Magalog heralds new era in clean shipping

Magalog is a new EU-sponsored project that is studying the viability of an LNG bunkering network around the Baltic Sea

Supported by the Norwegian Research Council, 'Big LNG' is investigating gas-fuelled ships in shortsea trades

Magalog, short for Marine Gas Logistics, is a new project focusing on the potential for LNG as a vessel fuel in the Baltic Sea region. It has been conceived to address practical ways of reducing emissions of carbon dioxide (CO_2) and other atmospheric pollutants across the region and in individual ports. The intention is to develop solutions that are not only effective for the Baltic but could also be exportable to other regions of the world.

Gasnor of Bergen is coordinating the project, which is 50 per cent funded by the European Union. The other members are the Baltic Energy Forum, Trondheim's Marintek, the city of Lübeck, Hordaland Oil and Gas of Bergen and Poland's Swinoujscie Port Authority.

The potential environmental benefits from utilising LNG as a ship's fuel in the Baltic/North Sea region have already been demonstrated by Eidesvik's offshore supply vessels and the five new passenger ferries put into operation on the Norwegian coast this year by Fjord1 (see article on page 41). It is estimated that the use of LNG instead of diesel oil to power this fleet of ferries brings a reduction in nitrogen oxide emissions equivalent to taking 150,000 cars off the roads.

The fact that the Magalog initiative has a Baltic focus makes sense. The Baltic and North Seas have already been specified by IMO as sulphur emission control areas, with an upper limit of 1.5 per cent for the sulphur content of ships' fuels. Norway imposes a nitrogen oxide levy of NKr15/kg and this is set to increase, while harbour dues are differentiated by environmental performance in Swedish ports such as Stockholm and Gothenburg.

The Magalog members point out that current ship emission cleaning technologies do not meet the future environmental requirements that have been agreed, nor has the contribution that shipping and aviation will have to make in slowing the pace of climate change beyond 2012 been adequately dealt with.

Amongst the early practical steps being taken to face up to these problems, the Magalog members are seeking to create a small-scale LNG supply network in the Baltic Sea region in order to promote the development of LNG as a clean fuel for ships. The first of the terminals will be established in Lübeck while investment research will be conducted in Swinoujscie and three other port cities in the Baltic.

When the project is completed, the Magalog members point out that it should be possible for a shipowner to order an LNG-fuelled vessel which can bunker in at least two cities in the Baltic. Taking it a stage further, one participant at the inaugural Magalog conference in Bergen in January 2007 stated, "We believe that in 5-10 years the majority of ships contracted for shortsea trading in the Baltic will use LNG as a fuel."

Over the longer term Magalog could also help open the door to biogas and provide a bridge to a hydrogen economy. *LNG*