

LNG Pricing and Supply

The argument for using LNG as a marine fuel is that it will reduce emissions significantly (NOx, SOx and particulate matter). However, there may be another argument as well, that LNG may *cost less* than fuel oils.

In addition to LNG's price advantage versus fuel oils may be a small insurance advantage, since carrying LNG means no potential for oil spills. The possible future cost of CO2 could also benefit LNG, which emits less CO2 than fuel oils.

But those who supply or use LNG today will not go on record and reveal cost comparisons.

Nevertheless, Karen Sund, managing director of Sund Energy in Norway, said that today LNG is cheaper than fuel oils in the wholesale market, although retail pricing varies significantly among different suppliers.

"In Europe LNG consumers typically buy LNG at the wholesale spot price, plus distribution costs (up to 100 percent over the wholesale price)," she said, "or at gas prices linked to MGO."

Unfortunately, suppliers tend to be very secretive about their pricing, which, Sund said, may have been counter-productive by limiting the market potential. "Who wants to buy something if they don't know what it will cost?"

MOVING TARGET?

According to one marine industry consumer who asked not to be identified, some suppliers are trying to increase profit margins by pegging it to existing fuel prices.

"Others are doing it with the cost of the liquefaction," he said. "You build the plant, it's expensive, but it's a fixed cost. You add the expense to the cost of the liquefaction."

While diesel prices move up and down, LNG has had a fairly stable pricing model, however.

"You can take the fuel price, which is a huge percentage of a shipping company's cost structure, and map it out for a very long period of time. You should have relative confidence in what your fuel price will be," said the source.

"Some of the major suppliers are trying to peg it; the smart buyers look the other way."

As more suppliers enter the market, he said he expects the pricing model to shift in favor of buyers.

LNG SUPPLY

While there are 13 LNG-fueled cruise ships on the orderbooks, slated for deliveries from 2019 through 2026, there are also orders for LNG-fueled ferries and cargo ships, including an order for nine large container ships to be "LNG ready," so when the owners are happy with the pricing they will install LNG tanks and switch fuel, according to Sund.

There is ample availability of LNG globally, although bunkering facilities still need to be developed in many countries. If, however, the most optimistic forecasts come to fruition, expecting up to 20 percent of the worldwide fleet to run on LNG by 2030, there could be a shortage, which would drive up pricing.

Carnival Corporation has entered into a supply agreement with Shell,

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– Karen Sund, Sund Energy

which may be able to offer LNG bunkering globally. Shell owns the Norwegian company Gasnor, which it acquired in 2012, having built up expertise, owning production plants, terminals, tanker trucks and bunkering vessels.

In the United States, Pivotal LNG is currently delivering LNG to TOTE Maritime and its two Marlin-class cargo ships via an onshore solution at the port of Jacksonville (JAX).

Furthermore, partnering with Northstar Midstream, a spokesperson for Pivotal said the JAX LNG partnership is building an LNG plant with a dock in Jacksonville to serve the maritime industry.

JAX LNG also plans to supply TOTE via the first LNG barge operation in the country.

"We are looking to expand our delivery of LNG to other maritime customers in the southeast using the Clean Jacksonville barge or other LNG barges that have yet to be constructed," she noted.

FLUCTUATIONS

Having worked with a number of shipping companies, Sund said that LNG had a clear cost advantage on spot pricing when the oil price was around \$100 a barrel. When the oil price fell, it was more advantageous to buy at the wholesale price minus. But as the price of oil is climbing, LNG is becoming more competitive again.

She said she worked with the Norwegian cruise ferry company Fjord Line through these cycles.

"And," she added, "riverboats are another segment of shipping that would benefit from LNG, considering they are all sailing inland where there is more focus on pollution than before."

"I am a believer in LNG," Sund added, "especially if you have some competition among suppliers which tends to mean fairer pricing for customers."

"The goal must be to have a simple contract with transparent pricing and global bunkering facilities." ■