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Tapping into Africa's Refining Potential

Africa is home to a long list of oil-rich countries. In 2017, Africa's total crude oil production amounted to around 8 million barrels per day (bpd), with sub-Saharan Africa contributing an estimated 5.5 million bpd to global production. The stabilization of crude oil prices in 2017 has contributed significantly to the increase in the region's production, and to the opening up of new investment opportunities.

Paradoxically, Africa's top oil producing countries, counted among the world's fastest growing economies, are also major importers of refined petroleum products. While the continent's crude oil production is more than enough to meet its demand, the domestic refining output is far too low, forcing the region to export the lion's share of its production and rely on refined-product imports to satisfy the internal market's rising needs. An estimated total of 1.9 million bpd of refined products are currently being imported by African countries.

Nigeria

Traditionally ranked as Africa's leading crude producer and currently the sixth largest in the world, with a maximum production capacity of 2.5 million bpd, Nigeria is one of the major importers of refined products on the African Continent.

The four existing refineries – two in Port Harcourt, one in Kaduna and one in Warri – with a combined installed capacity to refine 445,000 bpd, are riddled with operational problems due to the prolonged lack of proper maintenance and are far from operating to their fullest capacity. According to the official information made available by the Nigerian National Petroleum Corp. (NNPC), in 2017 the highest capacity utilization was just under 37%, and in 2018 they are collectively producing at 14% capacity. Even if the four were running at full capacity, they would only be able to supply a quarter of Nigeria's fuel needs. This basically forces the country to import the vast majority of refined products it consumes (Nigeria reportedly imports one million tons of fuel per month).

NNPC has announced plans to rehabilitate and increase the utilization of the existing refineries. However, the state of decay and obsolescence of the plants and equipment is allegedly such that nearly $1.2 billion would be required to revamp and modernize the existing facilities. The much expected revamping of the four refineries was first announced in 2017 and will purportedly begin later this year, following discussions held with various consortia on the best funding alternatives. The total rehabilitation costs were not disclosed, and no financial commitments seem to be in place to-date.

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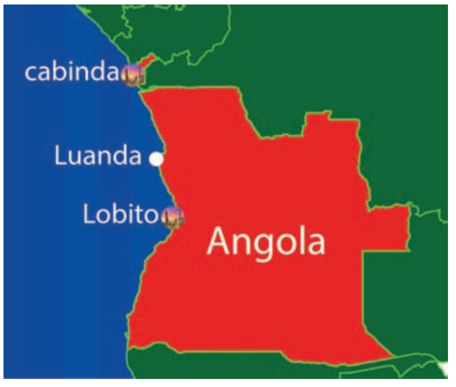
Angola

After overtaking Nigeria temporarily as sub-Saharan Africa's largest oil producer in 2017, Angola currently ranks second, with oil production for 2018 being forecast to be around 1.6 million bpd.



The only full-scale refinery operating in the country is a long way from meeting the domestic needs for refined products. With an estimated capacity of 65,000 bpd, the Luanda Refinery, built in the 1950s (100% owned by the state oil and gas company Sonangol, and heavily subsidized), produces 39,000 bpd at maximum capacity, covering about 20% of the country's demand for medium grade and heavy fuels.

This forces the country to rely on imported refined products to cover 80% of market demand, and whose prices fluctuate according to the latter. In addition, products refined by the country's single refinery are reportedly more expensive than imported products, due to the unit's age and structural inefficiencies.

Although plans for new refineries have been discussed on and off in Angola for a number of years, no new units have materialized.

South Africa

South Africa, the continent's most industrialized country, is also a net importer of refined oil products. It currently has six refineries –four crude oil refineries, one coal-to-liquid (CTL) fuels and one natural gas-to-liquid (GTL) fuels. These refineries do not operate at levels needed to meet the country's demand and require upgrading to be able to produce cleaner fuels to meet the automotive industry's requirements. South Africa is currently importing about a quarter of its refined products consumption.

Also, the Mossel Bay plant, the world's first GTL refinery and the third largest GTL refinery in the world, which represents around 6% of South Africa's refining capacity, is operating at less than half of its 45,000 bpd capacity and could allegedly run out of feed gas within two to four years when reserves dry out.

Future of African Refining

At a first glance, it could be deemed surprising that major crude oil exporters with proven reserves, like Nigeria and Angola, and more industrialized countries like South Africa, would be importing products they should be refining and selling, which in turn creates balance of payments problems. This however epitomizes a problem that a great majority of African countries have been facing in the last decades.

Less than 50 refineries serve the entire continent, many of which are obsolete and operating well below their capacity. Besides being insufficient and underperforming, most of the current refineries are not fitted out to produce the cleaner fuels required by modern engines or to comply with the most recent international environmental requirements and standards.

The upgrade and maintenance of the existing infrastructure and the construction of new refineries are high-cost ventures that pose unique challenges in the raising of financing, such as the volatile margins in the refining business, easily impacted by all kinds of factors affecting the global market. Moreover, most African countries are also perceived by many as involving additional risks – political, civil or economic instability, local content requirements, corruption, currency fluctuation, or government-backed subsidies to make fuel cheaper at the pump (a hefty cost for the States' budgets when the oil price is high) – that may discourage potential private investors. For those reasons, most of the ambitious refining projects announced in recent decades either remain on paper or have been mothballed due to financial constraints.

However, new winds of change seem to be blowing through the African continent with the hope to reduce the region's reliance on refined-product imports. Projects for the construction of new refineries or the revamping and upgrading of existing units have been recently announced in several countries, including Nigeria, South Africa, Mozambique and Angola.

The owner of the Dangote Group and ranked in 2018 by Forbes magazine as Africa's richest man, Aliko Dangote has recently decided to invest an estimated $10 billion (around $7 billion bank financing and $3 billion equity) in the construction of the first privately owned refinery in Nigeria, expected to be completed by December 2019. With a production forecast at 600,000 bpd, the facilities, already being built in the Lekki Free Trade Zone, will be Africa's largest refinery and a true game-changer in the continent's supply of fuel.

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At the end of 2017, the South African government also announced its intention to build a new refinery with a 400,000 bpd capacity with the help of its BRICS partners. The project, which had already been announced in the past, never evolved because of the lack of investment partners.

In Mozambique, while some seem to believe that a refinery in the country would be unviable, the state-owned National Hydrocarbon Company, ENH, launched in April 2018 a public tender for consultants to conduct a study to assess the economic and technical feasibility of building the country's first natural gas refinery. For that purpose, cooperation agreements were already signed between ENH and one of its partners in the Rovuma Basin Area 4, the Chinese National Petroleum Corporation.

As announced by ENH, while waiting for the gas from the Rovuma Basin's reserves to be piped onshore (which presumably will not happen before 2022) the immediate goal would be to import liquefied natural gas for in-country refining and subsequently selling and exporting the refined products to neighboring non-coastal countries, if the projected refinery were to be concluded before production.

2017 was also a changeover year for Angola. The regulation of refining activities in 2017, which had been awaited since the enactment of the 2013 legal framework on crude oil refining, more than just providing a new set of technical and procedural rules for the construction, operation and maintenance of refineries, sends a clear message to private players interested in investing in the (re)organization of the country's downstream sector. This message was further strengthened with the recent entry into force of a new Private Investment Law in June 2018. The new statute sets out principles and rules aimed at facilitating, promoting and accelerating private investment operations in Angola, introducing significant changes in the legal framework applicable to domestic and foreign investment.

The country is eager to attract investment for the building of new refining infrastructure and rehabilitation of its single operating refinery, having as a primary goal the country's self-sufficiency in refined products. At the end of 2017, Sonangol launched a tender for the construction of two refineries, one in the port city of Lobito and the other in the northern enclave of Cabinda. With completion planned for 2022, the Lobito Sonaref project – Angola's first attempt to overcome the lack of domestic capacity, put on hold since 2016 – is expected to process up to 200,000 bpd and create 10,000 jobs. No deadline or capacity has thus far been defined for the Cabinda project. By February 2018, more than 60 proposals from national and foreign companies and consortia had been submitted, with Sonangol having selected the best 14 bids. The due diligence and negotiations phase is currently underway.

Also, in June 2018, Sonangol and Italian major ENI signed a technical and financial assistance agreement for improving and expanding the Luanda Refinery over a 24-month period and increasing the unit's current capacity. The financing to be made by ENI, estimated at about $180 million, will be channeled to the overall maintenance of the refinery, the development of a business and operational model focused on sustainability and staff training, and the construction of a new refining unit.

If all these construction, rehabilitation and modernization projects come to fruition, the continent will witness a historical change in a critical sector. The increase in the domestic refineries' utilization levels and the new refining capacity would entail numerous benefits, starting with the reduction of the heavy import bills and freight costs (preventing the outflow of much needed hard currency reserves), the creation of jobs, the increase in refined-product storage capacity and the creation of stock, an increased tax collection, less exposure to the risk of oil theft, and the possibility to export any surplus products to other markets. In the long-run, said projects would lay the foundations for the creation of sustainable, well-organized and competitive refining markets.

African nations need to find alternatives to adequately finance these projects and their maintenance, either through the cooperation between the national oil companies and private investors or by making a bet in privately owned infrastructures. Even if the African region and the refining sector in particular are considered by many as a challenging environment for private investors, these fast-growing economies are providing unique opportunities for local and international players looking to enter new markets, who may end up becoming greatly needed regional or worldwide exporters of refined products.

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