

Lisbon, 27 June 2012

**Subject: Report from meeting with ad hoc experts in relation to LNG June 5-6, 2012 at EMSA in Lisbon**

## **1. Introduction**

It was decided on the first meeting of the groups on 17 April that EMSA should invite for a second expert meeting with the objective of continuing the constructive dialogue in relation to reinforcing the potential of LNG as bunker fuel. At the first meeting a number of potential barriers were highlighted. Of those, the issues of regulatory framework as well as the problem of availability were discussed in more detail during this meeting.

EMSA invited for a two days meeting on June 5-6 with ship-owners and ports out of which some parts were held separately and some as a joint meeting between the two sectors.

With the objective of creating further synergies a joint lunch was arranged with representative of ports, ship-owners as well as representatives from the gas suppliers.

The agenda is enclosed to this report.

## **2. Meeting with ports**

A number of ports were present at this second meeting, representing geographically different parts of Europe from Stockholm in the North to Marseille in the South. The main aim of this separate session for ports was to discuss the developments in relation to a regulatory framework for LNG bunkering. Under this part a number of presentations were made. First Magda Kopczynska, HoU DG MOVE, updated on the outcome of the political agreement on the revision of the Sulphur Directive (Dir. 1999/32/EC) that was concluded by the Council and the European Parliament on May 23. Torsten Klimke, DG MOVE, continued to further explain the content of this agreement but he did also present the outcome of the first meeting of the groups held in Brussels on April 17, *presentation enclosed*. The main outcome of that meeting was:

- Plans of some ferry operators very advanced; drivers are SECAs, but also general economic considerations.
- Some ports take concrete steps to provide LNG.
- Retrofitting LNG seems possible.
- Lack of spot market/availability of LNG issue for ship-owners.
- There are no harmonised definitions for "bunkering operations".
- Need to develop requirements for training.
- Bunkering should be possible while passengers on-board / cargo.

- Land-side approval processes long/not harmonised; esp. need for harmonised approach on risk assessment.

We got updates from the Port of Marseille, a Mediterranean port who is aiming to provide LNG at its port. This is most welcomed since the driving force there is the LNG environmental benefits of LNG on the local environment rather than the new SECA requirements.

EMSA presented its work since the previous meeting with regard to the development of possible common EU-wide guidelines for LNG bunkering. EMSA has published a tender for a study on standards and rules for bunkering of gas fuelled ships with the goal of having a proposed possible guideline by the end of 2012<sup>1</sup>. In the work thorough consultations is envisaged to be held in November. It was highlighted that the outcome is for the Commission, Member States, ports, ship-owners and other stakeholders to consider. A more detailed description of the project can be found in the *presentation enclosed*.

EMSA got some valuable feedback from the ports on standards to be included in this study such as SIGGTO guidance. In general the ports were positive to this work and some participants expressed appreciation that the work is done by a neutral body such as EMSA. The need for good coordination with present on-going projects such as the IAPH WG on LNG was emphasised. This project was presented by its coordinator Tessa Major from the Port of Antwerp. She pointed out that a standardised approach towards LNG as fuel for shipping between ports is one of the crucial factors for the success of LNG. This can be best achieved by working together at an early stage. The project is under the umbrella of the International Association of Ports and Harbours (IAPH) and its World Ports Climate Initiative and has a global participation. The project is focused on a few topics such as development of a standardised LNG-bunker checklist for ports, guidance towards a potential accreditation system for bunker suppliers and assessment of the risk perimeters. As a first step it is planned to have some standards ready by the end of the year and the rest for mid-end of 2013. The second part of the work will focus on risk analyses and potentially needed mitigation measures. The work is open for all -not just members of IAPH and not just for ports. IAPH is open to try to share, as much as possible, information with EMSA but also with other interested projects.

ISO has for some time had a working group dedicated to develop standardisation of LNG bunkering (ISO TC 67/WG 10). This work was presented by its chairman Erik Skramstad from DNV. The group has wide participants with 30-35 participants from different sectors – however no ports. The presentation was most welcomed since this was the first time many participants got some first-hand presentation on the work of ISO. The group has the ambition to have some preliminary results out by the end of the year/or early next year. The first focus will be to have guidance on philosophy, processed and functional requirement for the bunkering system for ships as well as the supplier. In the next step they will focus on more specific requirement and standards for key components such as manifold etc.

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<sup>1</sup> [www.emsa.europa.eu/tender-archives/current/112-archived-calls-for-tenders/1459-emsaop062012.html](http://www.emsa.europa.eu/tender-archives/current/112-archived-calls-for-tenders/1459-emsaop062012.html)

In principle the standards will have a two-step approach; for the simple and standardised bunkering systems a prescriptive approach could be used whilst a risk based approach will be used for the more individual and complex bunkering systems.

The importance of coordination between all projects emphasized and the atmosphere was generally positive towards as much transparency as possible to avoid duplication of work.

Another issue that was discussed at some length was the issue of the quality of LNG. This will to some extent be covered by this ISO standard. This is important to know for the ship-owner but not necessarily important from a safety perspective so far problems have not been reported. Furthermore the need of requiring incidents in bunkering of LNG to be reported was highlighted.

### **3. Meeting with ship-owners**

A number of ship-owners and organisations (ECSA, European Cruise Council, INTERFERRY, VDR, RBSA) were represented but representation from some ship segment were lacking. The main aim of this separate session for ship-owners was to discuss the developments in relation to a regulatory framework for LNG bunkering.

The ship-owners had the same updates from the Commission and EMSA as the ports the first day. First Magda Kopczynska, HoU DG MOVE, updated the meeting on the outcome of the political agreement on the revision of the Sulphur Directive (Dir. 1999/32/EC) that was concluded by the Council and the European Parliament on May 23. Torsten Klimke, DG MOVE, continued to further explain the content of this agreement but he did also present the outcome of the first meeting of the groups held in Brussels on April 17, *presentation enclosed*.

EMSA presented their work since the last meeting with regard to development of possible common EU-wide guidelines for LNG bunkering. EMSA has published a tender for a study on standards and rules for bunkering of gas fuelled ships with the goal of having proposed possible guidelines by the end of 2012<sup>2</sup>. In the work thorough consultations is envisaged to be held in November. It was highlighted that the outcome is for the Commission, Member States, ports, ship-owners and other stakeholders to consider. A more detailed description of the project can be found in the presentation enclosed.

The discussion focused on the need to coordinate all players in the approval chain of a bunkering system i.e. also the Member States. A suggestion was made to involve them earlier in this process, an opinion that was shared by the wider group.

ISO has for some time created a working group dedicated to develop standardisation of LNG bunkering (ISO TC 67/WG 10) and this work was once more presented by its chairman Erik Skramstad from DNV. The group has wide participants with 30-35 participants from different sectors. The presentation was

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most welcomed since this was the first time many participants got some first-hand presentation on the work of ISO. The group has the ambition to have some preliminary results out by the end of the year/or early next year. The first focus will be to have guidance on philosophy, processes and functional requirements for the bunkering system for ships as well as the supplier. In the next step they will focus on more specific requirements and also standards for components.

The issue of safety was discussed at some length. For the "early adapters" this does not seem to be an issue. They have had their systems approved according to individual risk analysis methods of the bunkering system as a whole. To some extent the individual ship-owner will have to rely on the rules coming out of IMO, ISO or individual Member States.

The benefits of having generic risk analyses made on a central level was discussed, some agreed that this could be useful even if each ship will have to have its own specific risk analysis made. References were made to a document sent to the BLG-subcommittee of IMO by Japan including hazard identification of liquefied natural gas-fuelled ships (BLG 16/INF.3). Japan conducted hazard identification (HAZID) for ROPAX and Containerships of trial designs of liquefied natural gas-fuelled ships to scrutinize the provisions in the draft International Code on Safety for Gas Fuelled Ships (IGF Code).

References were also made to land-side road fuel installation where standards for European, American and Japanese standards are in place and that these standards could be joined with the ISO standards being developed for LNG bunkering. The chairman of the ISO TC 67/WG 10 confirmed that coordination within ISO will be taken care of.

Once more the issue of what regulation a bunkering system with LNG onboard in trailers/containers would fall under. It seems to be unclear. In the proposed draft IGF-Code it is stated

#### **4. Joint session to discuss availability of LNG with gas-industry**

The purpose of this part of the meeting was to have an open and informal discussion with all parties involved in the infrastructure chain ports, ship-owners and gas supplier. Gasunie, Gasnor and DONG ENERGY representing different parts of the supply chain all made presentations on the topic of potential and barriers from their perspective. The presentations noted, among other things that:

- The gas industry are willing to get into the market, if not already there, of supplying/selling gas to ships. They were all more or less willing to find individual solutions for different customers. This seems to be the case even for the large scale buyers who said they are willing to be small scale sellers. The small scale seller is already selling under the idea of "take and pay" where they provide for everything until the LNG is delivered to the ship.
- They all presented the way a normal gas market works with larger quantities and long contracts.
- Currently not much gas is being imported to Europe due to the competition with Asia who currently imports a very large part of the available gas. There is also a competition for LNG with other user markets such as land based. The slots seem to be to some extent limited and at a high price.

- One company mentioned a potential legal barrier to be that currently under EU law gas cannot be stored in available tanks for more than a short period (regulation on unbundling of infrastructure and market). If these tanks could also be used as storage tanks it could decrease the price for the small scale infrastructure side in a quick and cost-effective manner.

- Europe could attract LNG if the prices are competitive with other parts of the world (today most gas is sold to Asia). For this to be the case, one participants mentioned that tax incentives might be needed to attract LNG at competitive prices in this part of the world or at least that taxation should correctly reflect the environmental impact.

- One gas supplier reflected on the need for new business models included pricing mechanism, contracts durations, and volume off-take for shipping.

- The gas suppliers confirmed that they are considering other alternative fuels such as bio-LNG.

The ship-owners showed lot of interest in the presentations made and at the end we believe that both sides had a better understanding of the condition the sectors are working under. The ship-owners need to buy smaller quantities on shorter contracts than are, mostly, offered today. One way out of this could be to find more than one potential customer in a port. Here the ports could play an important role.

The commercial risks needs, especially in the early phase of introducing LNG as fuel, to be shared by all parties involved. This could be done by joint project by ports, ship-owners and gas supplier where each one tries to contribute to keep prices down. One example of some reduction of some ports dues were mentioned as a practical example. One gas supplier also presented some ideas on the topic of sharing risks. He was explaining that: Seller provides the gas and takes the volume risk whilst the buyer takes the price risk.

The issue of pricing of LNG was discussed. Should it be fixed or floating, connected to oil? It seems like the price is mostly likely to be connected to oil price. A wish to have it connected to more ordinary marine fuels such as MGO or HFO was expressed and the issue of option contracts and swapping contracts was presented. The representatives from the gas industry confirmed that they need to be flexible on these issues.

The issue of the quality of the gas was once more discussed. This could be a potential problem. At some LNG terminals LNG specification is provided at each filling but it is not a legal requirement but rather contractual. It was further mentioned that long-term storage of LNG could create a quality problem.

The Commission informed about the present opportunities to apply for EU funds through the TEN-T and Motorways of the sea calls and especially the call for 2011, just finalised, which specially addressed this issue. It did not seem like all parts were aware of this opportunity. Some representatives of ship-owners stated that the application process might be too difficult and that more information is needed. The Commission informed that the normal procedure is that the TEN-T Agency organising information meetings open for all when calls are published.

## 5. Outcome of the three meetings

The main outcome of the meetings could be summarised as follows:

The issue of availability of LNG was discussed thoroughly between ports, ship-owners and the gas-industry.

- It was evident from the discussion that the most common way of selling gas for the land side will not fit for the seaside with its long contract duration as well as minimum amounts. It was noted that new business models are needed.
- The gas-supplier seemed keen on getting into the market of supplying LNG as bunker to ships.
- Potential barriers for a functioning LNG market are that present storage tanks are not allowed to be used for purely storage purposes.
- It seems very valuable to find ways forward to share the risks for the first early pioneer projects between the port, gas-supplier and the ship-owners. A few example of how this could be done was mentioned.

The other main issues discussed were the way forward with regard to potential lack or irregularities with regard to guidance for bunkering of LNG.

- It is evident that a few major projects trying to identify and find solution on standards for LNG bunkering is undergoing and out of those a few were presented at the meeting (ISO 67/WG 10 and IAPH WG). The timing of these projects is planned to the end of this year and the beginning of the next. There is a common need to coordinate this on-going work not to duplicate each other works.
- EMSA presented its issued call for tenders for a study of common guidance for LN bunkering and got some valuable feedback on its work.
- To have a wide representation in the consultation of any potential common guidelines was addressed and especially mentioned was the need to have the Member States early included in this work.
- It was agreed that “small” groups do not need to meet more individually.

EMSA announced its plans for the future work and most probably the next meeting will be sometime in October or November. Before this time the option of consultation per correspondence might be used.

*Annex – Agenda of the meeting*

## Agenda

### Second expert meeting for ports in relation to the sustainable waterborne toolbox

European Maritime Safety Agency (EMSA)  
 Cais do Sodre'  
 1249-206 Lisbon, Portugal  
 Meeting room: Conference center

**June 5, 2012**

<b>09:00</b>	<b>Registration</b>	
09:15	<b>Welcome</b>	EMSA
09:25	<b>Outcome of the first expert meeting (17 April)</b>	DG MOVE
09:40	<b>Regulatory framework</b> <ul style="list-style-type: none"> <li>EMSA's on-going work</li> </ul>	Pia Berglund, Roel Hoenders, EMSA
10:00	<b>Discussion</b>	All
10:15	<b>Updates on the progress with the ISO TC 67/WG 10 on LNG Bunkering</b>	Erik Skramstad, DNV
<b>10:45</b>	<b>Coffee Break</b>	
11:15	<b>Regulatory framework (cont.) –</b> <ul style="list-style-type: none"> <li>Port related recommendations of the North European LNG Infrastructure Project</li> <li>Progress in WPCI LNG WG</li> </ul>	Pia Berglund, Roel Hoenders EMSA Tessa Major - WPCI LNG WG
11:45	<b>Summing up, common actions, next meeting, etc.</b>	All
<b>12:15</b>	<b>Joint lunch with ship-owners and gas industry</b>	
<b>13:30</b>	<b>Welcome/Up-date</b>	Theresa Crossley, EMSA, Representative DG MOVE
<b>13:45</b>	<b>Joint meeting with ship-owners - introduction</b>	Henrik Ringbom, EMSA

14:00	<b>The 'availability' problem</b>	Mark Esdaile, Shell Shipping Technology
14:30	<b>Gas supplier: potential and barriers</b>	Piet Kager, Gasunie
14:50	<b>Gas owner: potential and barriers</b>	Sreekanth Vemula- DONG Energy
15:10	<b>Small scale LNG: potential and barriers</b>	Leiv Arne Marhaug, Gasnor
<b>15:30</b>	<b><i>Coffee Break</i></b>	
16:00	<b>Panel discussion with gas-industry</b>	All
16:45	<b>Summing up, potential follow-up, next meeting, etc.</b>	All
<b>17:00</b>	<b><i>End of the meeting</i></b>	



## Agenda

### Second expert meeting for ship-owners in relation to the sustainable waterborne toolbox

European Maritime Safety Agency (EMSA)  
 Cais do Sodre'  
 1249-206 Lisbon, Portugal  
 Meeting room: Conference center

**June 5-6, 2012**

	<b>DAY 1 – June 5</b>	
<b>12:00</b>	<b>Registration</b>	
<b>12:15</b>	<b>Joint lunch with ports and gas industry</b>	
<b>13:30</b>	<b>Welcome/Up-date</b>	Theresa Crossley, EMSA, Representative, DG MOVE
13:45	<b>Joint meeting with ports - introduction</b>	Henrik Ringbom, EMSA
14:00	<b>The 'availability' problem</b>	Mark Esdaile, Shell Shipping Technology
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15:10	<b>Small scale LNG: potential and barriers</b>	Leiv Arne Marhaug, Gasnor
<b>15:30</b>	<b>Coffee Break</b>	
16:00	<b>Discussions on 'availability'</b>	All
16:45	<b>Summing up, potential follow-up, next meeting, etc.</b>	All
<b>17:00</b>	<b>End of joint session</b>	
<b>17:15</b>	<b>Updates on the progress with the ISO TC 67/WG 10 on LNG Bunkering</b>	Erik Skramstad, DNV
<b>18:00</b>	<b>End of Day 1</b>	

Meeting room: Room 2/76

	<b>DAY 2 – June 6</b>	
9:00	<b>Welcome</b>	EMSA
9.05	<b>Outcome of the first meeting (17 April 2012)</b>	DG MOVE
9.15	<b>Regulatory framework</b> <ul style="list-style-type: none"> <li>• EMSA's on-going work</li> </ul>	Pia Berglund, Roel Hoenders, EMSA
9.45	<b>Discussion</b>	All
<b>10:15</b>	<b>Coffee Break</b>	
10:45	<b>Regulatory framework (cont.)</b> <ul style="list-style-type: none"> <li>• Ship related recommendations of the North European LNG Infrastructure project</li> <li>• Bunkering definition</li> <li>• Other items</li> </ul>	Pia Berglund, Roel Hoenders, EMSA
11.45	<b>Summing up, common actions, next meeting, etc.</b>	All
<b>12:00</b>	<b>End of meeting</b>	