Advisory Outlook

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# The Bottom-up Refining Revolution (3 of 4)

Olumide Adeosun

Nigeria is on the verge of altering the supply dynamics of refined products in the West African region. Nigeria's potential to become West Africa's refining hub is becoming imminent with a refining revolution finally underway. Nigeria's erstwhile dormant refining sector now holds bright prospects for the future and this will be triggered by various events

Ayodele Oluleye

The first two articles in this series highlighted the existing gaps in the supply of refined petroleum products within Nigeria and the West African region. We also discussed three scenarios of possible outcomes in the refining sector up until 2030, and found that Nigeria could balance supply and demand within 2.5 years.

This installment sets out the event triggers for the strategic leaps necessary to catalyze the refining revolution.

## Event Triggers for the Transformation

### Regulations

***Current situation***
The Nigerian oil and gas industry is heavily regulated and comprises multiple regulators including the Ministry of Petroleum Resources (MPR), Nigeria National Petroleum Corporation (NNPC) and Department of Petroleum Resources (DPR). The effectiveness of these bodies in the refining sector has remained debatable. Delays in the passage of the Petroleum Industry Bill (PIB) and full deregulation of the downstream sector are major factors which have consistently dampened investor's confidence in the potential of the refining sector. According to the Nigerian Extractive Industries Transparency Initiative (NEITI), Nigeria loses an estimated $15 billion yearly in foreign investments due to regulatory uncertainty.

***Our Assessment***
Effective Regulations will be a key driver for growth within the refining sector and therefore bold & decisive reforms are necessary. Regulations are pertinent to driving confidence within the refining sector and boosting attractiveness to potential investors. Full deregulation of the downstream sector remains the most glaring to boost the attractiveness of the sector. Removal of price caps on PMS is the key trigger.

The current institutional construct and policies need to be rationalized and reconstituted to drive efficiency of the sector. Setting up institutions that will be responsible for the co-ordination and regulation of all commercial activities relating to the downstream sector of the oil and gas industry and the regulation of transportation, transmission/distribution and marketing of downstream products will help drive efficiency and healthy competition within the sector. Policies which foster legal bunkering, access to feedstock for local refiners and export of refined products into the West African sub-region also need to be established.

Increasing refining capacity remains crucial to the government's plans for the downstream sector. The Ministry of Petroleum Resources' 7 Big Wins framework to reform the industry is the main vehicle to transit Nigeria from being a large-scale importer of petroleum products to a net exporter of petroleum products. Focus is also on increase in value-added petrochemicals to diversify its export base and enhance import substitution. Plans within the framework include committing about USD 1.8 billion for the rehabilitation of local refineries through private sector participation and promoting the setup of modular refineries.

Prima facie, these are encouraging steps in the right direction which increase the likelihood of a revitalisation of the existing refineries as well as the enactment of reforms which will drive private investment into the oil and gas industry.

### Security

***Current Situation***
Industrial sabotage, crude oil theft, illegal refining operations, pipeline vandalism and piracy present significant challenges in the industry. These have adversely impacted onshore oil and gas production and presented challenges in delivering the same to market. Nigeria lost over NGN 50 billion to pipeline vandalism between January and April 2016. The Government and oil and gas companies have embarked on several initiatives to curb instability within the Niger Delta region, however these have not yielded the desired results. Instability in the region has repeatedly forced companies to frequently declare force majeure on oil shipments.

***Our Assessment***
The major security threat in the oil & gas industry has been the disruptive activities of various militant groups. Restoring security and safety would require a multi-faceted approach involving the use of various pragmatic measures. In recent past, the government has adopted various measures to stabilize and engender peace within the Niger Delta region. These include: implementation of the amnesty program, the creation of the Ministry of Niger-Delta Affairs, and the establishment of the Niger-Delta Development Commission (NDDC). However, these institutional arrangements have not delivered effective results and therefore are being reconsidered & fine-tuned.

Institutions, and by extension programmes need to be structured to deliver specific developmental outcomes within the region. Interventions need to be sustainable and address the agitations of the South-South communities; which range from developmental neglect to environmental degradation. Intervention packages should be delivered as part of a 'social contract' with the citizens. Furthermore, these plans can be more efficient and effective if delivered as a mix of diplomacy and advanced security intelligence measures.

### Infrastructure

***Current Situation***
Damaged pipelines, shallow channels and the absence of an effective logistics backbone are major infrastructural impediments which have constrained growth within the refining sector and the broader oil and gas industry. For a sustained succession of months, damaged pipelines have impeded the supply of crude for refining operations. The rail system which will have been a viable alternative for transporting huge product volumes is sub-optimal and requires deep investments to be made. Similar issues exist on the inland waterways which are too shallow to accommodate for the safe use of oil tankers to transport crude oil and refined products to the hinterlands, so investment in dredging and barges is required.

***Our Assessment***
There is an urgent need for a well-planned intermodal transport system to ensure the efficient distribution of refined products. Rail and the Inland waterways are obvious, viable channels for transporting refined products across the country. These would complement the dominant road transport system and drive the efficiency and safety around transporting products.

Public-Private Partnership (PPP) is a key consideration for bridging Nigeria's infrastructure gap. However in Nigeria, despite the benefits associated with PPP, there are challenges to the use of PPP and these include: lack of contribution from the government, concern over expropriation by future administrations and risk of continuity. However, the onus is on the government to develop a structured model to deliver such projects efficiently.

The recent announcement of the USD 2 billion Nigeria railway concession project and plans by the National Inland Waterways Agency (NIWA) to improve the waterways for crude oil and refined products transportation, and the recent bid for concession of the narrow gauge Eastern & Western railway line are steps in the right direction. These efforts are required to bridge the existing gap caused by inadequate infrastructure.

### Feedstock Access

***Current Situation***
Without a doubt one of the biggest challenges which local refineries will be faced with is guaranteed supply of feedstock. This can be attributed to several reasons already cited in this paper, namely inadequate infrastructure, insecurity, unstable production amongst others.

***Our Assessment***
In Nigeria, local refineries will be required to explore varied options to ensure constant access to feedstock required to keep refining output at optimal levels. Feedstock can be sourced from various locations, however each location will have its corresponding cost implications. Distance from source and type of feedstock are two key considerations because they impact refining economics.

Refiners would be required to look beyond heavy reliance on the government for feedstock. Leveraging strategic partnerships with upstream oil and gas (onshore) producers and setting up close to crude sources are likely considerations to guarantee steady supply of crude. Sourcing for crude in international markets would be a likely option for conventional refineries which have sizeable crude requirements. On the other hand, modular refineries are likely to explore co-location within existing refineries and onshore marginal fields.

**About the authors**
Olumide Adeosun is an Associate Director & Head, Capital Projects and Infrastructure Advisory practice at PwC Nigeria. His industry experience is from over 10 years in a variety of finance & commercial roles with oil and gas supermajor, BP.
He can be reached at *olumide.adeosun@pwc.com*

Ayodele is a consultant with PwC Nigeria's advisory practice.
He can be reached at *ayodele.oluleye@pwc.com*