no LNG carrier has been built in the U.S shipyards for a long time, U.S capability to build LNG carriers might be questionable regardless of the cost competitiveness.

**b. Would you expect operating costs of a U.S.-flagged vessel to exceed costs for ships flagged elsewhere? If so, to what extent?**

The requirement to use U.S.-flag vessels built in the United States and crewed by U.S. seafarers would significantly increase costs for LNG carrier owners/operators of such vessels. According to the U.S. Maritime Administration, the cost of operating a U.S.-flag vessel in the international trade is approximately \$5 million more per year than the cost of operating an open-registry vessel, not counting the increased capital costs that are to be expected in conjunction with a U.S.-build requirement. That is before the impacts of the restrictions on fleet optimization are taken into account (please see below).



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## **8. What overall effect would such a requirement have on U.S. exports of LNG?**

If a requirement that U.S. export of LNG be on U.S. flagged and built vessels causes the shipping cost for U.S. LNG to exceed the cost otherwise attainable on non-U.S. flagged and built vessels, the affect would be that U.S. LNG would be less competitive as a result of the legislation, which would also be counterproductive and jeopardize the framework of open market access and free trade principles in shipping that have prevailed over the last decades.

Buyers, who prefer to operate their shipping fleets on an integrated and optimized basis, would see this requirement as increasing their costs and reducing their trade flexibility. Imposing higher costs on the transportation of U.S.-sourced LNG will likely have an adverse impact upon the price competitiveness of exported U.S.-source LNG, at a time when competition to export volumes is increasing, with Canada, East Africa and Russia all competing to develop large-scale LNG exports and at a time when the buyers are seeking greater flexibility of supply and are becoming increasingly cost conscious.

As a result, if such requirements are not practicable, or cause the loss of price competitiveness of U.S. LNG or give rise to concern over safe and stable transportation, it might jeopardize U.S. LNG exports.

## **9. What factors would shipping companies consider when determining whether or not to purchase US-built vessels if this proposal is implemented? Would that determination be different for US-flagged vessels (re-flagging existing vessels)? How?**

The question is unclear. Carriers typically consider price of construction and reliability/quality of the vessel when making vessel purchase decisions.

It should also be considered that as the LNG trade becomes increasingly global, flexible and liquid (a trend to which the U.S. exports are considered to be likely to contribute significantly) any constraints on the flexibility of trade (such as which ships can be used to lift cargoes from the U.S.) are likely to both inhibit the development of liquidity in the industry and reduce the attractiveness of those volumes to buyers who are currently pushing for greater flexibility and liquidity of trade.

GIIGNL estimates that about 30% of the LNG trade is currently conducted using short-term contracts of 4 years or less. This component of trade has been trending upwards over the past-decade as the industry evolves to a more flexible, global trade – an evolution that benefits LNG and gas buyers worldwide as they seek supplies that are more flexible and responsive to their market requirements. The proposed constraints, effectively a constraint on free-trade, would be a step backwards in this regard from the perspective of the buyers.

Many of the buyers operate their business on a portfolio basis, with multiple supplies and a single shipping fleet. They have bought the U.S. volumes on the expectation that these



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can be integrated homogenously into their current business based on the export licenses issued by the DOE and FERC. Subsequent introduction of additional constraints on these licenses would increase perceptions that US exports have a greater regulatory risk associated with them than other locations.

**10. Would companies that charter or purchase LNG carriers differently value (i.e. pay a premium for) U.S. flagged vessels? Or a U.S. built vessels? Why or why not?**

In general terms, LNG importers will not see any special value to the U.S flagged or U.S built vessels. A shipper of LNG would not likely pay a premium for a U.S.-flag vessel because ocean transportation is generally viewed as a commodity, and there is nothing inherently better or worse about U.S.-flag tonnage in the eyes of the typical LNG shipper. U.S. yards would not initially have the build track-record of Korean and Japanese yards for these vessels and might be considered more of a risk in terms of quality of build.

**11. Have any of your members explored the possibility of procuring US-built LNG vessels for Jones act trade? How, if at all, would this market differ from the global LNG trade?**

GIIGNL refrains from exchanging information on any specific company's procurement plans unless such information is publicly available. Therefore, GIIGNL is not in a position to answer this question.

That being said, the Jones Act is different from the global trade in many ways. The Jones Act is the domestic commerce of the United States, and is therefore subject to U.S. laws including taxes, health and safety, employment, and labor laws. Additionally, Jones Act vessels must be U.S.-built and U.S.-crewed. Vessels in the global LNG trade are subject to flag and port state regimes, and generally operate with significantly lower cost as outlined above.

**12. The Indian government has imposed similar LNG carrier requirements for some LNG traded with India. What have been the affects of their requirement?**

GIIGNL does not have specific data on this point. However, Indian seafarers are commonplace on open registry vessels, and the cost differential between U.S. and Indian flag regimes should be expected to be substantial, with Indian costs being much closer to those found under open registries.

It appears from press reports that the Indian Government is struggling to implement its proposal:

**Newswire 15 Feb 2015**

*State-owned Gail India Ltd has scrapped a tender that would have led to the construction of three massive liquefied natural gas (LNG) carriers at Indian shipyards, in a setback for the government's Make India initiative that seeks to encourage domestic manufacturing.*



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*The tender, floated in 1 August 2014, was aimed at hiring nine LNG carriers, with a caveat that three of them be made in India. However, there were no takers for the tender, since local yards inexperienced in building such ships failed to get expert LNG shipbuilders to share technology for the same.*

*Gail needs the carriers for a period of 20 years starting 2017, for transporting LNG from US to India. The gas transporter had given time until 17 February for bidders to put in their techno-commercial quotations.*

*"We decided not to extend the tender as there was no interest from bidders even after four extensions of time. Indian ship yards are yet to have technology tie-ups in place to build the ships locally. There was no point in going on extending the tender when there was no response. As a result, the tender has lapsed," an official at Gail said.*

More recent reports suggest:

*GAIL is all set to retender for the construction of three Liquefied Natural Gas carriers by July, relaxing earlier conditions.*

In conclusion, GIIGNL believes that flag or build restrictions on LNG vessels able to lift U.S volumes would reduce the competitiveness of U.S LNG exports through:

- An increase in the fundamental cost of transporting U.S volumes due to higher ship and crewing costs,
- An increase in the cost of volumes which are unable to be optimized within current buyer fleets and purchase portfolios,
- An increase in the perceived regulatory risk associated with the U.S "changing the rules" of the current export licenses,
- A reduction in the flexibility of U.S volumes to trade freely within the global market place.

We hope that the comments provided to your specific queries are useful and we would be happy to elaborate further if you have any additional questions.

Yours sincerely,

Domenico Dispenza – President of GIIGNL