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Qatar Petroleum (QP) is once again transforming the global LNG business after taking a final investment decision (FID) to develop the world's largest ever LNG project, which will raise the Gulf nation's LNG production by 33 mtpa to 110 mtpa from 2025. As well as being the most competitive LNG project in the world, the North Field East (NFE) expansion project is expected to set an industry benchmark for emissions reduction efforts as it includes one of the largest ever carbon capture and sequestration (CCS) systems.

QP announced the FID on the NFE project on Monday afternoon after awarding the onshore engineering, procurement and construction (EPC) contract to CTJV – a joint venture between Chiyoda Corporation and Technip Energies.

CTJV, which built six of the existing trains at the Ras Laffan LNG plant, was one of three consortiums bidding for the EPC contract, worth a reported ~USD 13 billion.

Under the terms of the contract, CTJV will construct four 8 mtpa capacity LNG trains. Additionally, the joint venture will construct the associated facilities for gas treatment, natural gas liquids recovery, as well as helium extraction and refining within Ras Laffan Industrial City, QP said in a statement.

The deal also covers the construction of a "large CO₂ Carbon Capture and Sequestration facility, leading

to more than 25% reduction of Green House Gas emissions when compared to similar LNG facilities,” Technip Energies said in a statement.

Commenting on the decision to take FID on the NFE project, QP’s CEO Saad Sherida Al-Kaabi said: “The execution of this EPC contract marks the commencement of the construction of the North Field East LNG Project, and is a significant landmark in Qatar Petroleum’s strategic growth journey in a sustainable manner.”

“The total cost of the NFE project will be 28.75 billion dollars, making it one of the energy industry’s largest investments in the past few years, in addition to being the largest LNG capacity addition ever, and the most competitive LNG project in the world.” added Al-Kaabi.

The FID announcement was later than the market expected, with Al-Kaabi having last year suggested the EPC contract would be awarded before the end of 2020.

One LNG expert suggested the timeframe for the project seems lengthy considering it’s a brownfield expansion project.

“The announcement says first production is expected in Q4’25, which means a 4.5 year construction period which looks long given that they are building on an established site at Ras Laffan and work started on some of the offshore development in 2019,” the expert told Gas Matters Today.

“It is probably realistic to be cautious given the size of the project and the fact that work will be starting during a global pandemic,” the expert added.

QP expects to award the EPC contract for the LNG storage tanks within the next two weeks, with a tender offering a 30% stake in the brownfield expansion project to be launched next week, Al-Kaabi was quoted as saying.

QP is in talks with long-time partners Exxon, Chevron and ConocoPhillips regarding the stake, Al-Kaabi said, adding that several Asian LNG buyers are interested in farming into the project.

Setting the bar

The launch of the NFE project should worry Qatar’s LNG competitors – not only is the project “the most competitive” but central to the project is an emphasis on reducing emissions.

“Today’s decision carries even more significance considering that it encompasses a number of concrete environmental investments in support of our strong commitment to achieve the highest environmental standards and to provide a credible solution in the low-carbon energy transition,” said Al-Kaabi.

“One of the most important environmental elements of the NFE project is its CO2 capture and sequestration (CCS) system that will be integrated with our wider CCS scheme in Ras Laffan, which - once fully operational- will be the largest of its kind in terms of capacity in the LNG industry, and will be one of the largest ever developed anywhere in the world,” added Al-Kaabi.

In addition to the CCS project, a “significant portion” of the project’s power needs will be sourced from solar plants, with NFE to include a jetty boil-off gas recovery system – helping to cut greenhouse gas emissions (GHG) by 1 mtpa of CO2 equivalent. The expansion project will also conserve 10.7 MMcm of water annually by recovering 75% of the plant’s tertiary water, QP said.

One market observer told Gas Matters Today that QP's emphasis on reducing the emissions footprint of its LNG production "now makes it necessary for any new project to take these issues into account".

QP's new project, including the mega CCS project and the offshore investment, will cost ~USD 870/tonne, which the LNG expert said is "very competitive".

In comparison, US LNG developer NextDecade said its first stage development of its Rio Grande LNG (RGLNG) project will cost USD 600/tonne for two trains and USD 543/tonne for three trains. NextDecade, which says its project is expected to be the lowest cost per tonne greenfield project on the US Gulf coast, has said it is targeting carbon neutrality at its RGLNG facility. It is however unclear if the cost estimate factors in emissions reduction technology, with NextDecade pursuing CCS for its project.

Last year saw several proposed liquefaction projects – particularly in the US – push back FIDs due to the low price environment. If Qatar's competitors are to factor in emissions reduction efforts going forward, project costs and cost of supply could increase, which stand to favour QP in its efforts increase production further to 126 mtpa by 2027.

Speaking to the Financial Times on Tuesday, Al-Kaabi said that at "least half" of proposed liquefaction projects scheduled to start in the coming years "will not happen".

"There isn't a lot of money that will be helping oil and gas companies. But the pure economics of these projects do not fly any more at low oil prices," Al-Kaabi told the FT. - ET

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