

Roth: LNG New Alternative for Offshore Vessels

As discussed in last week's column, tighter air emission regulations and increasing petroleum costs have prompted ship owners and operators to search for an alternative fuel.

The combination of environmental compliance requirements and decreasing price are making LNG (liquefied natural gas) an attractive option.

International shipping is a major source of sulfur, nitrogen oxide and carbon dioxide emissions. Replacing conventional shipping fuel with liquefied natural gas would greatly reduce the environmental impact of shipping.

The international shipping industry now accounts for about 4 percent of annual global emissions of sulfur, 7 percent of emissions of nitrogen oxide and less than 3 percent of carbon emissions.

Over 90 percent of world trade is carried by the global shipping industry and that means emissions from shipping total over a billion tons a year.

The seaboard off both the East and West coasts of the United States and Canada, as well as most of northern Europe, are Emission Control Areas as adopted in amendments to Annex VI of the International Convention for the Prevention of Pollution from Ships.

Operators are recognizing LNG as a fuel source for ferries and offshore vessels because they can return to the same terminal for fuel. Shell's bunkering (refueling) strategy for LNG-powered ships recognizes the new expanding market.

Today, the sulfur content in marine fuel must be at most 1

percent. By 2015, marine fuels should contain at most 0.1-percent sulfur.

Preventing pollution was one of the original aims of the International Maritime Organization when it was set up in 1948. The IMO estimates that ships cause about 2.7 percent of total man-made emissions. Under a convention brought into force this year, ships will have to introduce fuel-economy measures with the aim of reducing their emissions by 20 percent by 2020 and 50 percent by 2050.

The IMO is also pressing on with planned new rules on cleaning up ships' ballast water. These may come into effect this year, once enough national governments have signed up for them.

The major drawback to the use of LNG as a marine fuel remains the lack of infrastructure. There are relatively few places in the world where a marine vessel powered by LNG can conveniently refuel (bunker).

It will take time and require significant investments to increase the percentage of ports that can provide vessels with LNG. Today, an increasing number of seagoing vessels are being built to operate on LNG, either exclusively or as part of a dual-fuel arrangement. But this good idea and emerging trend are worthy of the investments and efforts.

As was discussed last week, Harvey Gulf International Marine recently announced plans to build and operate the first LNG marine fueling facility in the United States at its vessel facility in Port Fourchon, La. The announcement was the latest in a whirlwind of similar plans that have accelerated LNG-fueled ships from a novelty to a growing market. This good idea has set sail and is picking up good wind at its back.