MarTech LNG as a platform for cooperation

LNG Shipping Seminar
Small-scale distribution for coastal and short-sea shipping
Szczecin, October 15th 2014
MarTech LNG

“Marine Competence, Technology and Knowledge Transfer for LNG in the South Baltic Sea Region (SBSR)”

Launched: 01.01.2012

Partners: Lithuania LB
Poland
Germany
Denmark
Sweden
MarTech LNG

- Develop the LNG related competences for the Maritime industries in SBSR
- Foster LNG targeted scientific research
- Create LNG supply/value chain in SBSR
- Support LNG development and operation processes in SBSR
SBSR in Poland

Zachodniopomorskie

Pomorskie

Part of Warmińsko-Mazurskie (adjacent area)
Why LNG?

The worldwide policy is going towards environment protection and the limiting pollution in the seas, inland waters, grounds and the air. Therefore the international organizations like IMO implements new, much tighter regulations.

Pollutants related with fuel:

a) Oxides of sulphur SOx
b) Particulate matter PM
c) Nitrogen oxides NOx
d) Ozone depleting substances ODS
e) Volatile organic compounds VOC
f) Green house gas CO2
Why LNG?

SOx limits

- Inside of ECA
- Outside of ECA

01.07.2010  01.01.2012  01.01.2015  01.01.2020

0.1%  0.5%  1.0%  1.5%  3.5%  4.5%
Why LNG?

The Baltic Sea is one of the SECA (sulphur emission controlled area). Shipowners have only three options:
Why LNG?

Low sulphur fuel:
- Require only minor modifications on vessel fuel systems.
- Rising demand will increase its price
An exhaust gas scrubber:
- Requires installation of an exhaust gas scrubber to remove sulphur from the engine exhaust gas by using chemicals or seawater.
- This technology requires significant modifications on ship systems.
- The sulphur-rich sludge produced is categorized as special waste, to be disposed of at dedicated facilities.
- Moreover, scrubbers increase the power consumption, thereby increasing its CO$_2$ emissions.
Why LNG?

LNG fuel (liquefied natural gas):

- LNG-fuelled ship requires purpose-built or modified engines and a sophisticated system of special fuel tanks, a vapouriser, and double insulated piping
Why LNG?

LNG fuel is the cleanest form of fossil fuels available.
Status of LNG infrastructure on Baltic Sea

Under construction
Mapping LNG knowledge and competence in the SBSR

Stakeholders profile:

- Bunkering
- Shipbuilding & repair
- Ports
- Shipping
- End-user technologies
- Regulators (authorities, classification societies and other)
- Storage stakeholders
- Distributing
- Consultants
Joint study

Distribution in the SBSR

Number of Stakeholders

- Bunkering
- Ports
- Shipbuilding & repair
- Classification societies
- Shipping
- Organisations / Associations
- Storage
- End-user technologies
- Consultants
- Distributing
- Authorities

Distribution in the SBSR

- Bunkering: 5
- Ports: 10
- Shipbuilding & repair: 25
- Classification societies: 17
- Shipping: 15
- Organisations / Associations: 18
- Storage: 24
- End-user technologies: 24
- Consultants: 7
- Distributing: 27
- Authorities: 27
The objective of the Polskie LNG Company is to construct and operate the Liquefied Natural Gas terminal in Świnoujście. The duties and responsibilities of the Company involve, performance of the technical and economic documentation and obtaining the necessary administrative permits and licences, selection of the general contractor for the project and monitoring and coordination of actions connected with the construction of the terminal.

http://www.polskielng.pl/
Study trips

• LNG 17 Conference and exhibition
  – A record number of over 5,000 industry professionals from over 80 countries are expected to attend, and the record-setting exhibition of 200,000 square foot will be the largest of its kind, attracting thousands of trade visitors
Study trips

- **Stavanger, Norway 17-19 of September 2013**
  - sailing with LNG powered ferry, the MS Stavangerfjord from Fjord Lines and a visit to the SKANGASS LNG Terminal at Risavika Harbor.
  - More than 50 different companies/organisations/authorities from at least 11 different nations participated in the study visit to explore LNG
Study trips

• Stockholm, Sweden 09.05.2014
  – The main goal of the visit was to exchange the experiences concerning LNG bunkering procedures and regulations.
  – LNG Terminals, LNG fuel bunkering in ports and LNG bunkering procedures - study
Maritime LNG training content

The first day
1. LNG – general knowledge 2 hours

Practical part
2. Ship’s steering – principles 2 hours
3. Hydro-meteorological influences 1 hour
4. LNG carrier and tugs cooperation 2 hours
5. Emergency situations 1 hour

Total: 8 hours
Maritime LNG training content

The second day

1. LNG fuel tank operations 3 hours
2. Safe practices procedures 2 hours
3. Emergency procedures 3 hours

Total: 8 hours
Movies

- LNG tricks
- Introduction to LNG simulator
- Familiarization with LNG simulator
- Loading operation
Trainings

- Poland
  - 14-15 October 2013 (Szczecin)
- Lithuania
  - 21-22 October 2013 (Klaipeda)
- Germany
  - 9-10 January 2014 (Rostock)
- Sweden
  - 15-16 January 2014 (Malmö)
  - 12 June 2014 (Karlshamn)
Supply chain

- Assist during public procurement procedures of ferry fueled by LNG for Samso community
Activities

• Roadshow
  – Rostock, Germany 13.10.2014
  – Szczecin, Poland 15.10.2014
  – Klaipeda, Lithuania 17.10.2014

• Prefeasibility study: ferry line Świnoujście – Klaipeda
MarTech LNG

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The final conference:

“GO LNG IN THE SOUTH BALTIC SEA REGION – FINAL CONFERENCE TO THE SBSR PROJECT “MARTECH LNG”

Event dates: 9–10 December 2014
Event venue: Hotel Aurora, Klaipeda
Thank you for your attention