

Friday, June 12, 2020

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Features

Mozambique Sees LNG as Catalyst for Development

Mozambique's government is hoping that LNG will create a stable economic base for the country, but an Islamist insurgency in the dirt-poor province of Cabo Delgado could impede progress toward that goal.

Three LNG projects are under development in the province, utilizing gas from large fields discovered in the offshore Rovuma Basin. If all goes well, they could be transformative for the southeast African country's economy.

Energy Minister Max Tonela said during a presentation this week that the government is focused on building local skills and competence to support the emergence of an LNG industry in Mozambique.

"We are focused on local companies and local communities. There's a comprehensive program to promote participation by local players, to involve local businesses and there are some training initiatives in place," Tonela said.

Investing in the creation of local contracting capacity in Cabo Delgado could help to erode support for the shadowy group behind the insurgency, as the government struggles to contain the violence while also fighting the coronavirus.

Italy's Saipem -- which leads a consortium that will build Total's planned 12.9 million ton per year Mozambique LNG plant -- recently outlined some of the challenges it expects to face.

"The project is highly complex," said Saipem CEO Stefano Cao. "Why? It's a new country for us, a new region within the country that has never been exposed to any industry. We need to build a new industry, we need to support the supply chain, we need to develop the 'S' part of ESG [environmental, social and governance]," he said.

The \$6 billion contract awarded to Saipem and consortium partners Chiyoda and McDermott last year is the biggest to date for the Italian company ([LNGI May29'20](#)).

Due for start-up in 2024, and located on the remote Afungi Peninsula 3,000 kilometers from the capital, Maputo, the project will involve a peak of around 20,000 workers on site.

Saipem's head of onshore engineering and construction, Maurizio Coratella, said equipping members of the local community with skills and competence would have a big impact.

"We cooperate with universities, we train personnel who will then be employed during the construction phase. We also develop skills of all those in related activities," Coratella said. Local procurement of services and supplies will also play an important role in generating benefits to the local community, he added.

Saipem did not comment on how the coronavirus was currently affecting the project. However, Mozambique's health authorities reportedly authorized Total this week to resume work at Afungi after the site was locked down in April and work was reduced to a minimum due to an outbreak of Covid-19 ([LNGI Apr.22'20](#)).

Mozambique LNG is one of three projects where work is under way.

Eni's smaller 3.4 million ton/yr Coral floating LNG development in Area 4 of the Rovuma Basin is due to start up in 2022.

Exxon Mobil's yet to be sanctioned Rovuma LNG is the biggest of the projects, with planned output of 15.2 million tons/yr, and will be built on the same site as Mozambique LNG ([LNGI Apr.29'20](#)).

The LNG will be sold to target markets in Asia and southern Africa, where gas demand is growing, and "compared to Qatar, we will be able to market considerable volumes of gas in less time," Tonela said ([LNGI May25'20](#)).

The natural gas will also be used locally to fuel power generation plants and to make fertilizer and liquid fuels, Tonela said.

Allianz Global Investors portfolio manager Giulia Pellegrini also emphasized the importance of creating a strong governance model.

"Mozambique is in a delicate situation," she said. The country was battered by cyclones last year and now faces the challenges associated with the coronavirus pandemic. Although it has had a fairly limited impact on Mozambique as a whole so far, there has been significant economic damage.

Mozambique is talking to the International Monetary Fund about reform-linked aid to improve governance, including the management of natural resources, Pellegrini said ([LNGI Jan.22'19](#)).

"In our opinion it is important for Mozambique for its sustainable development, and for its attractiveness to use this period as an opportunity to consolidate and strengthen governance systems and growth strategies that are centered around social, environmental and financial sustainability."

Deb Kelly, London

Sarawak's two-year legal dispute with Malaysia's state-owned Petronas over the taxation of petroleum products in the East Malaysian state remains unsettled as the gas-rich state backpedaled a month after both parties stated that an agreement had been reached ([LNGI May12'20](#)).

Relations with Sarawak are important for Petronas because Bintulu LNG, one of the largest liquefaction plants in the world, a nine-train facility with the capacity to produce around 30 million tons per year, is located in Sarawak, Malaysia's province on the island of Borneo. Bintulu makes up the bulk of Petronas' LNG supply portfolio ([LNGI Jun.4'20](#)).

"It was a statement based on discussions back then, and today, I am making it clear that we will continue our civil case against Petronas. Our sales and service tax is nonnegotiable," Malaysian state news agency Bernama reported, citing Amar Mohd Asfia Awang Nassar, the chairman of the Sarawak state assembly consultative committee.

Based on Petronas and Sarawak's joint statement in May, Petronas agreed to pay sales taxes worth 2 billion ringgit (\$461.28 million) to Sarawak for the sale of petroleum products in 2018. But Sarawak has now moved back to its initial claim, seeking to recover 2.87 billion ringgit, and it does not plan to negotiate a reduction on the amount, Nassar was quoted as saying.

Sarawak's move follows the appointment of Tengku Muhammad Taufik Tengku Aziz as Petronas' new CEO by Malaysia's Prime Minister Muhyiddin Yassin after Wan Zulkiflee Wan Ariffin retired, effective at the end of this month ([LNGI Jun.9'20](#)).

Wan Zulkiflee's surprise retirement follows the fall of the ruling Pakatan Harapan coalition after defections left it without a majority in parliament. The new government holds onto a razor-thin majority, a precarious situation that could push it to make concessions in a bid to strengthen its position in the parliament.

Marc Roussot, Singapore

Market Insight

LNG Netbacks at Key Receiving Terminals

LNG Exporter Netbacks Between Key Receiving Ports													
(\$/MMBtu)	Algeria	Australia West	Australia East	Malaysia	Nigeria	Norway	Oman	Peru	Qatar	Russia	Trinidad	US Gulf	US East Coast
Dahej, India	-0.89	-0.63	-0.76	-0.67	-0.95	-1.08	-0.47	-1.10	-0.50	-0.76	-1.13	-1.24	-1.09
Sodegaura, Japan	0.36	0.97	0.99	0.98	0.41	-0.98	0.84	0.05	0.79	1.14	0.07	-0.29	0.41
Zeebrugge, Belgium	0.91	0.21	0.08	0.20	0.70	0.86	0.50	0.03	0.45	0.07	0.78	0.43	0.82
Huelva, Spain	1.16	0.47	0.34	0.46	0.93	0.89	0.75	0.26	0.70	0.33	1.00	0.62	1.00
Isle of Grain, UK	0.93	0.22	0.08	0.21	0.72	0.87	0.56	0.04	0.46	0.08	0.79	0.45	0.83
Everett, US	0.82	0.08	0.23	0.07	0.66	0.64	0.01	0.41	0.33	-0.08	0.91	--	--

LNG Market Indicators

Spot LNG Pricing				
	Latest WGI	Daily	Daily Chg.	Chg. From Latest WGI
NE Asia	2.15	1.76	-0.48	-0.39
SW Europe	1.75	1.75	0.14	0.00
Futures Pricing				
(\$/MMBtu)	Chg.	Latest	Previous	Week Ago
Henry Hub, US (futures)	0.03	1.81	1.78	1.82
NBP, UK (futures)	+0.11	1.62	1.51	1.63
European Spot Pricing				
	Chg.	Latest	Previous	Week Ago
NBP (UK)	-0.15	1.43	1.58	1.53
Zeebrugge (Belgium)	0.01	1.02	1.01	--
Dutch TTF	0.04	1.23	1.19	1.16
German NCG	-0.07	1.19	1.27	1.18
US Markets				
US Spot Prices				
Sabine Pass, Louisiana	-0.01	1.68	1.69	1.70
Corpus Christi, Texas	-0.04	1.65	1.68	1.68
Cove Point, Maryland	-0.11	1.48	1.59	1.44
Elba Island, Georgia	--	--	--	--
Nymex Henry Hub Futures				
Near Month	0.03	1.81	1.78	1.82
Second Mth	0.03	1.90	1.87	1.92
Third Mth	0.03	1.95	1.93	1.97

Briefs

China's Domestic Gas Production Is Back to Normal

China's domestic natural gas production has gone back to normal as most cities in China have lifted lockdown policies and state-run gas majors are keen to produce more domestic gas to please the central government, and make more profits amid current low international oil prices ([LNGI Jun.11'20](#)).

Domestic gas production has increased 10.8% year-on-year this May. Of the total domestic output, conventional gas output increased 9.4% year-on-year last month while unconventional gas output increased sharply by 20% compared to the same month last year.

Ironically, China's gas imports only increased 0.8% year-on-year this May, according to a unit called The Exchange.

"The epidemic has [a] very limited impact on domestic gas production, but will raise a lot of uncertainty to China's gas imports," Zhang Shuqiu, a senior official from Sinopec's upstream exploration and production sector, told the US-China Gas Industry Cooperation Workshop this week in Beijing.

The epidemic impacted China's domestic gas production this February because lockdown policies in most Chinese cities meant that workers, equipment and materials couldn't be transported to gas fields. But gas production quickly recovered this March and April and is totally back to normal now, said Zhang.

The Exchange predicted China's gas supply would hit 25.4 Bcm (29.89 Bcf/d) this June and 26.8 Bcm (30.52 Bcf/d) this July respectively, from 26.68 Bcm (30.38 Bcf/d) this May.

The oversupply trend is expected to continue as the rate of demand recovery is weaker than that of production recovery.

Russian LNG Export Revenue Drops on Low Prices

Revenue from Russian LNG exports dropped 34.1% on the year to \$2.4 billion in the first four months of 2020 due to the drop in gas prices globally, according to the country's customs data.

In terms of volume, LNG exports fell 12.7% on the year to 20.2 Bcm in January-April, the customs service said. The four-month export decline follows a 42% increase in three-month exports. The sharp change might be due to flaws in the reported data. Last year's March exports were reported at an unusually low 2.6 Bcm although there were no major shutdowns, while last year's April figure was unusually high at 11.4 Bcm.

This year's monthly exports are closer to normal levels, at 3 Bcm in March and 3.5 Bcm in April, according to the customs service.

Natural gas supplies globally took a hit this year amid the largest ever decline in demand due to the coronavirus pandemic ([LNGI Jun.11'20](#)). But exports from Russia's two large LNG plants, Novatek's Yamal LNG and Gazprom's Sakhalin-2, have looked relatively healthy, with no significant decline in cargo offloading, despite the low prices ([LNGI Jun.1'20](#)).

Russian LNG exporters tend to keep on sending cargoes, betting on higher-priced long-term contract deliveries which might be offsetting the losses from sales on spot where prices are extremely low.

Exports of Russian pipeline gas, the key rival of LNG in Europe, have been hit harder this year. They decreased 24.1% on the year to 59.6 Bcm in the first four months, while revenue dropped 52.3% to \$8.3 billion, according to customs data ([LNGI Jun.4'20](#)).

Study Suggests Growth in Small-Scale LNG Market

A study released by Reportlinker.com is forecasting growth in the global small-scale LNG market from \$2.3 billion this year to \$2.6 billion by 2025.

The study's authors concluded that the growth will be caused by various factors, such as increasing demand for small-scale LNG from heavy-duty vehicles; marine transport; and industrial and power applications. However, factors, such as limited receiving terminal infrastructure in the Asia-Pacific markets and the fluctuating price of small-scale LNG are likely to hinder the growth of the market.

The heavy-duty vehicle segment is expected to account for the largest market share during the five-year forecast period. The largest growth in this segment is expected in China and Europe. "LNG is the most viable option for long-haul LNG-fueled trucks globally," the authors wrote ([LNGI Feb.28'20](#)). The marine transportation segment will continue to grow in Asia and Europe and remain at a very slow pace in the US ([LNGI Jun.9'20](#)).

A breakdown of the global market shows Europe in the lead, following by the US; the Asian-Pacific countries; the Middle East and Africa; and South America rounding out the field. "The growing population and economic growth in major countries, such as China and Taiwan, and growing disposable income will also drive the market," the report says.

Partnership Formed to Study Greening LNG

Siemens Gas and Power is partnering with Total to advance new concepts for green LNG production that include greater use of automation as well as new compression trains that use less power.

As part of the contract, Siemens Gas and Power has started studies to explore a variety of possible liquefaction and power generation plant designs, with the ultimate goal of decarbonizing the production portion of the LNG industry ([LNGI Jun.4'20](#)).

"Siemens Gas and Power is committed to supporting the LNG industry's efforts to reduce carbon emissions through the application of proven equipment solutions and by providing financial, technical development and strategic support to customers in the early concept development and pre-Feed stages of projects," Siemens Energy Oil & Gas Division CEO Thorbjørn Fors said ([LNGI Mar.17'20](#)).

The studies are targeting key areas, such as reducing the environmental footprint of LNG liquefaction facilities and the associated greenhouse gas emissions, plant reliability, maintainability, regulatory compliance and development costs ([LNGI Feb.24'20](#)).

Concepts to be explored include the use of gas turbine- and electric-driven compression trains in conjunction with proven single-mixed refrigerant and double-mixed refrigerant technologies, selecting equipment that can minimize or eliminate process flaring and developing techniques to

improve the efficiency of onsite power generation facilities (heat recovery systems, inlet air chilling, supplementary firing, renewables integration, battery storage, etc.). The studies are also exploring how to leverage digitalization and automation platforms to optimize plant design and achieve seamless project execution.

There was no timeline released by the partners when the studies will be completed.

Eni and Kogas to Cooperate in LNG

Italy's Eni has signed a memorandum of understanding (MOU) with South Korea's Kogas to cooperate in the LNG sector.

Under the MOU, which was signed by Eni CEO Claudio Descalzi and Kogas President and CEO Hee-bong Chae on Jun. 11, the two companies will aim to cooperate on potential E&P projects, LNG projects, downstream and infrastructure projects, as well as low-carbon energy projects.

The two companies have previously worked together in LNG E&P in Africa, the Middle East, Southeast Asia and the Mediterranean.

"Our strong relationship can settle the basis for a new business with the aim of the second Mozambique Area 4 and Iraq Zubair project, which represents the new energy era," Chae said.

Alongside Exxon Mobil, China National Petroleum Corp., Portugal's Galp and Mozambican state ENH, Eni and Kogas have a stake in Mozambique's Rovuma LNG project ([LNGI May29'20](#)). The future of the \$30 billion, 15.2 million ton/yr Rovuma LNG project hangs in the balance however. In April Exxon, which is in charge of the onshore part of the project, pushed back a final investment decision until next year ([LNGI Apr.8'20](#); [LNGI Apr.29'20](#)).

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