AN FTI CONSULTING REPORT

Fuel Industry Quarterly Review: 2024 Q3





In this edition of the Fuel Industry Quarterly Review, commissioned by FIASA, FTI Consulting outlines the key performance metrics for the South African petroleum industry utilising the latest available information. This edition provides further insights into the current economic context within which the industry operates, as well as recent demand, supply and price dynamics. We also highlight key events in the industry that occurred in the past quarter.

1. Introduction

South Africa has a well-developed petroleum industry involved in importing, producing and distributing petroleum products for its domestic market and abroad. Petroleum products play a critical role in South Africa, supporting the smooth functioning of the economy and enabling people to go about their daily lives.

Petroleum can be used as a fuel and as a feedstock for products across many sectors in the economy: petrol for transportation; diesel for transportation and equipment, and for electricity generation during peak periods; kerosene jet fuel for powering jet engines of aircraft; illuminating paraffin for lights and cooking; Liquid Petroleum Gas ("LPG") for heating, cooking, industrial processes and agriculture; bitumen for paving and construction; lubricants for vehicle and machinery lubrication; fuel oil for powering merchant ships and for industrial steam and hot water boilers.

South Africa consumes more than 25 billion litres of petroleum products each year, facilitated by imports and its three operational refineries. The country boasts 3,800 kilometres of pipeline for transporting crude oil and fuel products, along with approximately 4,900 retail petrol stations.



2. Petroleum Industry Economic Contribution

A report published by FTI Consulting, titled "The Economic Contribution of the Downstream Oil Industry to South Africa in 2019", found that the petroleum industry supported R163 billion (3.2%) in gross domestic product ("GDP"), 247,772 jobs, and R94 billion in capital. The study found that:

- The industry directly contributed R139 billion in GDP, with FIASA members contributing R103 billion.
- For every R1 contributed directly to GDP, a further R1.59 was supported elsewhere in the economy.
- The industry supported 1.5% of total employment.
- For every one job in the industry, a further 1.52 jobs were supported elsewhere in the economy.
- For every R1 of capital investment, the industry added another R1.5 to GDP.

Figure 1 illustrates government revenue generated from the general fuel levy (taxes charged per litre of fuel sold), both in total and as a percentage of overall government revenue. In 2024 Q2, the general fuel levy contributed 5.2% to total government revenue. This is a slight increase from the previous quarter which had the lowest contribution since 2022 Q3.

Figure 1: General fuel levy fiscal contribution



Source: National Treasury



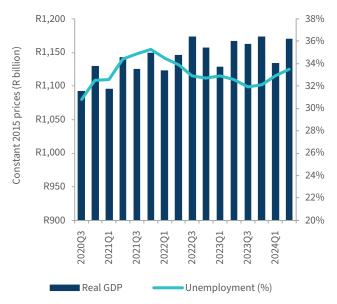
3. Macroeconomic Indicators

From the above, it is clear that the petroleum industry plays a vital role in the South African economy. In what follows, we first provide an overview of the macroeconomic conditions in South Africa and subsequently discuss specific trends in the petroleum industry, focusing on aspects such as demand, supply and pricing.

Figure 2 depicts quarterly GDP trends in constant 2015 prices (i.e. adjusted for inflation), alongside the quarterly unemployment rate. The recovery of economic activity since the Covid-19 pandemic has been slow. However, 2024 Q2 saw improved performance with GDP increasing by 3.2% compared to 2024 Q1.

Unemployment in South Africa remains persistently high, increasing to 34% in 2024 Q2.

Figure 2: Real GDP and unemployment

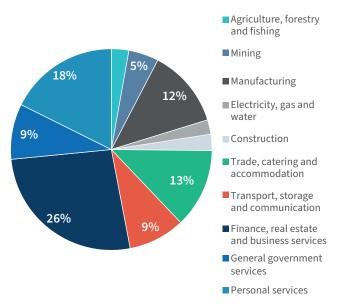


Source: Stats SA

The recent poor performance of the South African economy is linked to significant supply chain pressures, such as the Covid-19 pandemic, escalating loadshedding, the 2021 civil unrest and the Russia-Ukraine and Israel-Palestine conflicts.

Figure 3 shows the percentage contribution of various industries to real GDP in 2023. Local refineries are crucial in the manufacturing process, coal serves as a key input at the Secunda refinery, and the transport sector relies heavily on petroleum products for fuel, and end consumers purchase petrol and diesel.

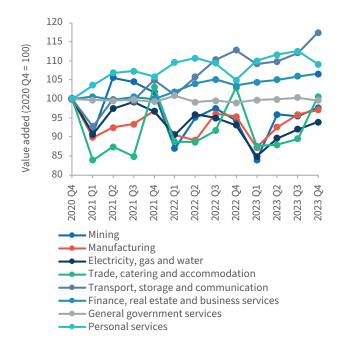
Figure 3: Real GDP, industry contribution (%), 2023



Source: Stats SA

Figure 4 highlights industry value-added trends for comparison. Although manufacturing performed poorly from 2022 Q4 to 2023 Q1, it appears to be rebounding. Transport, however, has performed well since Q4 2020.

Figure 4: Industry value added and GDP



Source: Stats SA

Figure 5 illustrates Brent crude oil spot price trends, in US dollar terms. One of the primary economic impacts of the Russian-Ukraine conflict has been a significant increase

in the global price of crude oil, although prices appear to have stabilised around the \$80s per barrel range recently.

Figure 5 also illustrates the ZAR-USD exchange rate over time. It shows that the Rand has slowly, and continually, depreciated over time to R19.20 at the beginning of March 2024, exacerbating the impact of the international rise in crude oil prices (an input into fuel prices) on South Africa. Overall, the Rand has since appreciated to R18.05 in September 2024.

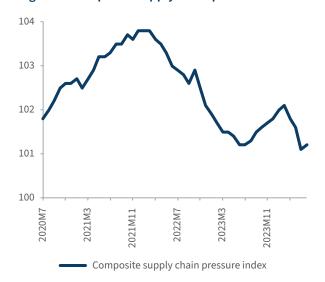
Figure 5: Crude price and ZAR-USD exchange rate



Source: Department of Mineral Resources and Energy ("DMRE")

Figure 6 illustrates the composite supply chain pressure index ("CSPI") for South Africa. The CSPI is compiled from 10 indicators which can be disaggregated into four dimensions: time (delivery periods), volume (throughput at ports), prices and inventories (related to manufacturing sector). A high reading signals increased supply chain pressure. The figure illustrates that supply chain pressures are easing in 2024 Q2 relative to the post-Covid-19 escalations.

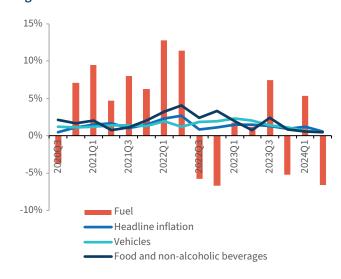
Figure 6: Composite supply chain pressure index



Source: South African Reserve Bank ("SARB")

Figure 7 illustrates headline inflation trends in South Africa relative to domestic food prices, vehicle prices and petrol prices. It is clear that between 2020 Q1 and 2022 Q3, petrol price inflation consistently, and significantly, exceeded both headline and food price inflation.

Figure 7: Inflation in South Africa



Source: Stats SA

Fuel inflation has shown greater variation since 2022 Q3. In 2024 Q2, fuel inflation decreased by 7%. This marks only the fifth time in sixteen quarters that fuel inflation showed a descrease.

Having described the importance of the South African petroleum industry, particularly in the context of the challenging local and international macroeconomic environment, in the following section we set out key performance indicators pertaining to the demand for petroleum products in South Africa.

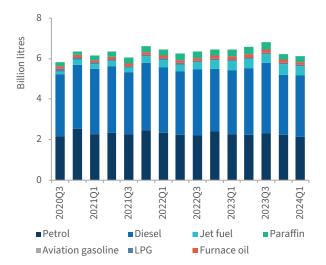
4. Demand for Petroleum Products in South Africa

The demand for petroleum products is influenced by a wide range of factors, including but not limited to:

- Economic factors: Economic growth, income levels, fuel prices and government policies
- Population factors: Population growth, population density and urbanisation
- Transportation factors: The number of vehicles, fuel efficiency, public transport infrastructure and technology
- Other factors: Weather, technology, environmental impact and geopolitical events

Figure 8 illustrates the consumption of different petroleum products in South Africa over time. Petrol and diesel are the petroleum products with the highest demand, accounting for more than 80% of consumption.

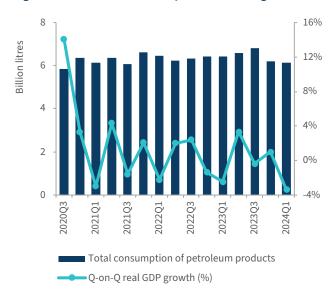
Figure 8: Consumption of petroleum products



Source: DMRE

Figure 9 compares total consumption of petroleum products with real GDP growth. The figure illustrates that fuel demand has mirrored real GDP growth to some extent. Notably, consumption saw a decline in 2023 Q4 compared to the previous quarter, primarily due to a 15% decrease in diesel consumption. Consumption in 2024 Q1 was marginally lower than in 2023 Q4.

Figure 9: Petroleum consumption and GDP growth

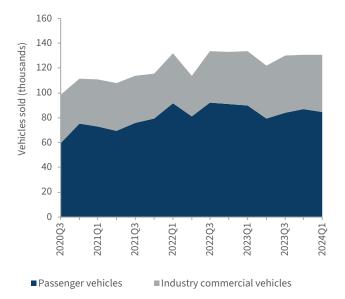


Source: DMRE; Stats SA

Demand for petroleum products is concentrated in the inland region and especially Gauteng. In 2022, according to the latest publicly available data, the inland provinces accounted for 52% of local petrol, diesel and kerosene consumption, while KwaZulu-Natal ("KZN") accounted for 19%, and the other coastal provinces for 29%.

Figure 10 illustrates new vehicle sales over time by type of vehicle. New vehicle sales' following Covid 19 remain stable for 2024 Q1. The recovery of vehicle sales has coincided with the recovery of petroleum demand.

Figure 10: New vehicle sales, by type

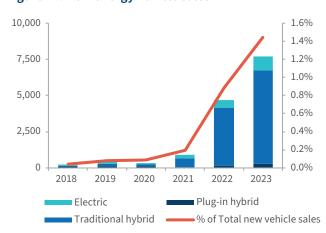


Source: National Association of Automobile Manufacturers of South Africa ("NAAMSA")

The total vehicle population in South Africa is estimated at around 13,195,793 vehicles as of March 2024, with motor cars representing the largest category. Gauteng accounts for more than 5 million (38%) of the total, followed by the Western Cape (more than 2 million) and KZN (1.77 million).

Figure 11 reports new energy vehicle sales, with traditional hybrid models dominating the category. Total new energy vehicle sales were 82.7% higher in 2024 Q1 compared to 2023 Q1. While the category is growing rapidly, it only accounted for 1.5% of total new vehicle sales in 2023. This underscores the continued significance of internal combustion engine vehicles, and therefore petroleum products in the South African automotive landscape

Figure 11: New energy vehicle sales



Source: NAAMSA



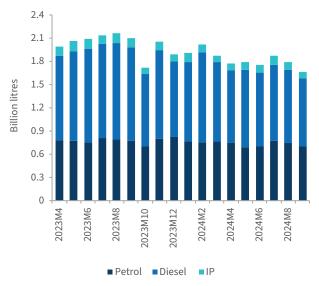
5. Supply of Petroleum Products in South Africa

To meet demand, petroleum products are supplied either locally through refineries, which utilise crude and coal to liquid to manufacture refined products, or through imports.

Figure 12 reflects the reported estimated quarterly volumes of the large oil companies in South Africa, which account for the bulk of volumes.

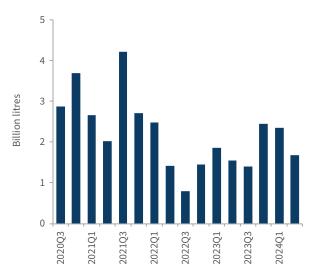
Figure 13 illustrates the decline in crude oil imports over time, as the local refineries have ceased or mothballed their refinery operations. The main reason for the change in the supply model is that South Africa has lost approximately 50% of its operational refining capacity and is currently limited to a single coastal refinery (in Cape Town) and two inland refineries (one of which uses coal as an input).

Figure 12: Estimated quarterly volumes



Source: FIASA

Figure 13: Crude oil imports



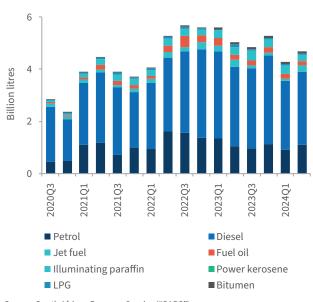
Source: South African Revenue Service ("SARS")

In May 2024, the state-owned Central Energy Fund ("CEF") purchased the SAPREF refinery in Durban. This refinery will require significant investment to become operational and meet new environmental standards. The South African National Petroleum Company ("SANPC") Bill gave effect to Cabinet's decision to establish a state-owned company positioned as a national champion to ensure security of supply and development of the sector with the introduction of modern, cleaner products and renewable components improving the energy mix.

Figure 14 illustrates that imports of refined product into South Africa have generally increased over time, despite quarter-to-quarter fluctuations. Notably, in 2024 Q2, diesel made up the majority of imported refined products (60%), followed by petrol (23%).



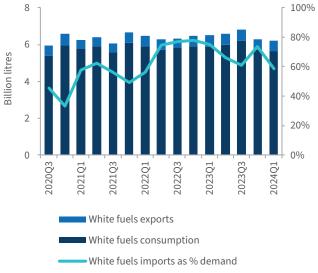
Figure 14: Imports of refined product



Source: South African Revenue Service ("SARS")

Figure 15 illustrates local demand and exports of white fuels (defined here as petrol, diesel, and kerosene), as well as white fuel imports as a percentage of this demand. The figure shows that through 2023 Q3 imports have gradually accounted for a larger share of demand. However, this share declined in 2024 Q1 to 59% due to a significant drop in imports, while consumption remained constant.

Figure 15: Imports as a percentage of demand



Source: SARS, DMRE



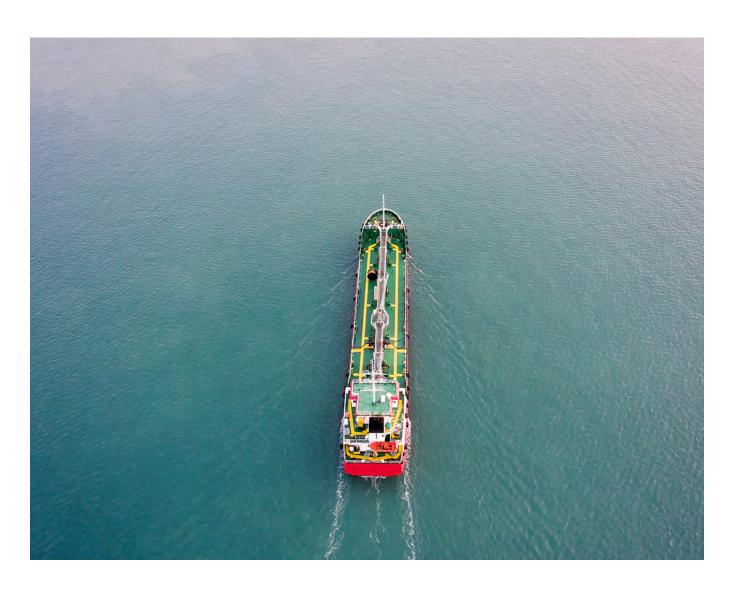
6. Supply of Petroleum Products Abroad

Figure 16 illustrates exports of refined product from South Africa over time. The bulk of these exports are to countries in the Southern African Development Community ("SADC"). Exports rose significantly in 2024 Q1, primarily due to a 91% increase in fuel oil exports.

Figure 16: Exports of refined products



Source: SARS



7. Price Trends

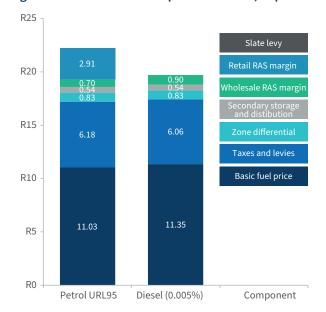
In the following section we provide a breakdown of the components influencing petroleum prices and explore their trends over time.

The DMRE regulates the maximum wholesale price of diesel and the retail (pump) price of petrol, by grade and location. The regulated prices are made up of several international and domestic price components:

- Basic fuel price ("BFP"): Market-related cost to import products and to transport them to South Africa
- Taxes and levies: Fuel Tax, road accidents fund, petroleum pipelines, customs and excise tax, tracer dye (diesel), equalisation fund (petrol)
- Zone differential: Recovery mechanism for costs incurred to transport the product to a specific zone
- Secondary storage and distribution charges:
 Secondary supply chain cost incurred
- Wholesale Regulatory Accounting System ("RAS")
 margin: Fixed maximum monetary margin earned for
 conducting wholesale activities
- Retail RAS margin (petrol only): Fixed retail profit margin based on the actual costs incurred

Figure 17 shows a breakdown of petrol and diesel prices as of September 2024, illustrating these components for the Gauteng zone. The majority of the regulated petrol price is composed of the BFP (50%) taxes and levies (28%) and retail and wholesale margins (16%).

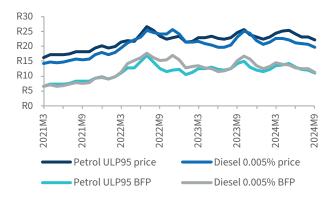
Figure 17: Petrol and diesel price elements, Sep-24



Source: DMRE Source: Stats SA, FIASA, DMRE

Figure 18 illustrates the trends in the petrol (ULP95) and diesel (0.005%) prices (all components), as well as the BFP trends for these products. Diesel and petrol prices increased significantly in 2021 and 2022, driven primarily by higher import costs, reflected in the higher BFP prices. However, BFP prices, and therefore petrol and diesel prices, have stabilised and have been declining in recent months. This trend is driven by falling crude oil prices and an appreciating Rand.

Figure 18: Regulated price trends vs BFP trends



 ${\tt Source: Stats\,SA, FIASA, DMRE}$

Typically, margins are adjusted in December, and taxes and levies are adjusted in April of each year. The Minister of Mineral and Petroleum Resources, however approved an increase of 5c/l to the retail RAS margin, effective from September 2024.

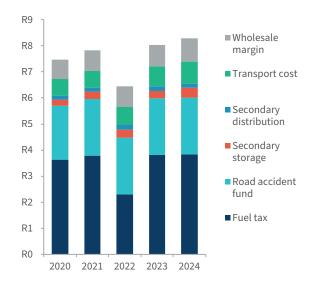
Figure 19 illustrates the evolution of taxes and levies, secondary fees, as well as retail and wholesale margins for petrol (ULP95) over time.

Figure 19: Petrol price components, excl. BFP, Aug-24



Figure 20 illustrates the evolution of taxes and levies, secondary fees, as well as wholesale margins for diesel (0.005%) over time.

Figure 20: Diesel price components, excl. BFP, Aug-24



of the taxes and levies on these products. Fuel taxes decreased substantially in 2022, with the reprieve offered at the onset of the Russia-Ukraine conflict. Fuel taxes returned to their previous levels in 2023, and have increased very slightly in 2024. Levies have remained constant over time.

Fuel taxes and the road accident fund make up most

In respect of petrol, August 2024 (relative to August 2023) saw an increase in wholesale margins (23.32%), retail margins (18.11%), transport costs (9.38%), and secondary storage costs (27.08%), collectively totalling R0.72. Despite these increases, due to decreases in BFP, the overall petrol price fell by R0.64.

Source: Stats SA, FIASA, DMRE



CHRISTO ROUX

Senior Managing Director 082 719 0817 christo.roux@fticonsulting.com

LAURIE BINGE

Managing Director 072 126 8415 laurie.binge@fticonsulting.com

TIMOTHY EVANS

Senior Consultant 072 774 4615 timothy.evans@fticonsulting.com

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