

A year after launching the LNG in Baltic Sea Ports project

Full speed ahead



Dear Friends,

The project 'LNG in Baltic Seaports' has now been active for more than a year. During this time we have had many very interesting meetings with all kinds of stakeholders across the LNG field. Some of us have had the opportunity to travel on *Viking Grace*, the first LNG-fuelled ferry/cruise vessel in regular service in the Baltic Sea region, sailing between Finland and Sweden. It gave us the opportunity to ex-

perience and see with our very own eyes the things we are working on.

The works across the seven ports that are partners in the project are developing according to plan in general, and you will be able to check out where each port currently stands by reading this newsletter. We are now also having the first 12 months of follow-up with the project partners in Klaipėda in connection with the Baltic Ports Organization's Annual Conference there on September 5-6. Nonetheless, there is still much work to be done before one can rest. A lot of analysis needs to be done with major stakeholders, e.g. in cooperation with shipowners and shipping companies. We are also working on a harmonization and stakeholder platform which will be greatly improved in the coming months. Finally, I would like to mention good collaboration with Actia Forum (as a coordination support) and BPO (responsible for the stakeholder platform and harmonization) concerning our LNG project.

Per-Olof Jansson, Project Leader

AARHUS HAVN PORT OF AARHUS

PORT OF AARHUS, DENMARK
Kim Meilstrup
Project's Activity Leader

Presently, the feasibility study is almost finalized, but there are still outstanding issues concerning such areas as costs for suggested dimension & localization as well as guidance in the permit process. In addition, there are some loose ends in regard to handling of the boil-off gas. We also don't have a clear commitment signal from the shipowners' side. Since some essential questions are still unsolved, we cannot say for sure what type or size of facility is the most probable solution, nor that there will be an LNG terminal in Aarhus port. The approval procedure from the authorities is quite a complicated affair, too, as a large number of institutions is involved. Moreover, because knowledge on LNG is limited, the requirements from each institution aren't specific, and the set of LNG rules hasn't been prepared. Therefore, it seems quite certain that the risk analysis and an Environmental Impact Assessment need to be based on a specific project. The design of the LNG terminal is expected to be of a size between 5-15 thou. m³. It still has not been decided whether it is going to be flat bottom tanks or several cylindrical thermos tanks of approx. 1 thou. m³ each, connected via pipes. The latter are more flexible and can be established step by step, depending on the market development, but they seem to be more expensive for a comparable volume. The design phase is at present at its very beginning, and pre-design is not expected to be finalized before the end of 2013. Based on this first design, a more detailed phase will follow, to be finalized at the end of 2014.

CMP COPENHAGEN MALMÖ PORT

COPENHAGEN-MALMÖ PORT, DENMARK/SWEDEN
Brian Kristensen, Project's Activity Leader

To date Copenhagen Malmö Port has completed two of its sub-activities, namely the mapping of shipping activities & volume estimations as well as a localisation study (incl. preferred location and layout of the terminal).

Currently, the port is carrying out 'Sub-activity 3: Cost and market analysis study' (incl. operational and investment costs). For now, the consultancy company Liquiline has delivered two parts of this sub-activity – one regarding atmospheric tanks built onsite and the other focusing on cost analysis for a 10,000 m³ LNG facility with six pressurized tanks. The second consultancy firm, SSPA, prepared the paper's introduction, the section on LNG in Skåne County as well as the report's conclusions, recommendations, and references.

No major unforeseen problems were encountered and the paper landed on the port's desk for revision. Feedback was given to the report's authors and the final version of Sub-activity 3 is expected any time soon. A final report will follow as a direct continuation of Sub-act 3; the expected delivery date to CMP is September 15th, 2013.



PORT OF TURKU FINLAND

PORT OF TURKU, FINLAND
Markku Alahäme
Project's Activity Leader

The 'LNG in Baltic Sea Ports' project in Turku is proceeding without delays. Most recently we discussed with relevant stakeholders the possibility of LNG bunkering with the use of tank trucks within the Port of Turku's areas. As a follow-up we will, together with a consulting firm, investigate the pros and cons of LNG bunkering across every quay. Preliminary results should be available by the end of August, while the final report is to be published at this year's end. In the meantime, a proposal of a local detailed plan for the Pansio LNG terminal was accepted in June 2013 by the Board of Environment and City Planning. The City Council of Turku is expected to approve the detailed plan during Autumn 2013, after the period of display for public inspection ends. Gasum, operator of the future facility, has started detailed technical planning of the LNG terminal, whereas Turku port will start the planning of the area around the LNG terminal during Autumn 2013. Report/planning is scheduled to be ready at the end of 2013. Last, but not least, we have completed a draft of the *Safety Manual*, which was sent to regional rescue services for comments. The final version is to be ready during Autumn 2013.



PORT OF HELSINGBORG, SWEDEN
Roland Brodin
Project's Activity Leader

The Port of Helsingborg, together with Öresundskraft AB, NSR AB and Kemira Kemi AB, is collaborating in a joint project called 'Helga' (Helsingborg Liquefied Gas Association) with the common goal of establishing an infrastructure for LNG in Helsingborg. The feasibility study was completed at the end of 2012, resulting in a key outcome that there is market potential for an LNG terminal in Helsingborg. A second important aspect was that the shipping segment is crucial for securing critical volumes. The project is also proceeding with a location study and a risk analysis study. The studies were completed in September 2013. The preliminary results from the location study indicate that, at this stage, there is no other location that is significantly better than Helsingborg in the western Swedish coastal area from Halmstad in the north and Vellinge to the south. Preliminary results from the risk analysis also show no obstacles for a location at the Kemira Kemi AB industry park in the southern part of Helsingborg. In parallel with the two abovementioned studies the project group is having a dialog with a number of prioritized stakeholders, too, in order to create a sustainable offer for the shipping segment.



PORTS OF STOCKHOLM

PORTS OF STOCKHOLM, SWEDEN
Sandra Gegerfelt
Project's Activity Leader

The LNG-powered ferry *Viking Grace* arrived in Stockholm for the first time on January 14th, 2013. After a slight delay, ship-to-ship bunkering started on a regular basis on April 5th and successful bunkering has taken place 5-6 times a week at Stadsgården in the city centre of Stockholm since then. However, on several occasions there have been articles in the newspapers regarding the hazards of LNG and a few residents have expressed their worries about handling LNG in the city centre of Stockholm. Our experience from this is that communication with the general public must not be underestimated. We are working proactively when it comes to informing the general public, i.e. providing information on our webpage and by handing out brochures, etc. As part of our proactive work, the Ports of Stockholm have also gathered various stakeholders in Stockholm (AGA, Viking Line, the Swedish Transport Agency, etc.) to discuss how we can deal with such questions arising from the media. At the end of May, the Ports of Stockholm hosted the first part of a successful two-day conference arranged by the TEN-T financed project 'Make a Difference'. Representatives from the Ports of Stockholm, Viking Line and the gas supplier AGA participated and described the process and experiences gathered so far.



PORT OF HELSINKI, FINLAND
Ari Parviainen
Development Manager
at the Port of Helsinki

Talking about LNG bunkering options, the most practical solution stemming from our feasibility study was found to be ship-to-ship bunkering. This is mainly because of the many separate harbours in Helsinki and their varying structures and functions, but also because of the method's flexibility. Ship-to-ship bunkering does not require any investments in the port's dock structures either. Also, locating an LNG terminal anywhere on the shores of the Gulf of Finland would not limit the use of this option in Helsinki. Based on experiences learned from Stockholm in early 2013, the alternative types of bunkering vessels could include a similar modified bunkering vessel as the *Seagas* one – with a fixed container structure or a vessel with replaceable cryo containers. Let us bear in mind, however, that introducing LNG as a ship fuel will be greatly influenced by the price development of various kinds of fuel, as well as the pricing and functionality of the sulphur oxide scrubbers. Meanwhile, the Port of Helsinki is also in talks with the Finnish border guard about possible LNG cooperation, i.e. bunkering options in the Vuosaari Harbour. We have also identified quays and places where it's possible to use, for example, tank trucks.

PORT OF TALLINN  **TALLINN**
The Port of Good News

PORT OF TALLINN, ESTONIA
Riina Palu
Project's Activity Leader

The Port of Tallinn commissioned a study to estimate the future impact of the MARPOL Annex VI on shipping traffic in Tallinn. The paper also evaluated the market potential of LNG as bunkering fuel in the region, found the most efficient way to provide LNG supply as well as addressed the questions of logistics and feasibility in general. According to the study, LNG demand in the Port of Tallinn will develop over time as LNG-fuelled vessels become more common. The likely first step in providing LNG bunkering services will be a bunker tanker serving low and irregular demand. This option will have some limitations on availability, but it is the most likely way to start LNG bunkering services in the region. Moreover, it is believed that an import terminal will provide a cost-effective logistics solution to import LNG to the northern Baltic Sea region. Naturally, the Port of Tallinn is also carrying out its project activities. The 'Muuga Harbour LNG Terminal General Plan and Strategic Environmental Impact Assessment' tender was published on July 12th, 2013. Meanwhile, the Port of Tallinn, together with its daughter company TS Shipping, is preparing for a design tender for an LNG bunker tanker.





LNG will become a success story

Interview with Torsten Klimke from the European Commission's Directorate-General for Mobility and Transport (DG MOVE) and Jarosław Kotowski, Project Manager from the TEN-T Executive Agency

The EU institutions are closely monitoring the liquefied natural gas development across the Baltic Sea region as a long-term strategy for ensuring eco-friendly ship bunkering. Once completed, the 'LNG in Baltic Sea Ports' initiative can serve as a touchstone for others. We talk with representatives of DG Move and the TEN-T Executive Agency about the project's progress.

■ ***The 'LNG in Baltic Sea Ports' project has been up and running for almost one year now. How do you perceive the project's undertakings until now?***

The objective of this project is to study the feasibility and design of the LNG bunkering infrastructure in a number of Baltic seaports. As such, it fits very well into the Commission's strategy to promote and contribute to the development of LNG availability as an alternative fuel for ships in the sulphur emission control areas.

At the port level, the project in general is progressing satisfactorily and according to plan, and the full involvement of the seven participating ports is obvious and visible. The Port of Helsinki has even completed its part of the study and the feasibility results

for bunkering facilities at the port, including bunkering from other vessels/barges and bunkering from trucks are now in place. This is a good starting point for planning real investments. However, in order to achieve a basic level of LNG bunkering infrastructure availability in the region and provide adequate LNG capacity for ships, the involved ports need to collaborate on the planning processes and standardisation. The ship owners should have no doubts regarding the availability of fuel, and that they will be able to bunker it across a sufficient number of ports guaranteeing the continuation of services. Last, but not least, there is an expectation that the results of the LNG project will be widely disseminated and shared with the industry – including to those stakeholders who are not involved in the



Photos: LNG in Baltic Sea Ports

project – since knowledge sharing is as important as the outcome of the individual activities of the project. The Transport Week event organised in Gdańsk in March this year responded well to these expectations. The final conference and the guidebook presenting all

the project findings and recommendations, due in 2014, will be even more crucial.

- **Not so long ago, the European Commission tabled a proposal of setting up LNG bunkering facilities across 139 TEN-T sea and inland ports by 2020/2025, respectively. In what way does the Commission plan to achieve two goals: financing the necessary bunker stations/options as well as supplying sufficient amounts of liquefied natural gas?**

Previous studies, in particular the 2012 study *North European LNG Infrastructure* supported by the TEN-T programme and of course the impact assessment for the proposed Directive on the deployment of alternative fuels infrastructure (COM(2013) 18/2), have identified and justified the need to quickly set up a basic LNG refuelling infrastructure network. This is especially geared at TEN-T core ports with the possibility to request TEN-T support. In addition, other European and national means of support might be applicable. An overview was recently published in the *Sustainable Waterborne Transport Toolbox* progress report (COM(2013)475). It should be noted that the Commission proposes full flexibility as to how to provide the LNG in order to respect local conditions and expected fuel demands. LNG refuelling points can be onshore (incl. tanks, but also mobile provision via trucks is possible) or offshore (e.g. via bunkering barges). We might also see evolutions over time in specific ports, from initial provision via



Jarosław Kotowski

truck to a larger fixed infrastructure when demand has grown. From our exchanges with industry (incl. fuel suppliers) we have seen a rapid increase in interest from the private sector to invest in LNG supply. These new developments are viewed as good business opportunities.

- **The year 2015 with its stricter sulphur regulations is getting closer day by day and it's hard to find anyone from the Baltic ro-ro & ferry business who is looking forward to seeing the 1st of January, 2015. Is the European Commission planning any steps to ease the concerns of the shipping industry?**

We should recall that since 2008, when the International Maritime Organization (IMO) first decided on the new global sulphur emission limits, time has not been effectively used by industry to prepare the compliance with the future thresholds. In 2011, together with the proposal to implement the IMO limits into EU legislation, the Commission presented the *Sustainable Waterborne Transport Toolbox* approach, issuing the first abovementioned progress report in July 2013. The *Toolbox* addresses a multitude of measures to support compliance with the new rules. In addition, in the coming months the Commission will establish a 'European Sustainable Shipping Forum' to further discuss implementation issues with all stakeholders. More information will be published shortly on DG MOVE's website.

- **What are the conditions for making LNG successful across the BSR? The Baltic Sea needs infrastructure which, at the same time, is dependent upon demand. Only two ships in regular traffic on the Baltic operate on LNG. How can the European Commission encourage fleet owners to shift to gas-powered ships?**



Torsten Klimke

In short, we need planning certainty for all parties and sufficient availability of reasonably priced LNG bunkering fuel. It is particularly important to have common standards and rules on the provision and use of LNG for shipping. The Commission, supported by

the European Maritime Safety Agency, in cooperation with ship owners, ports, fuel suppliers and other international organisations, is working on this issue. A gap analysis study was published this spring and we have held a number of workshops with the industry to make use of best practices and lessons learned by those who are planning to provide or use LNG. The future 'European Sustainable Shipping Forum' mentioned above and its planned sub-group on LNG will also address further technical standardisation aspects. The proposed Directive on the deployment of alternative fuels infrastructure foresees European standards to be developed shortly for LNG bunker provision.

Looking at the availability issue, the proposed Directive with its provisions on a mandatory LNG bunkering infrastructure should not only enable ships to access the new fuel across the network, but we expect that it could also lead to lower prices for LNG. We are witnessing quite a number of LNG supply projects evolving not only in the Baltic Sea, but also in other European maritime regions, e.g. the Mediterranean. For ship owners, the interest in switching to LNG, mainly for new ships, but also for some existing ones, is also significant. We are thus confident that LNG fuel for ships will become a success story not only for the Baltic Sea, but for Europe in general and become a fuel for intercontinental traffic in the long-term.

Przemysław Myszk

LNG in Baltic Sea Ports upcoming events

2013 events

Coordination Group Meeting
5th September 2013, Klaipėda, Lithuania

Harmonization Meeting
6th September 2013 Klaipėda, Lithuania

Local LNG Stakeholders Meeting
October/November 2013, Helsingborg, Sweden

2014 events

Coordination Group Meeting
March/April 2014

Stakeholder Meeting
March/April 2014

LNG Conference
March/April 2014

For more information see
www.lnginbalticseaports.com