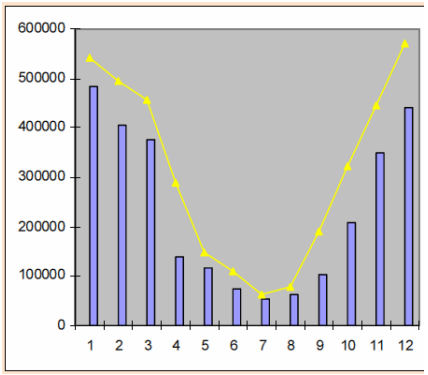
MAGALOG
LNG a clean fuel for ships

Standard LNG bunker terminal design

A standard LNG bunker terminal has been designed as a starting point for all future considerations and planning in port designated to provide LNG bunkers to the shipping community.

In Lübeck: combined bunker and city gas terminal



Typical city gas consumption curve

In Lübeck there is the unique opportunity to combine a maritime LNG bunker terminal with the supply of the city with gas from LNG. This LNG terminal will provide reserve gas for unexpected high demand or in cases of extraordinary high gas prices at the gas exchange. A 7.000 m^3 terminal is under sincere consideration and planning

Continued co-operation

The MAGALOG partners Gasnor and Stadtwerke Lübeck have agreed to co-operate further in order to further the construction of a LNG terminal in Lübeck.

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The project partners

GASNOR

GASNOR AS, Bergen, Norway
http://www.gasnor.no

baltic energy forum

Baltic Energy Forum e.V. Mallentin, Germany
http://www.baltef.de

MARINTEK

MARINTEK AS, Trondheim, Norway
http://www.marintek.sintef.no

HOG
HORDALAND OLJE & GASS

Hordaland Oil & Gas, Bergen, Norway
http://www.holga.no

Świnoujście

Town of Świnoujście, Poland
http://www.swinoujscie.pl

STADTWERKE LÜBECK

Stadtwerke Lübeck GmbH, Lübeck, Germany
http://www.sw-luebeck.de

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Mission accomplished

Liquid natural gas as a fuel for ships introduced in the European Union.

An environmentally friendly fuel added to the landscape of ships' bunkers

http://www.eu-magalog.eu

MAGALOG is financially supported by the European Union under the programme

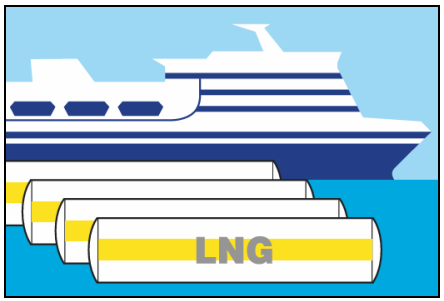
Intelligent Energy Europe

Background

Increasing air pollution by ships in port cities and adjacent touristic areas calls for action by legislative bodies, port cities and ship owners. IMO, the International Maritime Organization has set the milestones by requiring more stringent rules for ship borne air pollution. Therefore the shipping and port communities are in quest for solutions to combat sulphur oxides, nitrogen oxides and particulate matter in ambient air. One of the most favourable solutions especially in Emission Control Areas of the Baltic Sea and the Northsea is the use of LNG or Liquefied Natural Gas.

Objectives

The core objectives of the EU-(Intelligent Energy Europe) funded project MAGALOG or Maritime Gas Fuel Logistics were to investigate the technical and economical viability of a supply chain for LNG, to analyse 5 ports regarding their potential for LNG supply to ships and 1 port for its potential for city gas supply and to elaborate a standard medium size LNG terminal for the supply of ships. Finally LNG should be made public to all relevant stakeholders.

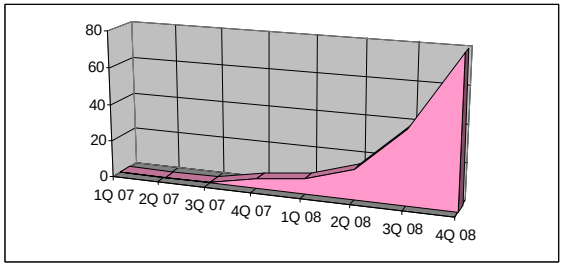


Achievements

High visibility

The project was presented at various national events and international conferences, i.a. at the 2007 BSSSC Annual Conference in Turku, the 2008 Energy Efficiency Conference in Lübeck, the 2008 Green Ship Technology Conference in Rotterdam, the 2008 Bunkering in the Baltic and Northsea Conference in Hamburg and at the 2008 Gothenburg RoRo Conference.

Increasing interest



At the beginning of the project stakeholders like ship owners, ports and shipyards showed extremely low interest in LNG up to severe objections. By time and with heavily increasing bunker prices and the decision of IMO's Maritime Environmental Protection Committee to reduce SO_X and NO_X especially in Emission Control Areas of the Baltic and Northsea interest took up momentum. Now, several ship owners and shipyards are planning ahead to meet more stringent international environmental standards and to prepare for the gas age in fuels.

Fire to the development of LNG fuelled ships

Interest was even more fired by the decision of the Norwegian ship owner Sea-Cargo AS to order two 132 m long LNG powered RoRo vessels with options for four more.

Pan-Baltic-Sea LNG fuel supply chain study

A logistics study regarding potential locations for LNG bunker terminals to supply shipping with LNG fuel from the starting point Kollsnes, Norway, shows that an LNG supply chain is technically feasible and can economically be operated

Five Ports for LNG fuel supply

1. Solutions for LNG bunkering for ships are identified and prepared in all targeted ports.
2. In Gothenburg, Stockholm and Lübeck, initial users and bunkering locations are identified.
3. Swinoujscie offer future supply of LNG potential from the planned large scale LNG import terminal.
4. In Bergen LNG bunkering is in operation, and has room to expand.