

Advisory Outlook

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The Bottom-up Refining Revolution (1 of 4)



Olumide Adeosun

As Nigeria grapples with current economic realities, the market dynamics for refined products reinforces the country's potential to become West Africa's refining hub. The inherent opportunity for Nigeria's erstwhile dormant refining sector holds bright prospects for the future and a recognition of key drivers will accelerate the imminent refining revolution.



Ayodele Oluleye

This first article in a series of four, provides an analysis of the current state of the refining sector and the refining revolution which is set to take place over the next 5 years. It draws attention to the existing gaps in the supply of refined petroleum products in Nigeria and the West African region and it highlights the sizeable potential for domestic refining of petroleum products. The series will identify key drivers that will spur the growth of the refining sector in Nigeria.

Refining in Nigeria

Refining in Nigeria began a decade after oil was discovered in the oil-rich Niger Delta region in the 1950s. Initially starting out in 1965 with a refining capacity of 38,000 barrels per day (bpd), Nigeria's refining capacity has grown over the years and is considered the 4th largest in Africa. The nameplate capacity of 445,000 bpd is housed by 4 refineries strategically located in various states around the country: Rivers, Delta and Kaduna.

Despite having a nameplate capacity that should meet domestic demand, Nigeria still imports over 80% of refined products to meet its current needs. Unlike the production of crude, the production of refined products has been sub optimal and Nigeria has consistently struggled to keep its refineries functioning optimally. The outlook for refining has been tainted with uncertainty due to the adverse effects of subsidies, poor maintenance, general operational failure and inconsistent supply of feedstock. As a case in point, Nigeria's per capita refining capacity is 0.002 bpd/capita. Low even by Africa standards. Libya by comparison is 0.06bpd/capita, and South Africa 0.01 bpd/capita.

However, recent events such as advancement of the Nigerian National Petroleum Policy and the sustained depression in crude oil prices are ushering in fresh waves of optimism for the sector and we predict a paradigm shift from a "net imports" to "net exports" structure. This shift will see Nigeria become a net exporter of refined products and the refining hub of West Africa by the start of the next decade.

The Refining Opportunity

Nigeria is the second largest producer of oil in Africa, producing over 1.5 million bpd (as at January 2017). With proven crude oil reserve estimates of about 37 billion barrels as at 2015, Nigeria boasts of about 29% of the continent's crude reserves (2nd in Africa). Nigeria is also one of the largest consumers of refined products in Africa (5th as at 2014, behind Egypt, South Africa, Algeria and Morocco) and accounts for over 7% of Africa's refined products consumption. In 2015, the refined products consumption was estimated to be about 24 billion litres and products consumed include: Premium Motor Spirit (PMS), Automotive Gas Oil (AGO), Dual Purpose Kerosene (DPK) and Aviation Turbine Kerosene (ATK). To the detriment of national earnings, these products are majorly imported from United States, North Western Europe and other sources. Imports currently account for over 80% of Nigeria's refined product supply, creating a huge potential for local refining. The West African market also holds significant potential as refineries such as SIR (Ivory Coast), SOGARA (Gabon) and SAR (Senegal) cannot meet current demand for refined products in the region, estimated at 39 billion litres. There is an opportunity for potential uptake by neighboring countries if the market has Nigeria's refined products readily available.

Product Analysis

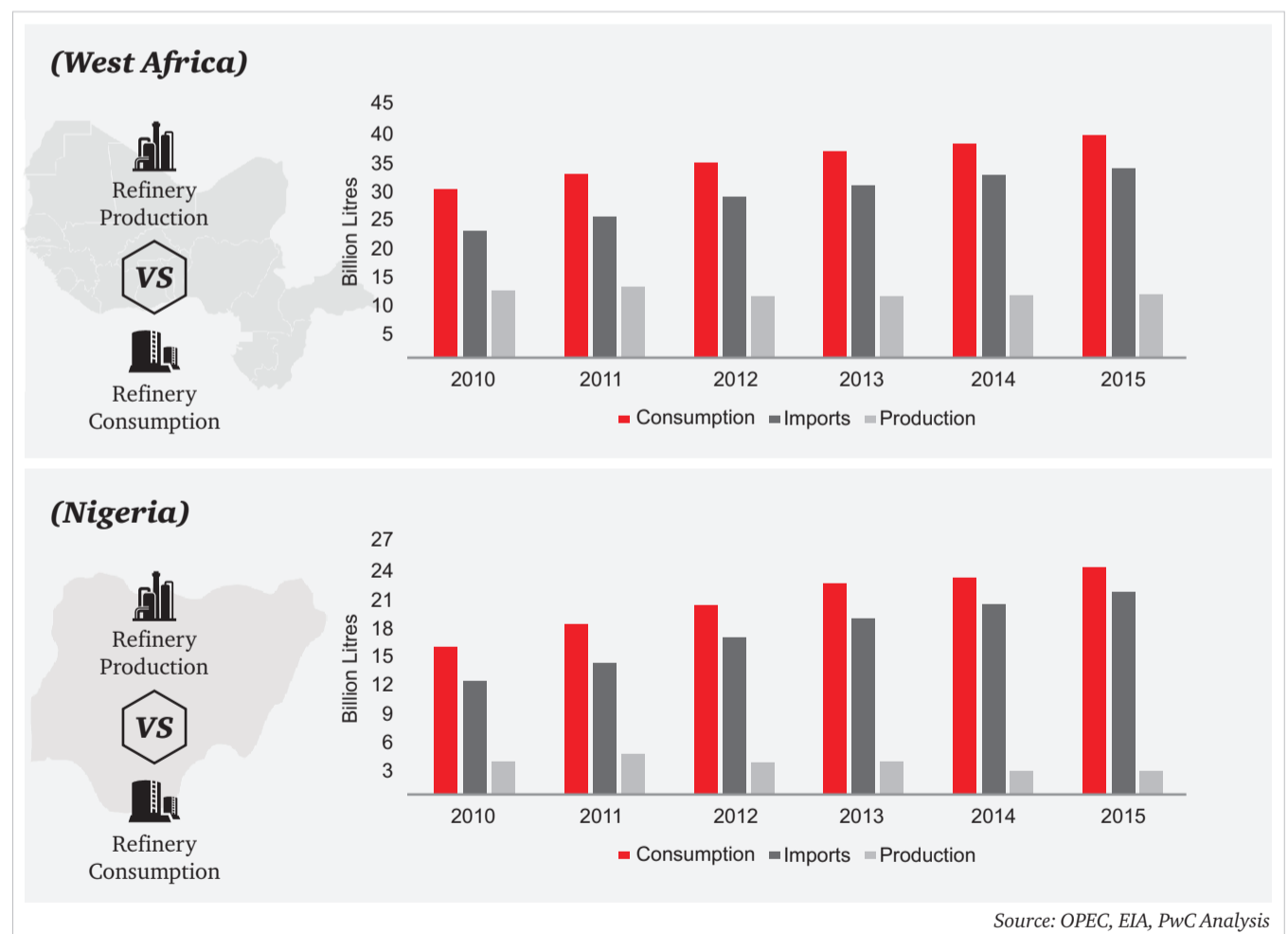
Premium Motor Spirit (PMS): Nigeria consumes over 17 billion litres of PMS annually. Transportation and power are the major drivers of demand for PMS in the country. Imports currently account for over 90% of PMS supplied in the country and this is likely to continue in the future. Imported PMS is primarily sourced from North Western Europe and United States. West Africa consumes over 22 billion litres of PMS annually. Imports currently account for over 90% of PMS supplied to the region.

Automotive Gas Oil (AGO): Nigeria consumes over 3 billion litres of AGO annually. The erratic state of the country's power sector has been the major driver of AGO demand. The power sector is currently plagued by a plethora of challenges, increasing the demand for self-generation options such as AGO powered generators. Imports currently account for about 60% of AGO supplied in the country.

West Africa consumes about 11 billion litres of AGO annually. Imports currently account for over 70% of AGO supplied to the region.

Aviation Fuel: Nigeria consumes over 400 million litres of Aviation fuel annually, most of which is primarily sourced from the United States. In 2014, Nigeria was the 2nd largest importer of US aviation fuel in the world. Imports account for 100% of the Aviation fuel supplied in Nigeria due to the inability of existing refineries to produce the fuel. There is a current deficiency in supply which is likely to continue in the short-to-medium term and this is primarily due to the shortage of foreign exchange and less to do with availability of product.

West Africa consumes over 1 billion litres of Aviation fuel annually with imports currently accounting for over 80% of Aviation fuel supplied to the region. SIR (Ivory Coast) is responsible for a significant portion of locally refined Aviation fuel within the region.



With oil prices expected to remain low in the medium to long term, the focus on ramping up domestic refining capacity should become imperative. Lower oil prices would mean cheaper crude feedstock and higher refining margins for refiners. Separately, following the combination of rising shale production in the US, continued oversupply in the export market and weak demand, the market for Nigerian crude is tainted with

uncertainty. A shift from crude production to crude value realization will see Nigeria becoming a net exporter of refined products by start of the next decade.

In the next article in this series, we will set out our views on the event triggers for the strategic leaps necessary to catalyze the refining revolution.

About the authors

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