

UNDERSTANDING FUEL PROCUREMENT IN ZAMBIA | PART 2



Zambia's total petroleum requirements are met through imports as the country has not recorded proven reserves of crude oil. The petroleum industry in Zambia is made up of **TAZAMA Pipelines Ltd**, which is owned, by the Governments of Zambia and Tanzania, **INDENI Refinery, Ndola Fuel Terminal, Bulk fuel storage depots** and the **Oil Marketing Companies (OMCs)**. The major activities that take place in the petroleum sector are; **procurement, transportation, refining, distribution** and **supply petroleum products** to various customers at a reasonable cost.

THE PROCESS

Zambia imports a mixed petroleum feedstock consisting of Crude oil, Naptha and Diesel from the Middle East. **This petroleum feedstock is processed at INDENI Petroleum Refinery and sold to OMCs as finished petroleum products.** On behalf of the OMCs, transporters distribute the petroleum products mainly by road to the service stations and commercial customers.

The basic business activities involved in the petroleum sector are:

- **Procurement and financing** of petroleum feedstock;
- **Transportation of petroleum** feedstock from Dar-es-Salaam by pipeline to INDENI Refinery in Ndola;
- **Refining of petroleum** feedstock by INDENI Refinery; and
- **Storage and distribution:** The OMCs uplift the refined products from the Ndola Fuel Terminal and bulk fuel storage depots for distribution and sale to service stations and commercial customers.

Extract: PETROLEUM IN THE NATIONAL ENERGY POLICY 2019

Petroleum is wholly imported and subject to ever increasing international prices and uncertain supply. The high cost of petroleum imports affects the costs of production and development programmes.

Objectives

Objective 7: To ensure adequate, reliable and affordable supply of petroleum products and natural gas in order to increase security of supply of petroleum products.

Policy Measures

- 7.1 Enhance mechanisms for the development and effective management of the petroleum sub-sector;
- 7.2 Ensuring full capacity utilization of existing petroleum infrastructure;
- 7.3 Promote investments in the petroleum infrastructure;
- 7.4 Ensure the effective and efficient pricing of petroleum products;
- 7.5 Strengthen mechanisms aimed at ensuring uniform pricing of petroleum products across the Country; and
- 7.6 Petroleum Sub-Sector Infrastructure development to improve security of supply;

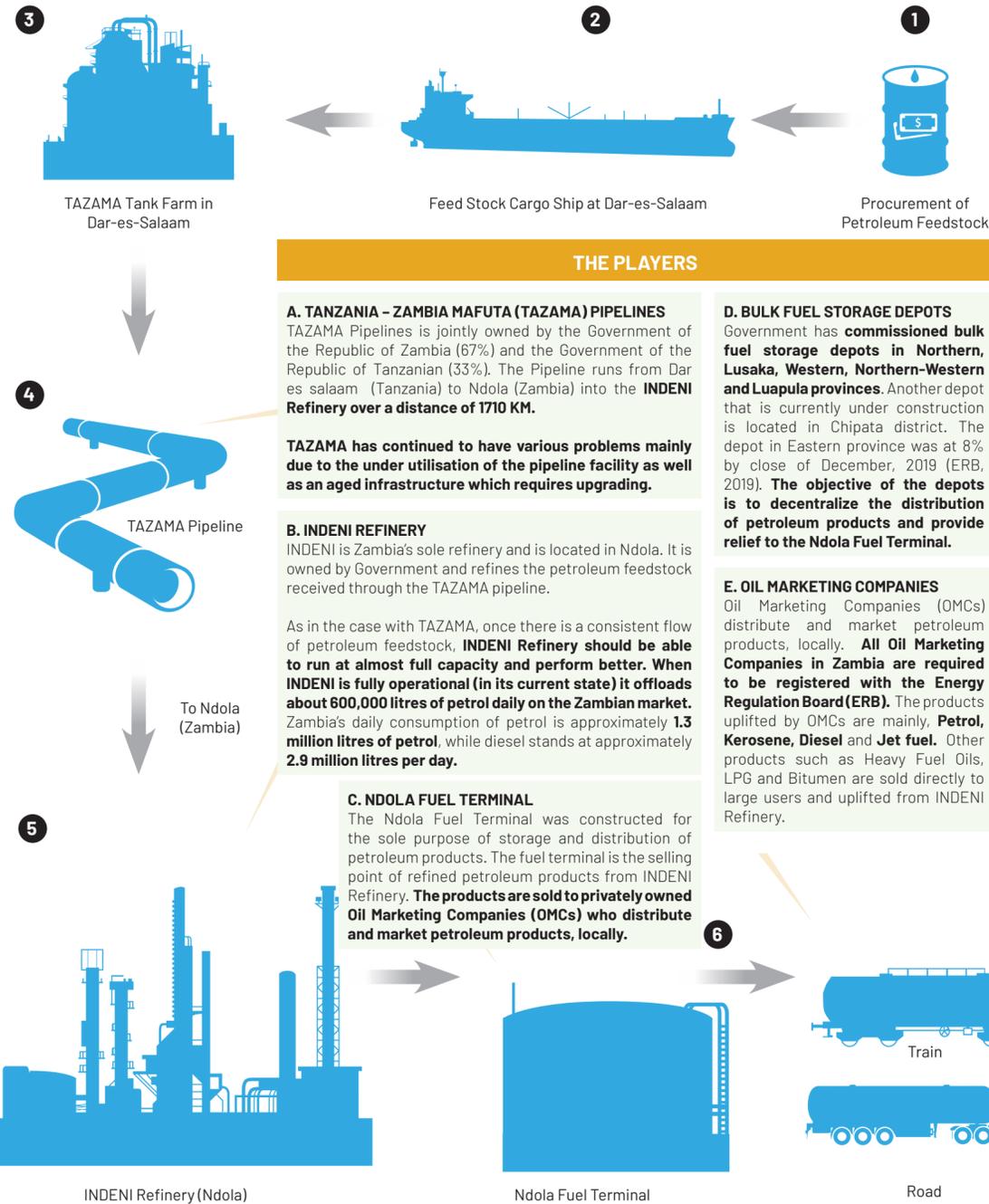
CHALLENGES

INFRASTRUCTURE: The state of the major infrastructure in the petroleum supply chain; namely the refinery and the pipeline need to be addressed. These assets are all over thirty (30) years old and require some investment to make them more efficient. At present, the refinery's production can only meet about 50% of national demand.

RECOMMENDATIONS

1. The Government is urged to revisit and **reform the controls and taxes that govern the petroleum procurement system** in order to allow greater competition in the market, which may ultimately eliminate any expensive procurement procedures.
2. **The long-term solution for the petroleum sector in Zambia is to liberalise it.** OMCs or the private sector need to be responsible for the procurement of the country's petroleum needs. This may reduce the financial burden on the Treasury and possibly free up resources to other sectors.
3. Government is urged to stiffen measures to ensure that there is uninterrupted flow of petroleum products into the country to guarantee supply and ensure stable and predictable prices.
4. **Taxation:** The introduction of Vat Added Tax (VAT) Zero-Rating by the Government of Zambia was a move in the positive direction. The idea behind the amendment was to lower the price of petrol and diesel for ease accessibility by the people. In this case, consumers are able to purchase fuel at a cheaper rate that will eventually increase the demand for fuel enabling suppliers to continuously stock fuel in their depots. However, the move by the Government will tend to reduce the ZRA tax revenue base. Therefore, the Government needs to consider other measures that will stabilize the ZRA revenue collection and not further tighten the fiscal space.

THE FUEL SUPPLY CHAIN IN ZAMBIA



THE PLAYERS

A. TANZANIA – ZAMBIA MAFUTA (TAZAMA) PIPELINES
 TAZAMA Pipelines is jointly owned by the Government of the Republic of Zambia (67%) and the Government of the Republic of Tanzania (33%). The Pipeline runs from Dar es salaam (Tanzania) to Ndola (Zambia) into the **INDENI Refinery over a distance of 1710 KM.**

TAZAMA has continued to have various problems mainly due to the under utilisation of the pipeline facility as well as an aged infrastructure which requires upgrading.

B. INDENI REFINERY
 INDENI is Zambia's sole refinery and is located in Ndola. It is owned by Government and refines the petroleum feedstock received through the TAZAMA pipeline.

As in the case with TAZAMA, once there is a consistent flow of petroleum feedstock, **INDENI Refinery should be able to run at almost full capacity and perform better. When INDENI is fully operational (in its current state) it offloads about 600,000 litres of petrol daily on the Zambian market. Zambia's daily consumption of petrol is approximately 1.3 million litres of petrol, while diesel stands at approximately 2.9 million litres per day.**

C. NDOLA FUEL TERMINAL
 The Ndola Fuel Terminal was constructed for the sole purpose of storage and distribution of petroleum products. The fuel terminal is the selling point of refined petroleum products from INDENI Refinery. **The products are sold to privately owned Oil Marketing Companies (OMCs) who distribute and market petroleum products, locally.**

D. BULK FUEL STORAGE DEPOTS
 Government has **commissioned bulk fuel storage depots in Northern, Lusaka, Western, Northern-Western and Luapula provinces.** Another depot that is currently under construction is located in Chipata district. The depot in Eastern province was at 8% by close of December, 2019 (ERB, 2019). **The objective of the depots is to decentralize the distribution of petroleum products and provide relief to the Ndola Fuel Terminal.**

E. OIL MARKETING COMPANIES
 Oil Marketing Companies (OMCs) distribute and market petroleum products, locally. **All Oil Marketing Companies in Zambia are required to be registered with the Energy Regulation Board (ERB).** The products uplifted by OMCs are mainly, **Petrol, Kerosene, Diesel and Jet fuel.** Other products such as Heavy Fuel Oils, LPG and Bitumen are sold directly to large users and uplifted from INDENI Refinery.

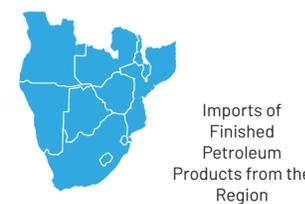
PRICING

In determining fuel (Petroleum) prices, the Energy Regulation Board (ERB) uses the Cost-plus Pricing Model, (CPM), which operates on the principle that the final price of petroleum products should cover all the costs incurred in the supply chain. Using the CPM model the ERB determines the wholesale prices and pump prices of petroleum products. OMCs rarely import finished products due to the high import duty of 25% on petrol and diesel.

INTERNATIONAL OIL PRICES AND ZAMBIA



Determinants of fuel prices: Important to note that the domestic prices of petroleum products are mainly affected by a rise or fall in international oil prices and the exchange rate of the United States dollar to the Zambian kwacha. Also worth noting is that increases in the local fuel prices have a tendency to trigger a general rise in the cost of goods and services i.e. inflation.



Imports of Finished Petroleum Products from the Region

STATUS ANALYSIS

Fuel remains one of Zambia's largest import products.

TAZAMA and INDENI Refinery are 100% dependent on the flow of petroleum feedstock that should ensure reasonable capacity utilisation in order to operate efficiently. Any inconsistency in the supply of petroleum feedstock would result in operating these facilities below minimum capacity levels and would demand an increase in the level of imports for fast selling products.

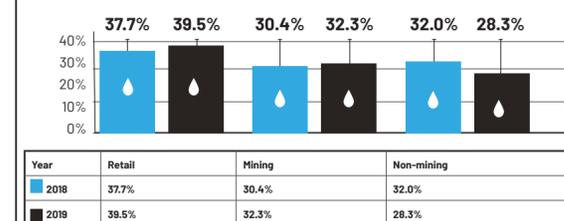
According to the Ministry of Finance, **in order to deal with challenges in the petroleum sector, the Government is reviewing the petroleum supply chain and the financing options.** Further, alternative sources of fuel supply are being pursued to reduce costs. Discussions at bilateral level with oil producing countries for the supply of crude and finished products have commenced to streamline the procurement process by eliminating middlemen, if any.

According to the Ministry of Mines, Energy and Water Development, INDENI Refinery was built with an installed refinery capacity of 1.1 million litres of petroleum per day. **Currently, INDENI is only able to process between 300,000 litres and 700,000 litres of petroleum per day.** This is an indication that the refinery has challenges in operating at full capacity.

CONSUMPTION BY ECONOMIC SECTOR

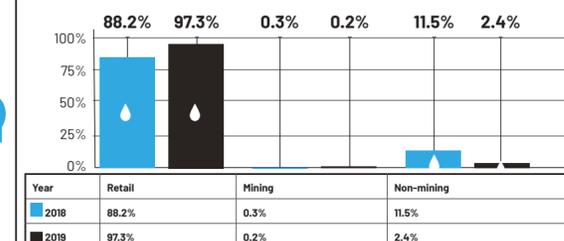
The retail sector accounted for the highest proportion of diesel consumption at 39.5 percent in 2019 followed by the mining sector at 32.3 percent. The proportions for both sectors increased during 2019, compared to 2018. Meanwhile, the non-mining sector recorded a decline in consumption of 3.7 percentage points from 32 percent in 2018 to 28.3 percent in 2019.

Diesel consumption by economic sector in 2019 and 2018



Similar to the trends observed in the previous year, petrol consumption was predominantly retail accounting for 97.4 percent in 2019, followed by the non-mining at 2.4 percent and mining sector at 0.2 percent. Figure below shows petrol consumption by economic sector in 2019 and 2018.

Petrol consumption by economic sector in 2019 and 2018



Source: (Energy Regulation Board Report, 2019)