

BUNKERING: ALL AT SEA



Furetank's *Fure Ven* takes on LNG fuel at Eagle LNG's Talleyrand bunker station in Jacksonville, Florida.

Source: GAC

The use of LNG as a marine fuel is still at an early stage, but a handful of bunkering ventures that use the fuel are advancing in North America.

Anna Kachkova

The use of LNG as a marine fuel is on the rise, but still at an early stage both globally and in North America. Steps forward are being taken in this area, and the sector is set to expand further, but there are also considerable obstacles to contend with.

A significant step for the shipping industry was the worldwide adoption of International Maritime Organisation (IMO) rules at the start of this year, known as IMO 2020, restricting sulphur content to 0.5% in marine fuels. LNG is one of the options available to ship owners, while other alternatives include retrofitting vessels with scrubbers to remove sulphur oxides from exhaust gases. Now too, ultra-cheap and clean jet fuel has found a new home, with the reduction in demand from aviation forcing it into ship's engines. And the evolving nature of maritime regulations means that options that appear attractive now may not stay that way for long.

"While [LNG bunkering] takes care of the sulphur issue, it does not take care of the CO₂ issue," Poten & Partners' head of business intelligence, Jason Feer, told *NGW*.

The IMO is due to publish a revised greenhouse gas (GHG) strategy in 2023. Given the high capital costs involved in overhauling and upgrading fleets in line with new requirements, some ship owners may hesitate to make major new investments until they know what this strategy contains. Industry players are concerned that while LNG may solve their immediate problems, it will not solve their long-term problem with upcoming IMO rules, Feer said.

STILL RISING

Nonetheless, the immediate problem of sulphur emissions does need to be solved, and there is greater interest in LNG as a bunker fuel as a result. According to industry group SEA LNG, at the start of 2020 there were 175 LNG-fuelled ships in operation globally, excluding the 600 or so that make up the LNG carrier fleet, the majority of which are LNG-fuelled. There were over 200 ships on order at this time, according to the group, and an estimated 10-20% of the new order book was LNG-fuelled.

New vessel orders are increasingly focused on deep-sea vessels including cruise ships, container vessels and crude and product tankers, as well as bulk carriers, SEA LNG says on its website.

This is in line with what sort of vessels the GAC Group, an international ship agency, expects to show the most interest in LNG as a fuel. "In the deep-sea sectors, our view is that the cruise and container lines will continue to lead the way, with car carriers and tankers following suit," GAC bunker fuels' global director, Nicholas Browne, told *NGW*.

The operators of existing ships are faced with choices such as converting to run on a different fuel – of which LNG is one possibility – or having scrubbers fitted.

"There are some vessels that have been built with the idea that they would be converted at some point in the future. They can't take LNG immediately but they were designed with space in mind for putting in tanks and this various other kit you'd need. So there are a few of those, not that many," said Feer. He noted, however, that he had not heard of a lot of ships coming off the market temporarily to be converted to run on LNG. He attributed this in part to the "chicken and egg" problem, whereby ports are hesitant to build new LNG bunkering infrastructure until they are confident that there is a market for it, while ship owners are equally unwilling to convert their vessels to LNG until the port infrastructure exists.

"I think where you're still seeing most of the action is in ships that have a single base," Feer said, giving cruise ships and ferries as examples. "It makes sense to spend some money on infrastructure there."

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— NICHOLAS BROWNE,
GLOBAL DIRECTOR, GAC BUNKER FUELS

JOINING IN

Europe has led the way in developing LNG bunkering infrastructure, but recently other regions, including North America are following suit. A handful of projects involving LNG bunkering are currently underway, scattered around different parts of the continent.

In Canada, for example, Cryopeak LNG Solutions and Japan's Sumitomo announced on September 21 that they had signed a memorandum of understanding (MoU) to jointly develop an

LNG bunker-fuels supply chain. This will be focused on Pacific Northwest ports such as Vancouver, Fraser River Port, Roberts Bank and Prince Rupert. As part of this venture, Cryopeak is designing a 4,000 m³ LNG bunkering barge, which is expected to enter service in 2023.

In the US meanwhile, Florida has been a prominent player in the nascent LNG bunkering industry. "What you've seen in Florida is interesting, where third parties and more specialised companies are focused on the the bunker market, and not some of the bigger [LNG] players. At least in the US, that's the pattern," Feer said.

In early September, GAC participated in the first LNG bunkering by a non-US-flagged vessel in the country, alongside Sweden's Furetank and Eagle LNG, in Jacksonville, Florida.

The process involved a dual-fuelled vessel owned and operated by Furetank, with GAC brokering the LNG fuel and providing ship agency services to the vessel. Eagle LNG Partners transferred the fuel to the ship when it called at Jacksonville Port Authority's (Jaxport) Talleyrand Marine Terminal.

The companies said it paved the way for more internationally trading vessels to bunker at Jaxport. It also noted that this was the first time that GAC's bunker fuels division had secured a deal to supply LNG as a marine fuel. Browne said GAC was speaking to other prospective customers about similar deals.

"In the immediate term, this is dependent on the voyage plans of some of the LNG-fuelled vessels currently in operation, the vast majority of which trade in Europe," he said. "We anticipate there will be growth in LNG-fuelled vessels across multiple segments regularly calling at all US coastlines."

GAC is confident that LNG will have a significant role to play in the overall bunker fuel mix. "As demand for cleaner shipping increases, the delivery infrastructure for LNG will improve at all of the major bunkering ports," Browne said.

Feer, meanwhile, also sees prospects for further uptake of LNG bunkering despite some of the hurdles involved. "You have cruise ships going out of the US to the Caribbean so there's scope for that. You have a lot of shorter haul, other kinds of cargoes going from the US out into the Caribbean, out into Latin America, so there are prospects there."

These are not the only routes, however. On September 15, the Alexander Cairo Port District in Illinois, Plaquemines Port Harbor & Terminal District in Louisiana and American Patriot Container Transport announced an agreement. The deal involves both ports offering container-handling services for new inland waterway vessels that would run on LNG.

Separately, a ship carrying four LNG fuel tanks for the largest LNG bunkering vessel under construction in the US sailed in September from China to Sturgeon Bay, Wisconsin. The tanks will be installed in a new 5,400 m³ LNG bunker barge being built for Polaris New Energy.

Despite these steps forward on individual projects, however, LNG-fuelled vessels continue to only account for a tiny proportion of the fleet, and obstacles to growth remain considerable. "Not to say people aren't interested in LNG, but it's relatively expensive, it's pretty complicated and there's no real guarantee that it achieves your objectives in the long run," Feer said. •