

Ghana import project homes in on FSU For Tema LNG Terminal

Partner Gasfin believes using a floating regasification unit newbuilding and an existing vessel modified for storage could offer big savings over an FSRU



An impression of the new breakwater, which will provide protection for the permanently sited floating regasification unit, storage vessel and visiting LNG carriers Photo: Gasfin

A development consortium building Ghana's first LNG import terminal is expected to either buy or charter an existing LNG carrier before the end of this year to modify for use as a floating storage unit (FSU).

Tema LNG Terminal Co (TLTC), which is led by African-focused fund Helios Investment Partners and includes LNG infrastructure provider Gasfin Development, has been looking for a minimum-sized ship of 127,000 cbm or more in capacity.

Combined with a floating regasification unit (FRU) barge newbuilding, the two will be able to offer 155,000 cbm of storage capacity.

Project officials said they are close to contracting the vessel for the FSU, which is likely to require three to six months in dry dock before it is ready.

Gasfin has taken the lead on putting together the design of the import project.

Company chief executive Roland Fisher estimates this solution offers around \$100m in cost savings over using a floating storage and regasification unit.

Fisher said the complexity for Ghana is to create a berth that offers 100% occupancy year-round. The country's Tema port is exposed to the long period swells from the South Atlantic, limiting times when ship-to-ship operations can be carried out.

To overcome this, Gasfin, which previously had been working on similar but since stalled projects for Martinique and Trinidad, is building a 750-metre long breakwater, which will contain the FRU and the FSU.

FRU specs

The 28,000-cbm FRU newbuilding will be fitted with two type-C tanks and can remain on site in class for 25 years. The 95-metre length overall FRU is being built by Jiangnan Shipyard in China. A price of \$75m to \$80m has been reported for the unit but Gasfin declined to comment on the cost.

The barge will be delivered at the start of the first quarter of 2020 and held in place by a collar and post piling system. It will be capable of handling a throughput of 2.2 million tonnes per annum.

Mooring dolphins will be built to secure the FSU and visiting LNG carriers will moor alongside the unit and discharge into it.

A one-kilometre subsea pipeline will be built to send gas ashore.

Fisher said all permits for the project are now in place for construction and TLTC has a concession to be there for 25 years.

Under the arrangements, TLTC supplies the terminal and Russia's Rosneft is contracted to supply gas to Ghana National Petroleum Corp under a 12-year agreement. The Russian energy company stepped in when Gazprom Marketing & Trading withdrew from the project.

Some of the gas is expected to be used to supply Karpowership's floating powerships, which are located in the port of Tema.

Fisher said Gasfin is working on several similarly designed projects.

"We believe this approach is relevant to many of the potential new markets where volumes required are less than two million tonnes per annum because it is much more cost-efficient and really has no material limitations over a large FSRU," he said