

2023 SOUTH AFRICAN ENERGY TRADE REPORT

DIRECTORATE:
ENERGY ECONOMICS
AND STATISTICS



mineral resources &
energy

Department:
Mineral Resources and Energy
REPUBLIC OF SOUTH AFRICA



THE SOUTH AFRICAN ENERGY TRADE REPORT 2023

Directorate: Energy Economics and Statistics

Compiled by:

Ms E Mokwena
Email: Eunice.Mokwena@dmre.gov.za

Supervised by:

Mr Ramaano Nembahe
Email: Ramaano.Nembahe@dmre.gov.za

Published by:

Department of Mineral Resources and Energy

Postal Address: Private Bag X96
Pretoria
0001

Tel: (012) 406 7540

Address: 192 Visagie Street, C/o Paul Kruger & Visagie Street, Pretoria, 0001

Website: <http://www.energy.gov.za>

Enquiries: publications@energy.gov.za

DEPARTMENT OF MINERAL RESOURCES AND ENERGY

Director-General **Mr. J. Mbele**

MINING, MINERALS AND ENERGY PLANNING BRANCH

Deputy Director-General **Ms. N. Ngcwabe**

ECONOMIC ANALYSIS AND STATISTICS CHIEF DIRECTORATE

Chief Director **Ms. S. Mohale**

ENERGY ECONOMICS AND STATISTICS DIRECTORATE

Director **Ms. V. Olifant**

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FOREWORD

It gives me great pleasure to introduce the 2023 South African Energy Trade Report. This report is based on imports and exports energy data collated mainly from the South African Revenue Service (SARS). This report presents us with the opportunity to inform and update all the relevant stakeholders about energy trade between South Africa and other countries.

This report is published annually with data and analysis based on the SARS Trade Statistics. We have made remarkable progress in improving the overall quality of our energy data in order to ensure that accurate, timely and reliable data is provided in all our publications and hope that this report will become a source of reference among energy analysts in South Africa and abroad. We will continuously collaborate with all our data providers to ensure that our energy data is of highest quality possible.

I extend my most sincere thanks and appreciation to the Energy Data Collection, Management and Analysis Directorate for the hard work that went into the compilation of this publication. I would also like to record my appreciation to all the energy data providers who have helped us to accomplish the compilation of this report. Comments and inputs are welcome and should be addressed to Publications@energy.gov.za.

Mr. Jacob Mbele

Director General

Department of Mineral Resources & Energy

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LIST OF ABBREVIATIONS

| | |
|----------------|---|
| DRC | Democratic Republic of Congo |
| DMRE | Department of Mineral Resources & Energy |
| GTL | Gas-To-Liquid |
| GWh | Gigawatt hours |
| IP | Illuminating Paraffin |
| LPG | Liquified Petroleum Gas |
| MT | Megaton |
| MW | Megawatts |
| SAPP | Southern African Power Pool |
| PetroSA | Petroleum Oil and Gas Corporation of South Africa |
| UAE | United Arab Emirates |
| UK | United Kingdom |
| USA | United States of America |





1. BACKGROUND AND INTRODUCTION

South Africa's energy products are derived mainly from fossil fuels, that is coal, oil and natural gas. The country has abundant coal reserves, limited oil reserves and insignificant natural gas resources. Given the growing need for energy in the country, South Africa is a significant player in the world's energy trading.

About all, South Africa's oil requirements are imported. The oil is used to produce various petroleum products. However, South Africa's petroleum products demand currently exceeds the country's production. As such, the excess demand is satisfied by imports. The petroleum products imported into the country are namely, petrol, diesel, jet fuel, illuminating paraffin (IP), natural gas and liquid petroleum gas (LPG).

Bituminous or steam coal is the main export of coal with anthracite having to be imported due to declining reserves. South Africa uses a large amount of its coal production to generate electricity. The electricity is traded with the Southern African Power Pool (SAPP) member countries namely, Mozambique, Botswana, Malawi, Angola, Lesotho, Namibia, DRC, Swaziland, Tanzania, Zambia, and Zimbabwe.

Offshore shallow gas reserves in South Africa provide PetroSA's Gas-To-Liquids (GTL) operation, which, however, has been in strong decline over the past number of years. The development of the Pande and Temane natural gas fields in Mozambique and the construction of a pipeline, the ROMPCO pipeline, to transport that gas from Pande / Temane to Secunda is the most significant supply to South Africa.

The figures and analysis covered in this section will give an overview of imports and exports for crude oil, petroleum products fuels, natural gas, coal, and electricity for 2023.



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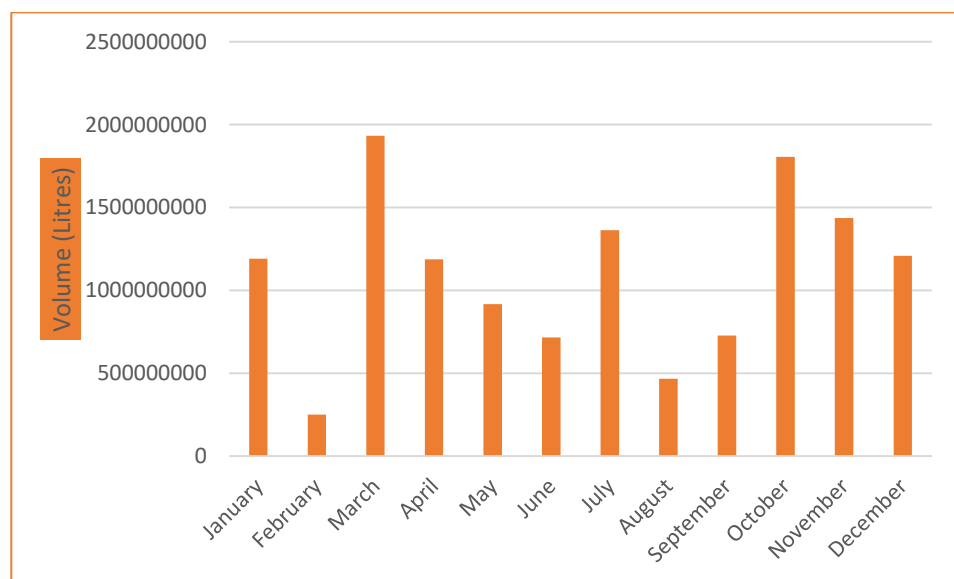
2. ENERGY TRADE DATA ANALYSIS

2.1 Crude Oil and Petroleum Products

2.1.1 Imports and Exports

South Africa imported a total of 13.2 billion litres of crude oil in 2023, compared to 11.2 billion litres imported in 2022. The country imported 1.2 billion litres of crude oil in January 2023, and in February same year, crude oil imports declined reaching its lowest for the year at 251 million litres. However, crude oil imports went up significantly in March 2023 to 1.9 billion litres then decreased again noticeably in August 2023 to 467 million litres. In October 2023, crude oil imports picked up to 1.8 billion litres and ended the year with a total of 1.2 billion litres in December 2023 as depicted in Figure 1 below.

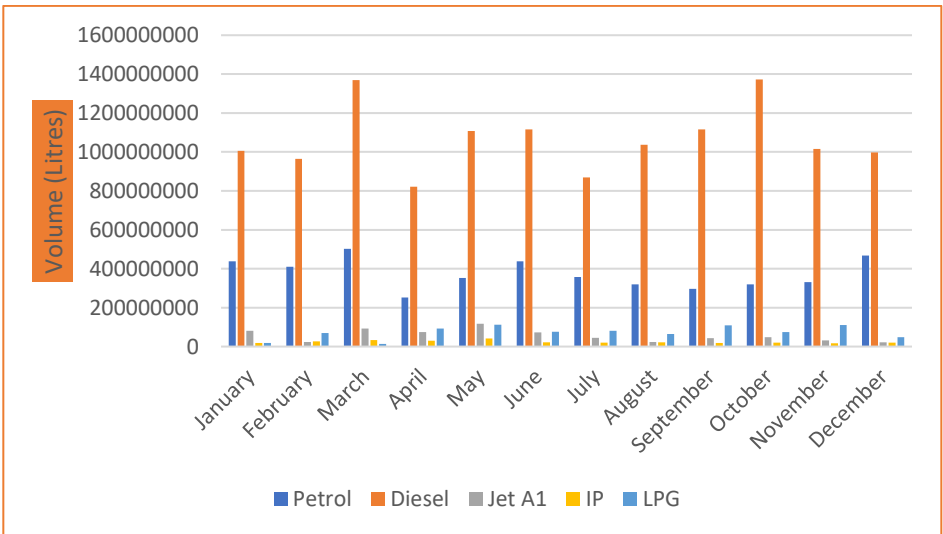
Figure 1: 2023 Crude oil imports



Source: South African Revenue Service (SARS, 2023)

Diesel continued to be mostly imported among petroleum products in 2023, followed in ranking by petrol, liquefied petroleum gas (LPG) and jet fuel. South Africa imported 12.8 billion litres (67 percent) in 2023 from 11.9 billion litres (63 percent) of diesel in 2022 and 4.5 billion litres (24 percent) in 2023, from 5.5 billion litres (29 percent) of petrol in 2022, while import volumes for LPG and Jet fuel were 871 million litres (5 percent) and 674 million litres (4 percent) in 2023, from 671 million litres (4 percent) and 810 million litres (4 percent) in 2022, respectively as depicted in Figure 2 below.

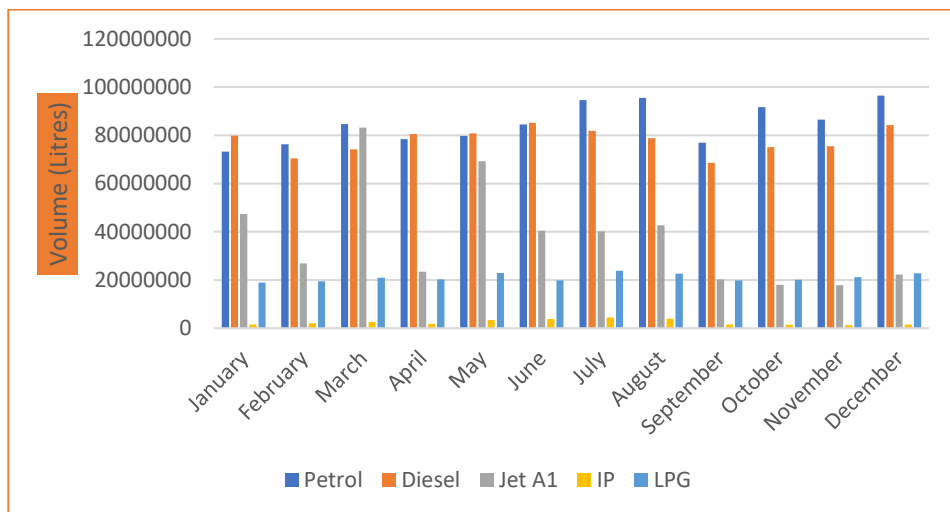
Figure 2: 2023 Petroleum products imports



Source: South African Revenue Service (SARS, 2023)

Petrol was the most exported petroleum product in 2023, with a total of 1 billion litres (38 percent) from 866 million litres (37 percent) in 2022, while diesel came second with 935 million litres (35 percent) from 898 million litres (38 percent) in 2022. In third place is Jet A1 with 452 million litres (17 percent) in 2023 from 385 million litres (16 percent) in 2022 and the total of 252 million litres (9 percent) of LPG exports was recorded in 2023, from the total of 188 million litres (8 percent) in 2022 (Figure 3).

Figure 3: Petroleum products exports

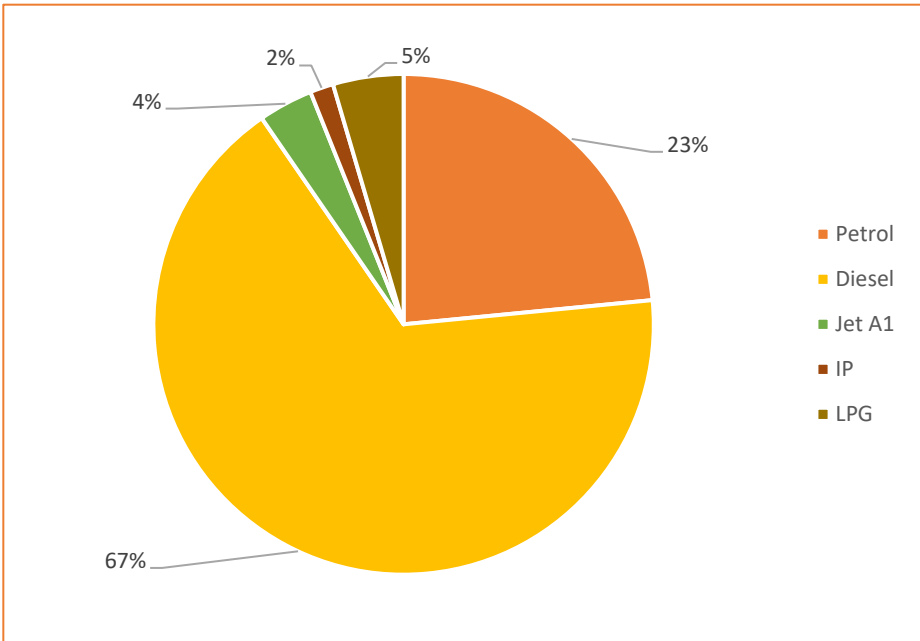


Source: South African Revenue Service (SARS, 2023)

2.1.2 Petroleum products trade shares

Diesel made up 67 percent (12.8 billion litres) of the refined fuel imported in South Africa in 2023, from 62 percent (11.9 billion litres) in 2022, followed by petrol at 23 percent (4.5 billion litres) from 29 percent (5.5 billion litres) in 2022 and LPG at 871 million litres (9 percent) in 2023, from 671 (4 percent) in 2022. Jet fuel and illuminating paraffin made up 4 percent and 2 percent (674 million litres) and (289 million litres) in 2023, respectively of the total imported fuels (Figure 4).

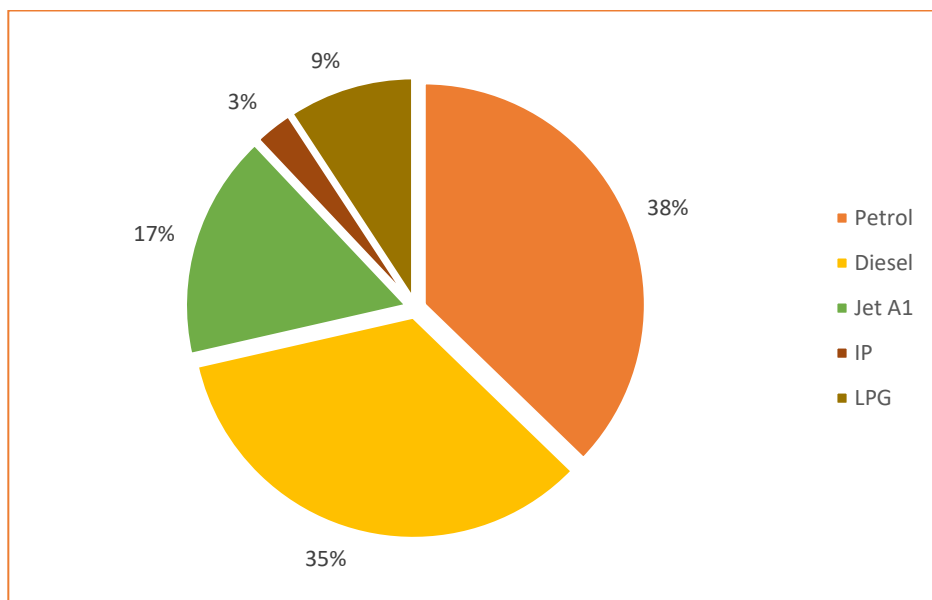
Figure 4: 2023 Petroleum products imports percentage share



Source: South African Revenue Service (SARS, 2023)

In 2023, petrol made up 38 percent (1.0 billion litres) of refined fuel exports, from 37 percent (866 million litres) in 2022, followed by diesel at 35 percent (935 million litres) from 38 percent (898 million litres) in 2022, and jet fuel at 17 percent (452 million litres), from 16 percent (385 million litres) in 2022. Illuminating paraffin and LPG comprised the rest of the liquid fuels exported to South Africa (Figure 5).

Figure 5: 2023 Petroleum Products exports percentage share

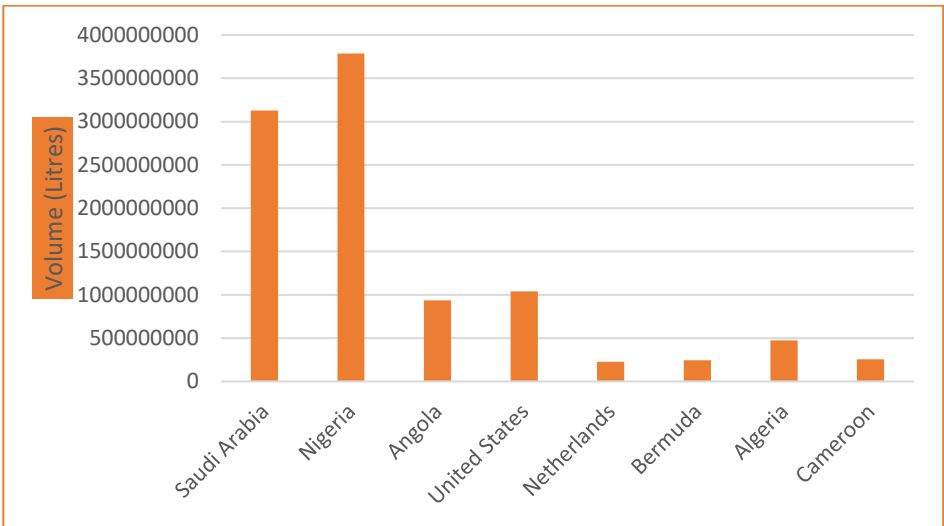


Source: South African Revenue Service (SARS, 2023)

2.1.3 Crude oil and petroleum products imports per country of origin

South Africa's crude oil imports were mostly from Nigeria and Saudi Arabia, with 29 (3.8 billion litres) percent and 24 percent (3.1 billion litres) in 2023 respectively, from 47 percent (5.3 billion litres) and 36 percent (4.1 billion litres) in 2022, respectively. The United States follows at 8 percent (1.0 billion litres), Angola at 7 percent (935 million litres) and Algeria at 4 percent (473 million litres). The remaining were small volumes from various producers (Figure 6).

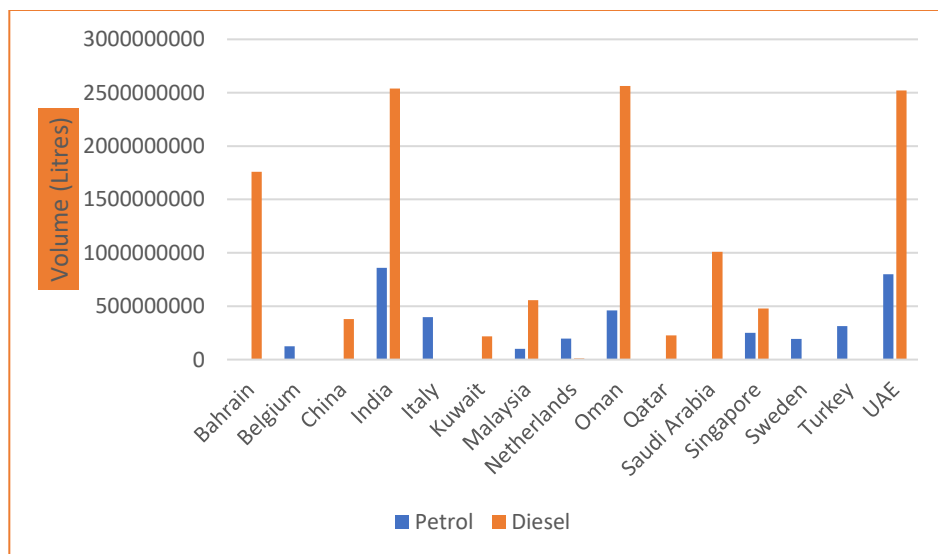
Figure 6: 2023 Crude oil imports per country of origin



Source: South African Revenue Service (SARS, 2023)

South Africa imported diesel largely from India, Oman and United Arab Emirates (UAE) at 20 percent of all three countries, (2.5 billion litres), (2.6 billion litres) and (2.5 billion litres) respectively, of the total imported diesel in 2023, Bahrain followed at 14 percent (1.8 billion litres), then Saudi Arabia at 8 percent (1.0 billion litres), while small amounts were imported from other countries to make up the rest. South Africa also imported petrol mostly imported from India in 2023, at 19 percent (860 million litres), followed by UAE at 18 percent (798 million litres) and Oman at 10 percent (462 million litres). Italy, Turkey, and Singapore contributed 9 percent (397 million litres), 7 percent (313 million litres) and 6 percent (251 million litres) respectively, and the rest were sourced from other countries in small quantities as depicted in Figure 7 below.

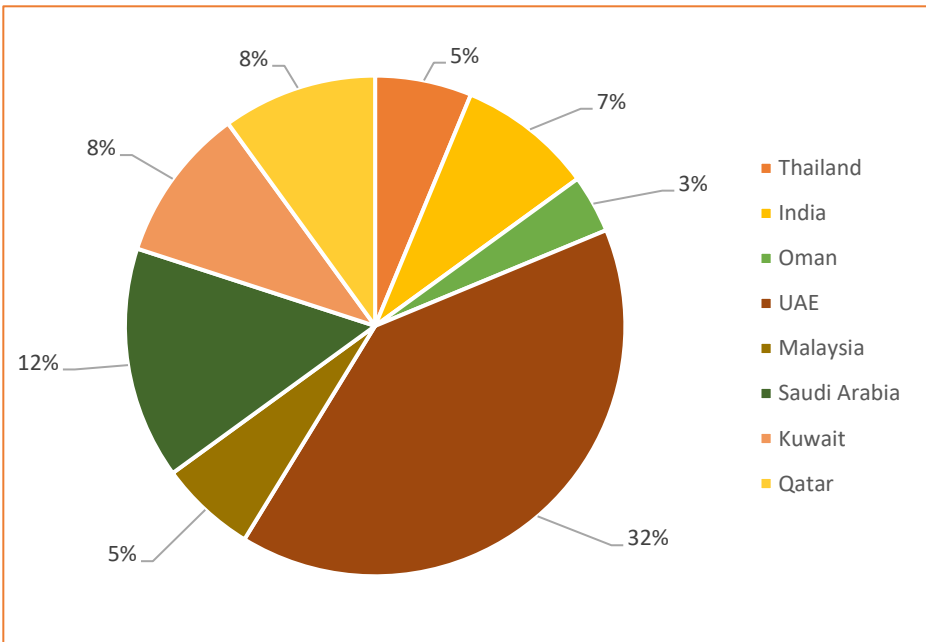
Figure 7: 2023 Diesel and petrol imports per country-of-origin



Source: South African Revenue Service (SARS, 2023)

In 2023, Jet fuel was imported mostly from UAE at 32 percent (218 million litres) from 26 percent (208 million litres) in 2022, followed by Saudi Arabia at 12 percent (83 million litres), Kuwait and Qatar are on the third place at 8 percent each (53 million litres) and (56 million litres), India at 7 percent (46 million litres) then Malaysia and Thailand both contributed 5 percent (34 million litres) and (36 million litres). The rest of the countries each contributed smaller volumes (Figure 8)

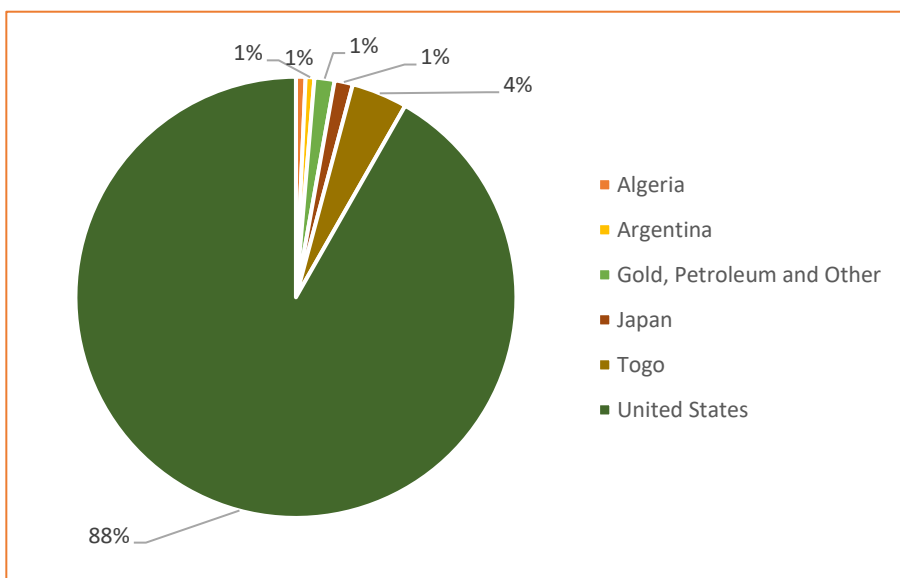
Figure 8: 2023 Jet fuel imports per country-of-origin percentage share



Source: South African Revenue Service (SARS, 2023)

The United States was again the largest supplier of LPG in 2023 at 88 percent (762 million litres) from 75 percent (505 million litres) in 2022. Togo follows at 4 percent (34 million litres) in 2023, from 14 percent (92 million) in 2022, then, Algeria, Argentina, Japan and Gold, Petroleum and Other accounted for only 1 percent (6 million litres), (5 million litres), (11 million litres) and (12 million litres) respectively in 2023 as depicted in Figure 9 below.

Figure 9: LPG imports per country-of-origin percentage share

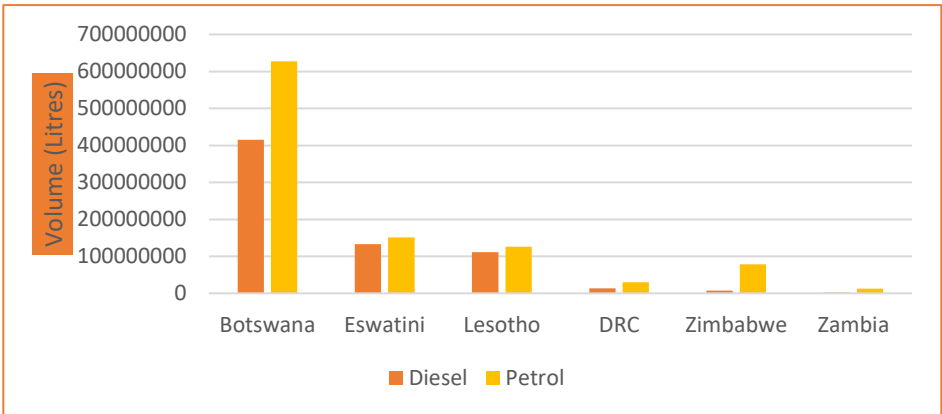


Source: South African Revenue Service (SARS, 2023)

2.1.4 Petroleum products exports per destination country

In 2023, South Africa exported a total of 628 million litres (62 percent) and 415 litres (44 percent) of petrol and diesel respectively, primarily to Botswana, as opposed to 577 million litres (67 percent) and 447 million litres (50 percent) of petrol and diesel, respectively in 2022. South Africa also exported petrol to other South Africa’s neighbouring countries namely DRC, Lesotho, Swaziland, Zambia and Zimbabwe. Diesel was also exported to Lesotho, Swaziland, DRC and Zimbabwe as depicted in Figure 10 below.

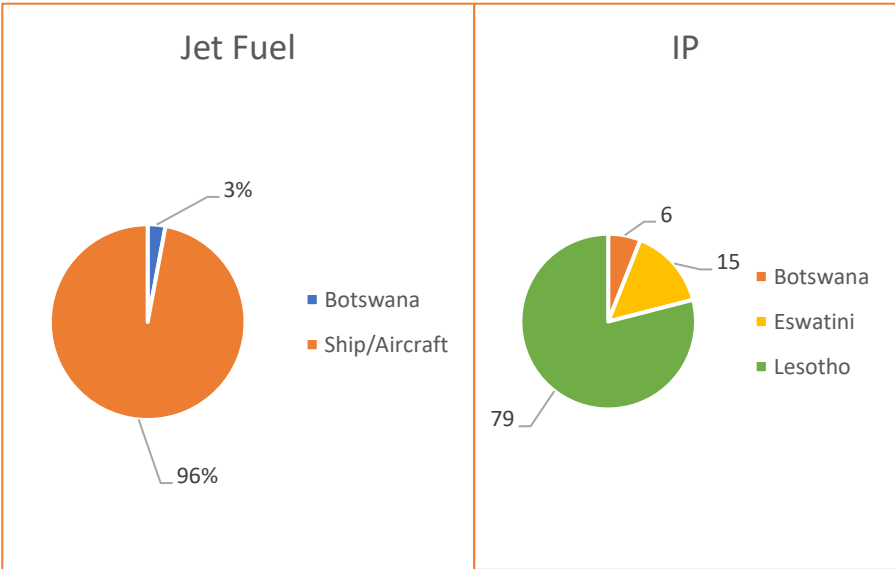
Figure 10: 2023 Petrol and diesel exports per destination country



Source: South African Revenue Service (SARS, 2023)

The bulk of South Africa’s jet fuel was sold to ships and aircraft at 96 percent (435 million litres) in 2023, with only 3 percent (13 million litres) being exported to Botswana. Again in 2023, IP was largely exported to Lesotho at 79 percent (23 million) then Swaziland at 15 percent (4 million) and Botswana at 6 percent (2 million). The remaining exports went to other neighbouring countries, as depicted in Figure 11 below.

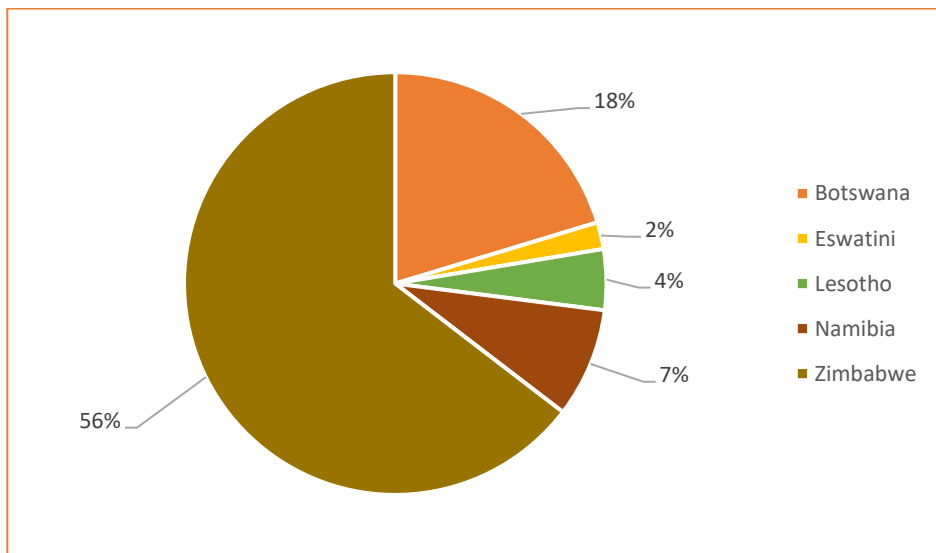
Figure 11: 2023 Jet fuel and IP exports per destination country



Source: South African Revenue Service (SARS, 2023)

Zimbabwe is still South Africa's LPG exports top destination country in 2023, with 56 percent (141 million litres) from 54 percent (102 million litres) in 2022, Botswana followed at 18 percent (44 million) from 23 percent (44 million litres) in 2022, Namibia at 7 percent (18 million) from 9 percent (16 million litres) in 2022, and Lesotho at 4 percent (10 million litres) from 6 percent (12 million litres) in 2022, smaller amounts were exported to other neighbouring countries, as depicted in Figure 12 below.

Figure 12: 2023 LPG exports per destination country



Source: South African Revenue Service (SARS, 2023)

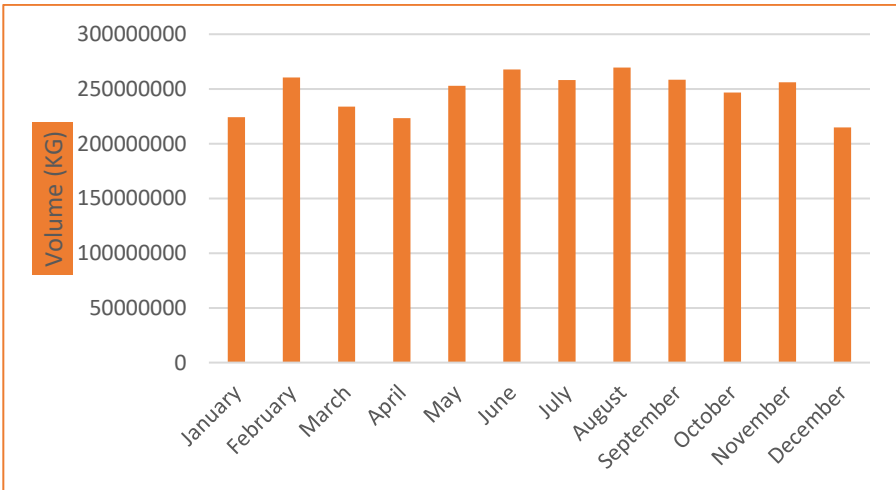




2.2 Natural gas

Most South Africa's needs for natural gas are met by imports. Owing to a lack of resources at home, a sizable amount is imported, mostly via pipeline from neighbouring Mozambique. More than 90 percent of the 2.8 billion kilos of natural gas that South Africa imported in 2022 came from Mozambique compared to nearly 3.0 billion kilograms of Natural gas that was imported in 2023. Imports are essential for sustaining industry and producing energy, even though South Africa produces some gas domestically and is investigating the possibility of shale gas. Due to its reliance on outside sources, South Africa needs to investigate diversifying its sources of natural gas and possibly sustainably developing its own resources.

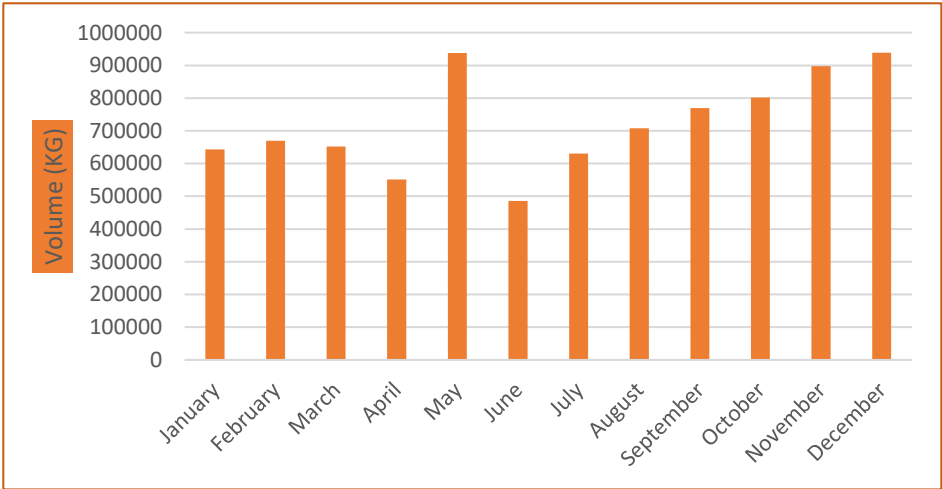
Figure 13: 2023 Natural gas imports



Source: South African Revenue Service (SARS)

9 million kilograms of natural gas was exported in 2023, compared with 10 million kilograms in 2022 (Figure 14). The majority of the exports were destined for Lesotho at 46 percent (4 million kilograms), followed by Swaziland at 36 percent (3 million kilograms) and Namibia at 10 percent (851 thousand kilograms). The rest was exported to other neighbouring countries in smaller quantities, as depicted in Figure 14 below.

Figure 14: 2023 Natural gas exports



Source: South African Revenue Service (SARS, 2023)





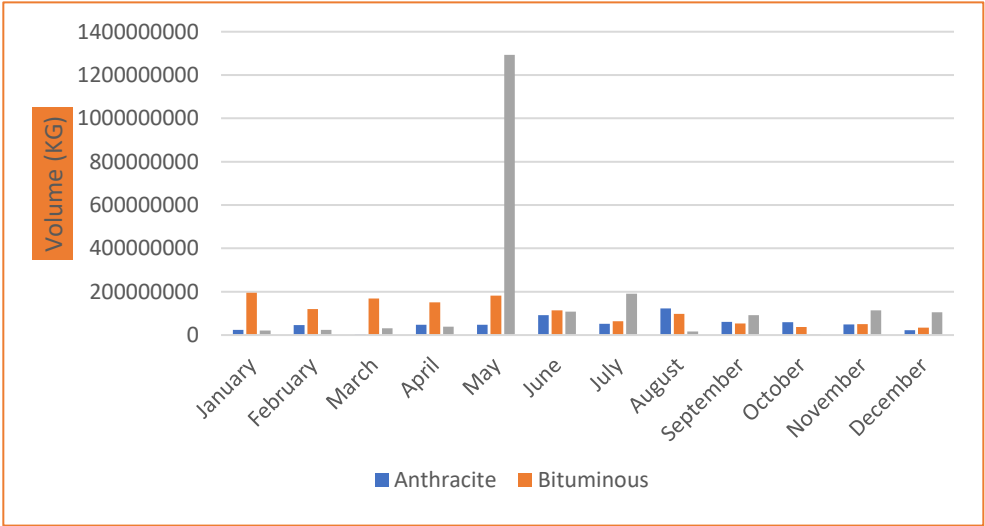
2.3 Coal

2.3.1 Coal imports and exports

South Africa is a major importer and exporter of coal, contributing significantly to the global market. Despite having large deposits of coal at home, the nation is mostly dependent on exports—coal accounts for 6 percent of all exports worldwide. The main export hub is the Richards Bay Coal Terminal, which mostly ships steam coal to nations in the Pacific Basin, including South Korea and India. To fill domestic demands and maybe rectify quality variations, South Africa has been turning more and more to nations like Australia and the United States for specialised forms of coal, including coal briquettes. This shift in import sources has occurred in recent years, though.

South Africa imported a total of 2.0 billion kilograms (52 percent) of other types of coal in 2023, from 1.2 billion kilograms (47 percent) in 2022, then bituminous coal with a total of 1.3 billion kilograms (32 percent) in 2023, from 965 million kilograms (39 percent) in 2022 and 627 million kilograms (16 percent) of anthracite in 2023 from 357 million kilograms (14 percent) in 2022, as depicted in Figure 15 below.

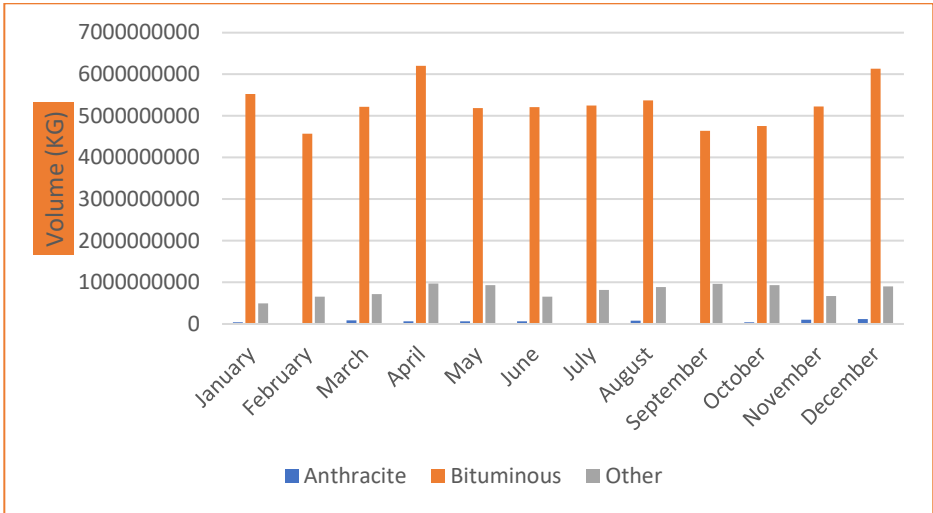
Figure 15: 2023 Coal imports



Source: South African Revenue Service (SARS, 2023)

Bituminous coal was again the most exported coal in South Africa in the period under review, with a total of 63.3 billion kilograms (86 percent) in 2023, from 63.6 billion kilograms (88 percent) in 2022, other types of coal exports were 9.6 billion kilograms (13 percent) in 2023, from 7.2 billion kilograms (10 percent) in 2022, and anthracite coal exports total came to 697 million kilograms (1 percent) in 2023, from 1.1 billion kilograms (2 percent) in 2022 (Figure 16).

Figure 16: 2023 Coal exports

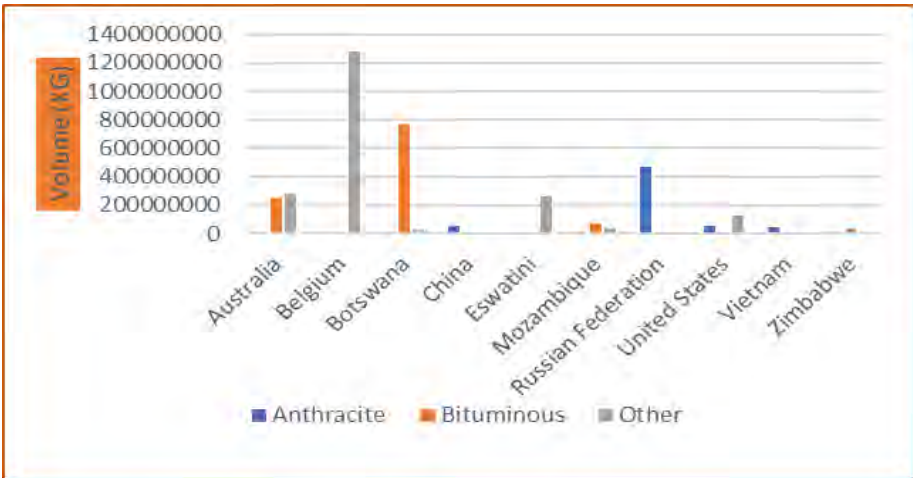


Source: South African Revenue Service (SARS, 2023)

2.3.2 Coal trade between South Africa and other countries

Belgium contributed 33 percent (1.3 billion kilograms) of South Africa's total coal imports in 2023, Botswana followed at 20 percent (791 million kilograms) and Australia at 14 percent (540 million kilograms). The country imported bituminous coal largely from Botswana at 61 percent (766 million kilograms), while Australia and Mozambique accounted for 20 percent and 6 percent respectively, (257 million kilograms) and (75 million kilograms). On the other hand, the country imported 63 percent (1.3 billion kilograms) of other coal from Belgium, 14 percent (283 million kilograms) from Australia and 13 percent (263 million kilograms) from Swaziland. Anthracite coal was mostly imported from the Russian Federation at 75 percent (467 million kilograms), as depicted in Figure 17 below.

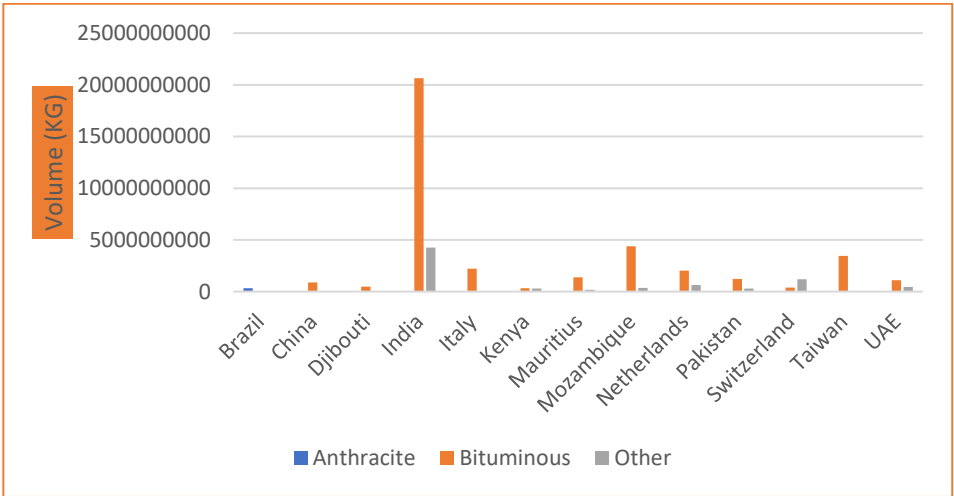
Figure 17: 2023 Coal imports by country of origin



Source: South African Revenue Service (SARS, 2023)

In 2023, South Africa exported large volumes of bituminous coal to India amongst other countries, with 33 percent (20.7 billion kilograms) from 29 percent (18.9 billion kilograms) in 2022, of the total coal exports. Mozambique came second at 7 percent (4.4 billion kilograms), Taiwan at 5 percent (3.5 billion kilograms) then Italy and Netherlands at 3 percent each, (2.2 billion kilograms) and (2.0 billion kilograms). The other countries made up smaller shares of the total exports each, as depicted in Figure 18 below.

Figure 18: 2023 Coal exports per destination country



Source: South African Revenue Service (SARS, 2023)



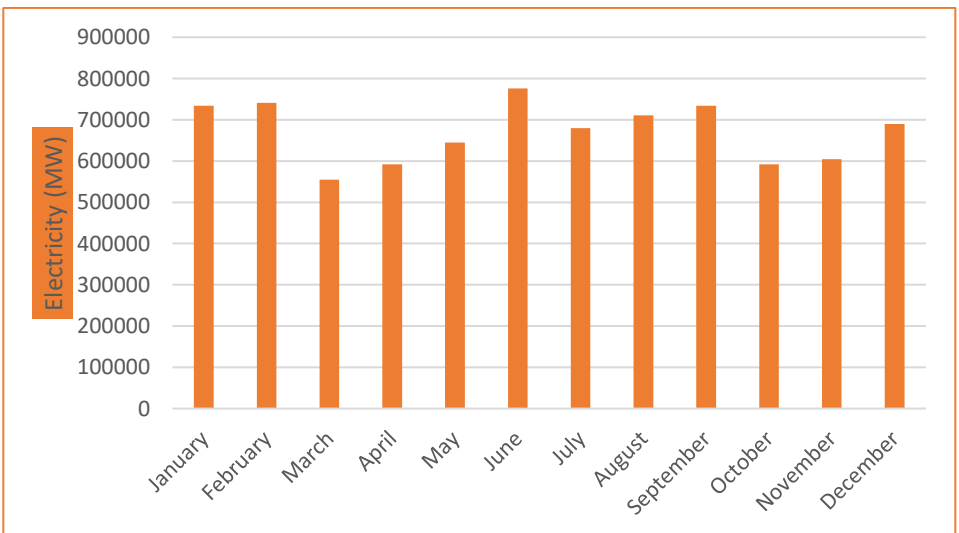


2.4 Electricity

South Africa imports energy to meet domestic demand even though it has a sophisticated grid and exports electricity to neighbouring nations like Namibia, Mozambique, and Zimbabwe. Often, inadequate generation capacity is the cause of this import dependency, especially during periods of high usage. South Africa has been more dependent on imports in recent years, with Mozambique serving as the main supplier. This underscores the necessity for the nation to allocate resources towards augmenting its generation capacity, broadening its energy blend beyond coal, and maybe fortifying regional collaboration to guarantee a more steady and safe supply of electricity.

South Africa’s electricity imports came to a total of 8 054 GWh in 2023, from 8 541 GWh in 2022 (Figure 19). Electricity imports were mainly from Mozambique in 2023 with 8 040 GWh.

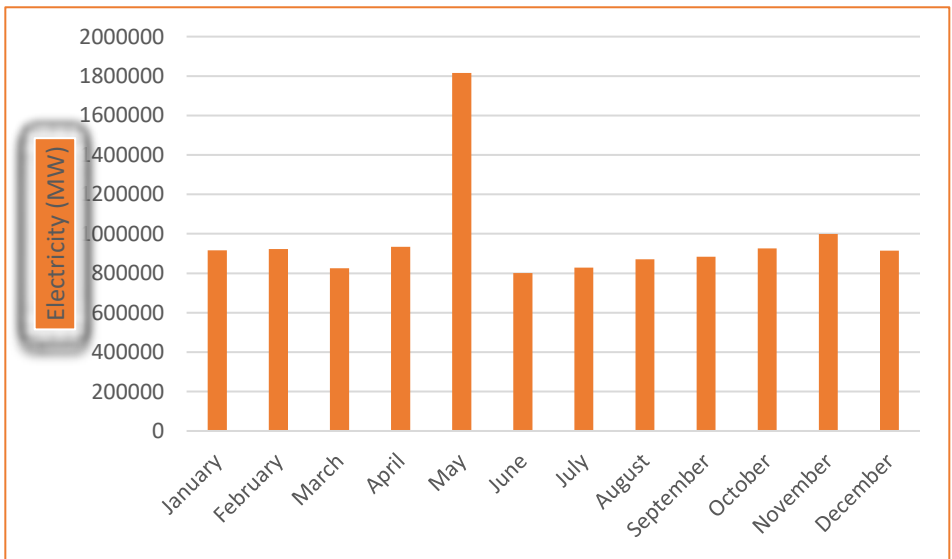
Figure 19: 2023 Electricity imports



Source: South African Revenue Service (SARS, 2023)

South Africa exported 11 637 GWh of electricity in 2023 as opposed to 12 601 GWh in 2022, which on average was 960 GWh of electricity exported each month. In May 2023, the country exported 1 816 GWh of electricity, the highest volume exported for the year, as depicted in Figure 20 below.

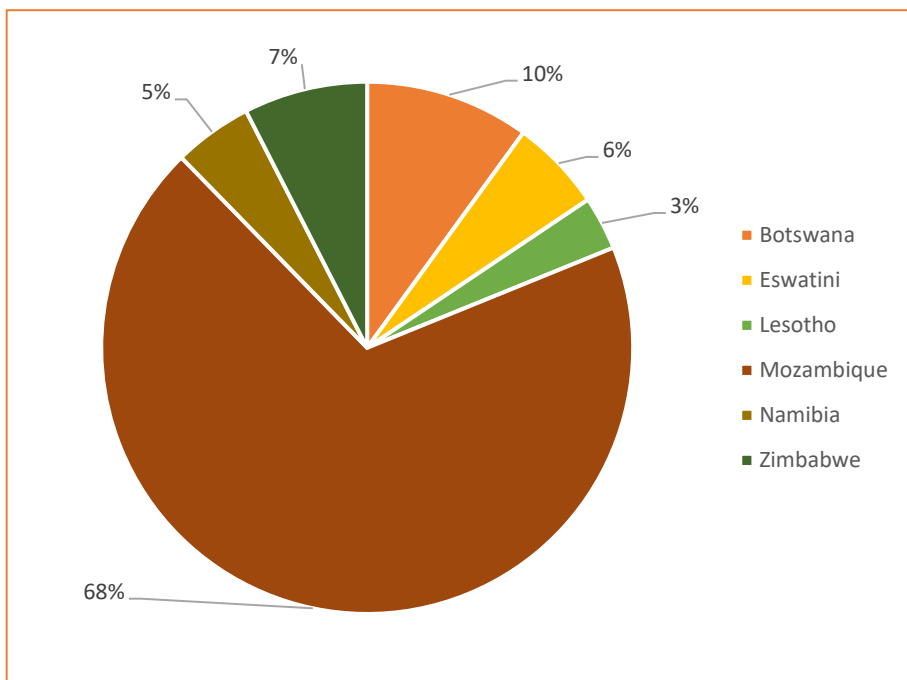
Figure 20: 2023 Electricity exports



Source: South African Revenue Service (SARS, 2023)

Mozambique was again the biggest recipient of electricity exports from South Africa in 2023, at 68 percent (8 billion GWh) from 71 percent (8 billion GWh) in 2022. It was then followed by Botswana at 10 percent (1.2 million MW), then Zimbabwe at 7 percent (871 thousand MW), Eswatini at 6 percent (648 thousand MW), Namibia at 5 percent (554 thousand MW), lastly Lesotho at 3 percent (377 thousand MW), as shown in Figure 21 below.

Figure 21: 2023 Electricity exports per destination country



Source: South African Revenue Service (SARS, 2023)



3. CONCLUSION

South Africa was a net importer of crude oil and natural gas in 2023. The country was also a net importer of most of the petroleum products except for illuminating paraffin. These products were mainly imported to meet the local supply shortfall. Due to a high supply of bituminous coal, South Africa continued to be a net exporter of bituminous coal and a net importer of other coal types. Bituminous coal was the most exported coal type mainly due to its abundance in the country. South Africa exported 8 percent less electricity in 2023 compared with the previous year and imported 8,054 GWh of electricity in 2023.

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Department of Mineral Resources and Energy

Physical address:

Matimba House, 192 Visagie Street
C/o Paul Kruger & Visagie Streets Pretoria

Postal address:

Private Bag X96, Pretoria 0001

Telephone number: +27 12 406 7540

Fax number: +27 12 323 5646

www.energy.gov.za