

Subject: Report from third ad-hoc LNG as shipping fuel expert meeting, Brussels, 4 December 2012

1. Introduction

Building on the results of the two previous LNG expert group meetings, this third expert group meeting had as main objective a discussion with stakeholders regarding the preliminary results of the EMSA procured study (carried out by Germanischer Lloyd) on 'standards and rules for bunkering gas fuelled ships'.

The study provides an inventory of the existing standards/regulations/guidelines/technical reports, as well as the on-going regulatory initiatives at international level (i.e. ISO, IMO, SIGTTO etc) applicable to marine LNG bunkering. It identifies the gaps within the existent regulatory framework, as well as those that are not addressed by the on-going international regulatory developments. Based on these findings, the study recommends possible action at EU level in order to address some of these regulatory gaps.

DG MOVE (Mrs. Magda Kopczynska) welcomed all participants and provided a short overview of the status of the implementation of the different measures identified in the Sustainable Waterborne Transport Toolbox. Participants were also reminded that since the last expert group meeting the revised Sulphur Directive had been adopted ([Directive 2012/33/EU](#) of 21 November 2012) and that it would enter into force in December 2012. In order to develop adequate EU framework conditions (rules, standards, guidelines) for marine LNG bunkering, compatible with international standards, by 2015, the Commission would further facilitate the dialogue and among other issues would consider addressing the gaps identified by the study (where and if needed). This work should start by getting a better view on what exactly is being addressed by the numerous on-going standard making initiatives. To this end, the GL study provides a good basis for discussions and further action.

EMSA reminded the participants that its mandate to look into the regulatory framework related to LNG bunkering, including a gap-analysis, follows from the Sustainable Waterborne Transport Toolbox, from some of the recommendations of the DMA study on LNG infrastructure and the outcome of the two previous LNG expert group meetings.

As part of the contract implementation, Germanischer Lloyd was requested to consult the relevant stakeholders both in writing and during a meeting. The third LNG expert group was identified as most appropriate group to do so. In order to reach out to a wide audience of stakeholders, the invitation for this third expert group was also extended to Member States.

The Commission reminded the participants of the new Clean Power for Transport initiative which is currently in Inter Service Consultation and encompasses all transport sectors and further promotes the use and availability of alternative fuels in the EU (including infrastructure means).

Finally, the Commission highlighted their intentions of publishing a progress report on the implementation of the Toolbox (going beyond LNG) early next year. It is also likely that MOVE will propose a wider sustainable maritime transport stakeholder forum which will look into the various elements of the Toolbox, including the possibility to create working groups addressing these topics.

2. Germanischer Lloyd presentations

Germanischer Lloyd made three separate presentations in which it highlighted their work done so far on the three different tasks of the study: (1) 'detailed description of existing standards/regulations/ guidelines', (2) 'gap analysis' and (3) 'proposal for a consolidated version of a common EU guideline/standard for LNG bunkering'.

Participants also received the latest drafts of the GL study a couple of days before the meeting in order to be better prepared and to facilitate discussion.

Participants commented on the draft results all throughout the meeting, while a number of speakers commented on the draft results in dedicated presentations ([all published on the EMSA website](#)). An overview of the main items can be found below.

3. Identified gap-analysis

In total 16 gaps have been identified in the study and participants were asked to comment on these gaps. Overall, the gap analysis was regarded to be comprehensive and capturing most outstanding issues related to LNG bunkering. Nevertheless, not all gaps were regarded as a priority issue and in need of direct guidance. Most gaps are already being addressed by on-going international standardization initiatives (i.e. ISO, IMO's IGF, IAPH/WPCI check-lists).

In order to have a full picture of the status of the different gaps it was decided that GL would provide in their final report a more comprehensive overview of all gaps identified and list the subject matter addressed, the rulemaking/standardization body responsible for developing that standards, state of play and possible timeline for the finalisation and adoption of the respective standards/rules would be expected.

4. General remarks about the need of a LNG bunkering standard/guideline

Some ports representatives voiced concerns that possible EU rules would not sufficiently take into account the diversity of ports and asked for guidelines rather than regulation on international level. Furthermore, it was highlighted that the LNG bunkering business should be preferably self-regulated by industry standards. Port authorities should perform control, but not be involved in rule-making.

Nevertheless, it was stressed that ports are in favour of EU-wide LNG bunkering guidelines rather than regulations.

It was stated that at least in one Member State different ports are working on separate LNG bunkering rules without having a national regulatory framework in place. It was stressed that

the national legislation is not yet in place because of a lack of experience and an overarching European framework would be useful to provide guidance for the development of a framework at national level. At the same time an example was also provided of two ports that jointly work on developing a shared bunkering concept (Gothenburg and Rotterdam).

This was countered by ECSA, supported by a number of national ship owners' associations, who insisted on the need for a binding framework for LNG provision and bunkering in order to enable widespread uptake of the technology.

Ship owners also stressed their fear for a wide variety of rules in different ports and a 'playground' of different bunkering rules, with perhaps not always the same level of safety.

This is of special relevance since the participants to the expert group meetings were notably frontrunners. Therefore it should be kept in mind that other interested parties and following ports and ship owners might not have their knowledge and rather than having to develop their own approaches may benefit from standardization.

ESPO highlighted that they will have to look in more depth to the concerns and interests of Mediterranean and other EU ports not situated in SECA areas. If there would be a European standard for LNG bunkering, it would be based on the experience from mainly Scandinavian and Northern European ports, but would also have to fit the needs of other EU ports.

IAPH stated that while the outcome of a risk assessments could be different in different ports, harmonisation of risk assessment approaches as such would be useful. A harmonized approach (and thus avoiding a wide variety of local rules) also seems to be useful for reducing administrative burden and for being able to compete with land transport. This is most relevant for short sea traffic and ferry operators that are likely to be mostly affected.

Some harmonized rules are further needed to speed up the building of necessary infrastructure. ESPO expressed some concerns about the way this could be addressed in the Clean Power for Transport initiative by requiring certain ports which are not bunkering any fuels today to provide LNG in the future.

The Commission stressed that no side wanted to reinvent the wheel and re-do all the standardization work which is already being done, but that the approach forward would be to collect some clear views on how best to integrate all ongoing initiatives with a view to combining and where necessary complimenting them towards a comprehensive framework.

5. ISO bunkering group

ISO stressed that their ambition is to start by developing some high level guidance and standards for this new industry group, rather than already developing a detailed comprehensive framework at this stage. The gas fuelled industry is still developing and more experience will be needed before going into very detailed standards

In the presentation made by the chair man of the ISO LNG bunkering working group detailed comments were provided on each of the identified gaps which the next draft of the GL study will take into consideration.

A consensus on the expected results of the ISO group is expected for early 2013.

6. Comments on the bunkering process

Despite the existence of guidelines for LNG (as cargo) transfers, it seems that these cannot be used in their entirety and need to be adapted for the bunkering process. A clear distinction between both is needed though. However, it has to be made clear that LNG bunkering has to be at least as safe as LNG cargo transfer. In this context SIGTTO mentioned that they are looking into redrafting some of their existing guidance and expanding it to bunkering operations. This material should be available as of spring next year.

Standardization of the **ship-shore link** in the GL study focuses mainly on a combination of the ESD (emergency shutdown) link and bunkering lines. SIGTTO mentioned that in this respect there were some new technics presented during the Gastech conference which may be interesting to examine.

It was mentioned that **safety distances** cannot be standardized and have to be subject to a risk assessment. A case-by-case approach seems needed and the 8 participating ports in the IAPH WorldPortsClimateInitiative (WPCI) are looking into a possible standardization of respective port rules. However, the difficulty is the existence of different national legislation. The group is currently looking into the concept of **'failing frequency'** and how this impacts risk perimeters.

There was a general consensus that **release of methane to the atmosphere** (methane slips) cannot be accepted during bunkering operation. This is the same approach as in the IGC code in relation to LNG cargo transfers, so for LNG bunkering this should not be any different.

SIGTTO highlighted that it may work on establishing a new specific and **dedicated industry association for gas fuelled ships**. This association could be developed under their auspices before it will be able to operate independently.

7. Accreditation

At least one port stated that general accreditation of bunkering companies would be important in order to guarantee a high level of safety for LNG bunkering.

8. Simultaneous bunkering/loading

The Port of Rotterdam highlighted that for allowing simultaneous bunkering and loading such procedures would have to be inserted into the ship manual (implying a previous ships risk analysis). It further implies that the ship's class has looked into these operational procedures and approved them, as well as the Flag of ship. This would make it easier to inspect whether these operations are being respected.

It could be concluded though that the issue of simultaneous bunkering with passengers on board is still a point of discussion. When third parties are involved in the bunkering, the safety level needs to be adapted accordingly and therefore further increased.

9. Portable tanks

A ship owner announced that its board decided to retrofit an existing vessel to sail on LNG, through bringing a portable tank on board. A risk assessment was carried out and supported by class companies. The on-board connection of the tank will also have to be defined by the class. The approach of bringing a truck on board seemed not to be supported by all meeting participants. It was also highlighted that there may be issues with opening ADR trucks (containing dangerous goods) on board of a ship. Until now it seems that the IGF code does not provide detailed attention to the issue. EMSA and GL were requested to look into this issue more specifically.

10. IGF code

It was criticised that the GL report mentions that it would be likely that the IGF code would revoke chapter 6 of the IGC code. However, despite the fact that there is a German submission to IMO which calls for this, there is no decision taken at this stage.

11. Training

SIGTTO highlighted that they are going to looking further into the matter of training requirements for gas fuelled ships during the third meeting of their dedicated gas as shipping fuel working group in January 2013.

12. Incident report

It was mentioned that it would be useful to centrally gather information on incidents to learn and improve operations.

13. Inland navigation

The recommendations related to inland navigation may have to be updated. It was mentioned that AND related matters have to be taken up with UNECE rather than with the International Committee for the Navigation on the Rhine.

14. Fuel quality

It was underlined that LNG is a natural product and its nature cannot be modified (but changes during longer storage). Engine manufacturers seem to require quality indicators for the LNG to be used. Therefore a standard containing a minimum requirement for the methane number may be needed. It was stressed that an excessive quality standard could also limit certain LNG imports and thus increase LNG prices. It needs to be verified with engine manufacturers whether modern engines could not use a wide range of LNG.

In relation to the sulphur content it was highlighted that although reference to the sulphur content of LNG is made in Marpol Annex VI, it is generally so low that it does not need to be emphasised. The perception that LNG is the same as pipeline gas should also not be created,

because of the different nature. Nonetheless, for all other marine fuels there seem to be a standard regarding its quality, so why should that not exist for LNG as marine fuel?

15. Sampling

Contrary to what is mentioned in the GL report, there seem to be already existing sampling guidelines for LNG. It was also argued that LNG is also certified when it is being imported so the quality is already defined which would make the need for further quality sampling redundant.

16. Other points

It was stated that a good **enforcement** of the requirements **of the Sulphur Directive** is needed as to further stimulate the use of LNG as shipping fuel. Ship owners will make considerable investments in order to adapt to using LNG, but this will also require certainty that sulphur limitations are being enforced.

One should also look at **other floating objects/vessels** that may use LNG as fuel other than seagoing vessels or inland barges.

The need for a better common platform for exchange of information was highlighted and it was proposed that EMSA could take up that role of providing some kind of a **coordination platform** to better disseminate best practices, studies etc.

Attention should be given to the **public perception**. It was not really a topic of the meeting of today, but still requires reflection.

The port of Stockholm invited interested parties to attend the **first bunkering** of the **Viking Grace** on 13th of January and its maiden voyage. LNG bunkering for now will be done by a truck-ship connection.

17. Conclusions

- The current regulatory framework for LNG bunkering is fragmented, and despite various on-going regulatory developments at international level there exist gaps that need to be addressed. Shipping needs clear and international compatible framework conditions (rules, standards, guidelines) for safe and secure marine LNG bunkering. Such framework conditions need to be available as soon as possible and preferably by 2015 when the new sulphur requirements will apply, notably in the SECAs.
- The Commission, together with Member States and industry representatives will look further into the process of developing appropriate framework conditions for marine LNG bunkering, based on identified gaps and considering the results of the on-going (esp. international) standardization initiatives.
- The Commission will use the results of the GL study, of the discussions on the meeting and all other input in order to further develop an adequate framework that will further

facilitate the introduction of LNG in a safe way and give a positive impetus to business cases for LNG.

- The preliminary results of the GL study seemed to be able to receive a sufficient support of the participants. Nonetheless, various comments/corrections were made and received and the study will be updated accordingly.
- Comments in writing can be sent to GL, with EMSA in copy, until the end of the year.
- In order to have a full picture of the status of the different gaps it was decided that GL would insert in their final report a table containing all the identified gaps and list for all of these whether, and in which rulemaking/standardization fora, these are being addressed and when results and approvals could be expected.

Annexes:

- agenda

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