LPG in World Markets

Indonesia's LPG demand to grow despite gas pipeline buildout

Indonesia is expanding its gas pipeline network to supply natural gas to residential customers in a bid to curb the growing reliance on imported LPG which has been promoted through costly subsidy programs to shift from using kerosene. In 2018, higher gas consumption limited the growth in LPG demand and imports; however, with the LPG subsidies still being offered and geographical challenges in building a comprehensive gas pipeline network, LPG consumption will continue to increase in coming years.

Indonesia's downstream oil and gas regulatory body BHP Migas estimates the existing gas network that spreads across provinces from the west to the east of the country has reduced LPG imports by Rp 18 billion/m or $1.3 million/m. It appears that increased gas connections as well as other market fundamentals have reduced growth in LPG demand to 2% in 2018 from 14% in the previous year.

According to BPS Indonesia, LPG imports only grew by 1% in 2018 to 5.5 MMt/y, which is a sharp contrast from the 28% growth in imports in previous year. However, Indonesia's pipeline developments are not expected to cut LPG imports this year or in the next few years as gas will still supply a small portion of the population.

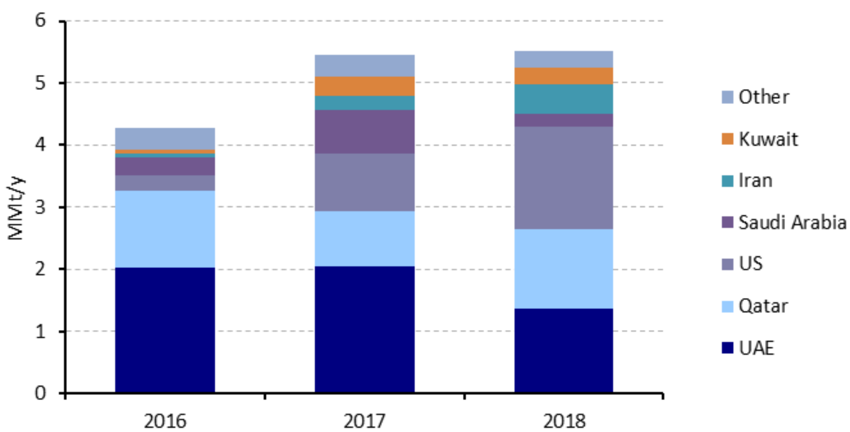
It will be very difficult for the government to scale the gas pipeline network to connect large number of households in a short time given Indonesia's geography. There are 65 million households in Indonesia and only about 470,000 are currently connected to the gas network. There are plans to connect another 78,000 in 2019 and 3 million households by 2025. At this rate, it would take a very long time to connect even a quarter of the population to natural gas.

As a result, Indonesia's domestic consumption of LPG is expected to continue growing in the coming years with the help of government subsidies towards LPG use, especially in households. Jakarta has subsidized the use of LPG among low-income households; however, the program has become quite costly for the government. In 2018, a total of $8 billion was spent when the original budget allocation was capped at $6.5 billion. The high cost of the program has been blamed on strengthening crude oil prices, the weakening of the Indonesian rupiah against the US dollar and the unwillingness of the incumbent government to make unpopular decisions before the election in April 2019.

The program is also somewhat problematic as some households with high income are able to avail themselves of the subsidized cylinders. Despite the program's flaws, LPG is still heavily subsidized, and the government is taking some steps that will primarily benefit low income earners by enforcing direct subsidy instead of indirect subsidy, similar to how India's subsidies currently work. This will minimize the prevalence of fraud. The switch will happen later this year.

The country's LPG demand is estimated to increase by around 10-15% yearly, according to trading sources. However, Poten expects, demand will increase by 5% to 8.9 MMt in 2019, boosting imports by 7% year over year. The relatively smaller demand growth is due to the incremental gas use. In addition, there is also push for gas-to-electric stove conversion to shift from LPG use to electric cooking. West Java, which accounts for 20% of the national quota for subsidized LPG, launched the program in March 2019.

Indonesia's LPG imports by country



Source: Reuters/Poten

Most of Indonesia's LPG imports are covered under term contracts delivered on FOB basis. Around 80-90% of their volumes are under term agreements, the rest are lifted from spot market. Traditionally, Indonesia has relied on the Middle East as its main source of LPG; however, imports from the US have increased sharply in the past two years. In 2017, imports from the US grew nearly four times to 930,000 t due to rising demand and in 2018 imports grew by another 80% to 1.7 MMt/y. However, the growth in 2018 was more driven by the US-China trade war that forced traders to swap their US-origin cargoes bound for China with mostly Middle East cargoes and sell the US cargoes in other countries in Asia rather than China.

As a result, US was the top exporter to Indonesia in 2018 replacing the UAE which exported 1.4 MMt, a 33% decline from the previous year. Exports from Qatar rebounded in 2018 to 1.3 MMt/y after falling 28% in the previous year. Most recent available trade data shows January imports were up by 2% year-over-year to about 412,270 t. Ship tracking data shows, VLGC/LGC imports were up by 1% to 1.4 MMt from February through April despite a sharp drop in February imports.

Elaborate gas network under development

To reduce the growing reliance on LPG and a desire to cut subsidy spending, the Indonesian government has put forward an ambitious plan by investing heavily in natural gas infrastructure expansions and coal gasification. However, the proposed new pipelines will only be able to connect a small portion of the population.

BHP Migas is commissioning three gas pipelines under the national gas development masterplan, with a combined length of 1,667 kilometers. The three gas networks are the Natuna-West Kalimantan pipeline which will span 487 kilometers at an estimated cost of $565 million. The second pipeline network is the West Kalimantan to Central Kalimantan which will be 1,018 kilometers long at an estimated cost of $516 million. Lastly, the pipeline from Central Kalimantan to South Kalimantan will be 162 kilometers long at an estimated cost of $97 million. All three projects are estimated to reach approximately $1.25 billion in cost for BHP Migas.

The mammoth project will supply gas to Indonesia's three western islands – Sumatra, Kalimantan and Java. Apart from the three gas pipelines, Jakarta will also develop a pipeline from Cirebon in West Java to Central Java's Semarang, which is handled by PT Pertagas, a subsidiary of state-owned PT Pertamina. The construction of the pipeline will be completed by 2020 and will have the capacity to transport 250-300 MMscf/d (million standard cubic feet per day) to growing industrial and household demand in Central Java.

Further, the second phase of the Kalija pipeline, which has long been delayed, is also expected for development to connect Java to Kalimantan.

Pertamina expands LPG infrastructure

There are downstream infrastructure projects as well to support the increased consumption of LPG. In line with Indonesia's efforts for the conversion program of "Fuel Oil to LPG", Pertamina has been expanding its entire infrastructure, logistics and supply chain, as mandated by the Ministry of Energy and Mineral Resources (ESDM) in 2017. Its latest project includes the commissioning of four LPG terminals in the eastern part of Indonesia. The four facilities will vary in capacity – two tanks of 500 t each for a terminal in Kupang, one tank with 1,000 t for Bima terminal, two 1,000 t tanks for a terminal in Jayapura and two tanks of 1,000 t for a terminal in Ambon. The four terminals in the east are aimed to improve LPG distribution capabilities in that region, and potentially eliminate floating storage and offloading (FSO) units.

For its downstream segment, Pertamina estimates to have invested around Rs 36 trillion ($2.5 billion) for its new round of projects that are focused on fuel oil and LPG distribution nationwide, which includes the restoration or repair of some existing facilities. Out of the Rs 36 trillion, around Rs 10 trillion went to a total of 12 LPG terminals. Some projects have been completed; some are underway while some are still in the pipeline.