the dtic
Department:
Trade, Industry and Competition
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TIPS
TRADE & INDUSTRIAL POLICY STRATEGIES

# SUPPLY SECURITY ISSUES PERTAINING TO THE DESIGNATION AND EXEMPTION OF THE SOUTH AFRICAN PETROLEUM INDUSTRY (SAPIA) FROM THE COMPETITION ACT

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## ABOUT THIS REPORT

Participants in the petroleum industry value chain, represented by the South African Petroleum Industry Association (SAPIA), are currently granted exemption from the Competition Act largely on the basis of ensuring security of supply of petroleum products. This exemption was invoked in 2002 for 18 months to ensure fuel supply security after the termination of the Main Supply Agreement whereby oil companies in South Africa were obliged to uplift and market a substantial proportion of Sasol's fuel production from its plants at Sasolburg and Secunda. The Designation and Exemption was not renewed. However, after severe supply shortages were experienced in 2005, the Moerane Commission of Inquiry recommended its reinstatement.

Following the 2010 World Cup, SAPIA applied for, and was granted, exemption between 3 October 2011 and 31 December 2015 with some conditions being attached after 2011. Since 2015, the exemption has since been extended some 21 times.

The continuous exemption of the fuel industry value chain over a period of more than two decades constitutes a risk to the integrity of Competition Policy. The Department of Trade, Industry and Competition (the dtic) and the Competition Commission are currently evaluating the merits of SAPIA's 2020 application in this context.

This paper draws on a confidential report of an investigation commissioned by the dtic to assess the merits of SAPIA's application for further Designation of the South African petroleum industry.

The paper examines the technical and infrastructural root causes of supply security risks and identifies measures that would contribute to reducing such risks, thereby eliminating the need for a general exemption of the fuel industry from the Competition Act.

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## ABBREVIATIONS

| | |
|---|---|
| AVTUR | Aviation Turbine Fuel |
| BFP | Basic Fuel Price |
| BIC | Biofuels Implementation Committee |
| CEF | Central Energy Fund |
| CTAFS | Cape Town Airport Fuel Services |
| CTIA | Cape Town International Airport |
| DJP | Durban–Johannesburg pipeline |
| DMRE | Department of Mineral Resources and Energy |
| dtic (the) | Department of Trade, Industry and Competition |
| ESMP | Energy Security Master Plan |
| GTL | Gas–to–Liquid |
| HDSA | Historically Disadvantaged South African |
| HOS | Heads of Supply Committee |
| IBLC | In Bond Landed Cost |
| IDC | Industrial Development Corporation |
| IVS | Island View Storage |
| JBS | Joint Bunkering Service |
| LFERP | Liquid Fuel Emergency Response Plan |
| LOA | Length overall (maximum length of a ship's hull measured parallel to the waterline) |
| LPT | Logistics Planning Team |
| MDF | Marine Diesel Fuel |
| MFO | Marine Fuel Oil |
| MPP | Multi–Product Pipeline |
| MRG | Methane Rich Gas pipeline (also referred to as the Lily pipeline) |
| MSA | Main Supply Agreement |
| NERSA | National Energy Regulator of South Africa |
| NMPP | New Multi–Purpose Product Pipeline |
| OCGT | Open Cycle Gas Turbine |
| ORTAFS | ORTIA Airport Fuelling Services |
| ORTIA | Oliver Reginald Tambo International Airport |
| SAPIA | South African Petroleum Industry Association |
| SBM | Single Buoy Mooring |
| SAPREF | South African Petroleum Refineries |
| SFF | Strategic Fuel Fund |
| SOP | Standard Operating Procedures |
| SPM | Single Point Mooring |
| TFR | Transnet Freight Rail |
| TNPA | Transnet National Port Authority |
| TNPA | Transnet National Port Authority |
| TOPS | Terminal Operator Performance Standards |
| TPL | Transnet Pipelines |
| VLCC | Very Large Crude Carrier |

# 1. INTRODUCTION

Participants in the petroleum industry value chain, represented by the South African Petroleum Industry Association (SAPIA), are granted exemption from the Competition Act largely on the grounds of ensuring security of supply of petroleum products.

This exemption was invoked in 2002 for 18 months to ensure fuel supply security after the termination of the Main Supply Agreement whereby oil companies in South Africa were obliged to uplift and market a substantial proportion of Sasol's fuel production from its plants at Sasolburg and Secunda. The Designation and Exemption was not renewed. However, after severe supply shortages in 2005 the Moerane Commission of Inquiry recommended its reinstatement.

Following the 2010 World Cup, SAPIA applied for, and was granted, exemption between 3 October 2011 and 31 December 2015 with some conditions being attached after 2011.

Since 2015, the exemption has been extended some 21 times.

The continuous exemption of the fuel industry value chain over more than two decades constitutes a risk to the integrity of Competition Policy. The Department of Trade, Industry and Competition (the dtic) and the Competition Commission are evaluating the merits of SAPIA's 2020 application in this context.

This paper draws on a confidential report of an investigation commissioned by the dtic to assess the merits of SAPIA's application for further designation and exemption of the South African petroleum industry. It examines the technical and infrastructural root causes of supply security risks and identifies measures that would contribute to reducing such risks, thereby eliminating the need for a general exemption of the fuel industry from the Competition Act.

The focus is on understanding and documenting the evolution since 2011 of the physical infrastructure and capacity, the technical operations and procedures, and the associated technical limitations of the fuel logistics infrastructure across all the main geographic fuel marketing areas of RSA. The specific physical and operational aspects of the infrastructure which contribute to supply insecurity as at 2022 are analysed to determine exactly what needs to be done to achieve "stability". The analysis extends to relevant policy and regulatory instruments that affect supply security.

Our approach draws on and complements the analyses of this industry from a Competition Policy perspective (Mondliwa and Roberts, 2014), (Paelo, Robb and Vilakazi, 2020) and the analysis from an energy sector regulation perspective (Crompton et al., 2020).

**Section 2** details the history of exemptions enjoyed by the industry since 2002.

The rationale for the exemptions was that concrete plans and activities would be put in place which would reduce petroleum product supply insecurity and thereby obviate the need for future exemptions.

**Section 3** outlines the historic and projected supply/demand profile of the RSA petroleum industry.

**Section 4** lays out the RSA petroleum industry logistics system and identifies and discusses the main issues contributing to fuel product supply insecurity between the refineries of Engen and South African Petroleum Refineries (SAPREF), a Shell SA Refining and BP Southern Africa joint venture, and the Island View fuel product tank farms at the Durban port and the Transnet Pipelines injection point at Island View, Durban.

**Section 5** highlights the main structural and operational issues contributing to petroleum product supply insecurity at the Durban Port berthing facilities.

**Section 6** outlines the scale, capacity, and capability of the Multi-Product Pipeline (MPP) to carry fuel products from Durban to the inland market.

**Section 7** outlines supply security issues between Jameson Park and the inland market areas.

**Sections 8-9** respectively trace structural and operational issues impacting supply security in Richards Bay, Western/Northern Cape and Eastern Cape market areas.

**Section 10** discusses supply insecurity issues at OR Tambo International Airport, Cape Town International Airport and Durban International Airport.

**Section 11** outlines the national fuel product supply security management system of the Department of Mineral Resources and Energy (DMRE).

**Section 12** examines the effectiveness of existing data collection systems that monitor the state of National petroleum product supply logistics.

**Section 13** discusses issues relating to commercial stocks of fuel products.

**Section 14** discusses the 2007 Energy Security Master Plan and the associated 20-Year Liquid Fuels Roadmap.

**Section 15** discusses South Africa's 2013 Draft Strategic Stock Policy.

**Section 16** discusses South Africa's clean fuels and biofuels policies.

**Section 17** lists impediments to third-party/new-entrant access to the fuel product markets.

**Section 18** outlines the DMRE's Draft Liquid Fuel Emergency Response Plan.

**Section 19** discusses various DMRE policy and regulatory processes that have a direct bearing on supply security.

**Section 20** concludes by outlining a road map of issues that need to be addressed to improve fuel product supply security. Such issues could be considered by the Competition Commission in evaluating and granting conditional exemption from the Competition Act.

## 2. 20-YEAR FUEL INDUSTRY DESIGNATION AND EXEMPTION HISTORY: 2002-2022

The South African oil industry has been exempted from compliance with the Competition Act of 1998 since 2002 largely based on ensuring security of supply.

Designation and Exemption was first requested in 2002. Until then the oil industry freely exchanged information and products under what was known as the Main Supply Agreement (MSA). The MSA originated during the sanctions period when Government forced oil companies to accommodate the production of all the fuels produced from coal by Sasol. Oil companies were compensated for lost profits arising from reduced crude oil refining in their own facilities.

The MSA contravened the Competition Act of 1998. Sasol then gave notice of its intention to terminate the MSA. Sudden termination would have disrupted the industry and to allow for a stable, negotiated outcome, the industry was Designated and Exempted for 18 months from February 2002.

The Designation and Exemption was not renewed. However, after severe supply shortages in 2005, the Moerane Commission of Inquiry recommended its reinstatement.

The process of Designation and Exemption operates as follows:

The Minister of Trade, Industry and Competition is empowered to designate an economic sector in terms of the Section 10(3) (b)(iv) of the Competition Act in consultation with the relevant Ministry responsible for the respective sector.

This facilitates an investigation by the Competition Commission which is empowered though not obliged to exempt the respective economic sector from complying with the Competition Act.

Following the 2010 World Cup, SAPIA applied for, and was granted, exemption between 3 October 2011 and 31 December 2015.

The conditions attached to Designation and Exemption in 2011 were as follows:

“The exemption application relates to the cooperation agreements and/or practices between SAPIA and its members at the following stages of the liquid fuels supply chain: Inbound logistics; primary distribution; terminal and depot operation and the specific shared services such as the airport fuelling services and the port joint bunkering services. The exemption does not extend to the wholesale, commercial and retail trade of the supply chain.

“The exemption is granted on the basis of the facts and the existing agreements and practices described in the application. Should the facts and existing agreements and practices change materially, including any change caused by the proposed addition of a new participant to an exempt agreement or practice or the conclusion of a new agreement, the Commission should be notified of such change. Any new agreement which affects the agreements and practices described in the exemption application, or any amendment or addendum to agreements contained in the application shall not be of force or effect until approved by the Commission.

“SAPIA and its members and any other approved participants in exempt agreements and practices may not share competitively sensitive information, except for the purposes described in the exemption application.

1) *"If:*

1.1. *"a party to an agreement or practice at any stage of the liquid fuels supply chain also acts as an operator of the infrastructure or coordinates the joint use of a facility to which that agreement or practice relates; and*

1.2. *"it is necessary for that operating party to be provided with disaggregated volume information of other participants, or any other information which may lead to a substantial/lessening or prevention of competition;*

*then the operating party must not share that information with the other participants, unless sharing the information is necessary to ensure security, stability and continuity of liquid fuels supply, or is necessary for strictly operational purposes.*

*The employees of any operating party who receive such information shall ensure that the information is held, maintained and used separately, confidentially and on a need to know basis only.*

2) *"SAPIA and its members may not share information relating to setting of margins, imposition of levies and/ or approval of tariffs, unless required to do so by the Department of Energy or NERSA. 5. SAPIA and its members and any other approved participants are required to comply in all material respects with all statutes, regulations and policies which have the force of law, and which directly relate to competition in the petroleum refining and marketing industry in South Africa. These industry regulations include but are not limited to: the Petroleum Products Amendment Act (58 of 2005), the Petroleum Pipelines Act (60 of 2003), the National Ports Act (12 of 2005), and Regulations in terms of the Petroleum Pipelines Act and the National Ports Regulations.*

3) *"SAPIA must open up its membership to accommodate both existing and potential marketers in the petroleum and refinery market on fair, reasonable and transparent grounds.*

4) *"SAPIA will provide the Commission with regular updates regarding the implementation of the Department of Energy's 'Energy Security Master Plan' (ESMP)."*

Arising from this, SAPIA did extend membership to licensed independent wholesalers (Mondliwa and Roberts, 2014).

The decision to exempt the industry was challenged in 2012 by an independent fuel importer, Gas2Liquids on the grounds that the exemption would mainly benefit the oil majors, reinforcing anti-competitive behaviour, and that exemption was not necessary for industry stability.

The Tribunal acknowledged that elements of the exemption could result in anti-competitive behaviour but concluded that neither Gas2Liquids, nor the commission had proposed alternative options to reduce the propensity for such behaviour (Paelo, Robb and Vilakazi, 2020).

The Tribunal furthermore asserted that, having solicited public comments, the bulk of which supported the exemption, the commission had no viable alternatives before it and that "indeed, the likelihood is that supply will remain at current levels regardless of any increase in the number of firms accessing the infrastructure". The problem for smaller firms is not the exemption, but the current physical constraints on supply as identified by the Moerane task team's report (Competition Tribunal 2013).

On 8 November 2013, SAPIA applied to the newly appointed Minister of Energy, Ben Martins, to start the process of extending the exemption well before its 2015 expiry.

The basis of SAPIA's application was that "….the new exemption would be substantially the same as the exemption that applies currently. This is because almost all of the constraints on the South African liquid fuels supply chain which applied at the time the existing exemption was applied for, still exist. The interactions between industry participants required to address these constraints are therefore still necessary" (SAPIA, 2013a, p.3).a or b

It is not clear why SAPIA approached the newly appointed minister more than one year before expiry, but it seems that Minister Martins did not comply. SAPIA resent the motivation on 22 June 2015 to Energy Minister Tina Joemat-Peterson (SAPIA, 2015a, p.59) as well as to the Minister of Trade and Industry.

In his response, the Minister of Trade and Industry pointed to the original designation having been given during the 2010 World Cup and requested SAPIA to clarify the several issues (Minister of Trade and Industry, 2015), which SAPIA did attempt to do (SAPIA, 2015b).

For ease of reference, the issues raised by the Minister of Trade and Industry and SAPIA's respective main responses are listed below:

- How was the industry managed prior to the designation of 2009?
    - SAPIA – prior to March 2010, industry interactions were limited to comply with the Competition Act, imposing a greater risk to supply security.
- Whether the request for a designation is for an indefinite period or for a period of "at least 5 years"?
    - SAPIA – at least six years from 1 January 2016.
- Whether further applications will be made in future for extension of the designation beyond the period granted?
    - SAPIA – this depends on when the Department of Energy's policy on strategic stocks is finalised.
- The impact of the designation on competition in the industry?
    - SAPIA – notes that designation of distribution and sale of fuels is not requested. Also, that exemption is likely to increase competition because an optimised and smooth functioning supply chain will enable greater volumes to be supplied to customers.
- *Whether a similar exemption for the industry from competition law applies in other legal jurisdictions such as the European Union?*
    - *SAPIA – Unlike other jurisdictions, South Africa is unique in that:*
        - *The fuel logistics infrastructure is constrained, with limited storage facilities.*
        - *No formalised system of strategic stockholding.*
        - *Critical logistics infrastructure between Durban and the inland market is shared.*
        - *The fuel import and refining supply chain is integrated.*
        - *Most refining capacity is located at the coast, with a geographic imbalance between supply and the main inland market demand.*
- *The views of the Competition Commission on the matter?*
    - *SAPIA – engagements with the Commission are ongoing.*

- *Whether any other options are available to the industry to address its operational needs other than a designation and exemption from the provisions of the Competition Act?*
    - *SAPIA –*
        - *a) continue co-operating without designation and run the risk of violating the Competition Act,*
        - *b) Cease cooperation and run the risk of supply insecurity.*

Designation and exemption of the oil industry has been reviewed several times since 2015.

- 5 Years – 3 October 2011 to 31 December 2015
- 9 Months – 1 January 2016 and ending on 30 June 2016, extended to 30 September 2016
- 3 months – 30 September 2016 to 31 December 2016
- 6 Months – 1 January 2016 to 30 June 2016
- 6 Months – 1 July 2016 to 31 December 2016
- 1 Year – 1 January 2017 to 31 December 2017
- 3 Months – 1 January 2018 to 31 March 2018
- 6 Months – 1 April 2018 to 30 September 2018
- 6 Months – 1 October 2018 ending 31 March 2019
- 3 Months – 1 April 2019 to 30 June 2019
- 6 Months – 1 July 2019 to 31 December 2019
- 1 Year – 1 January 2020 to 31 December 2020
- 3 Months – 1 January 2021 to 31 March 2021
- 3 Months – 1 April 2021 to 30 June 2021
- 6 Months – 1 July 2021 to 31 December 2021
- 4 Months – 1 January 2022 to 30 April 2022
- 3 Months – 1 May 2022 to 31 July 2022
- 6 Months – 1 August 2022 to 31 January 2023
- 3 Months – 1 February 2023 to 30 April 2023
- 4 Months – 1 May 2023 to 31 August 2023
- 3 Months – 1 September 2023 to 30 November 2023
- 3 Months – 1 December 2023 to 29 February 2024

The conditions applied to the exemptions have to date not been changed since the 2011 exemption was issued as published in Government Gazette No. 34651 of 7 October 2011.

Between 1 January 2016 and 31 December 2016, three short-term exemptions were granted to SAPIA. During this period, the Competition Commission issued a notice stating that it was "*satisfied that SAPIA's exemption will contribute towards maintaining the economic stability of the petroleum and refinery industry for the period starting on 1 October 2016 and ending on 31 December 2016".* The Commission invited interested parties to appeal this decision (RSA, 2016). No responses were received, and the designation and exemption were extended on six separate occasions between 1 January 2016 and 31 March 2019.

In October 2018, the dtic invited public comments on the SAPIA's designation application. SAPIA was the only party that submitted comments (RSA, 2018).

SAPIA effectively repeated the justification for designation made in SAPIA's 2015 application. However, SAPIA proposed that the Minister of Trade and Industry/Economic Development grant designation up until December 2020 and, between 2018 and December 2020. It submitted that:

- *The commission should then grant the exemption subject to agreed conditions setting out a process for appointing appropriately independent third parties to collate and aggregate at each relevant stage of the supply chain competitively sensitive information necessary for the operation of each of the agreements and practices described in the exemption application.*
- *SAPIA and its members would have to appoint such independent third parties and transfer responsibility to them for collating and aggregating information, where possible, by the expiry of the exemption at the end of 2020.*
- *Appointing independent third parties, where feasible, would significantly reduce the need for exemption for "day-to-day" interactions between industry participants. The scope of the exemption required beyond 2020 would reduce accordingly.*
- *The industry's requirement for exemption post-2020 would therefore be limited "emergencies-only". In other words, they would be limited to interactions between the competing industry players that are necessary to identify, prevent and respond to supply emergencies which threatened stability of both the petroleum industry and the national economy.* (SAPIA, 2018, p9)

Extensions were granted between April 2019 and December 2020.

SAPIA applied on 13 October 2020 to the dtic for designation of the petroleum industry for 10 years.

Designation would allow SAPIA to ask the Competition Commission to exempt SAPIA and its members from competition legislation so that they could collectively participate in:

- Coordination required to prevent, mitigate, and react to emergency situations, including:
  - Joint planning of planned refinery shutdowns.
  - Coordinated responses to unplanned refinery shutdowns.
  - The functioning of the Heads of Supply Committee (HOS) of the DMRE.
  - The SAPIA Security of Supply Committee which meets before each HOS Committee meeting.
  - The functioning of the DMRE's Logistics Planning Team.
- Interaction between SAPIA and government on:
  - Developing government policy on holding petroleum product strategic stocks;
  - DMRE's process of designing regulations for implementing government's biofuels policy; and
  - DMRE's process of designing regulations on implementing government's cleaner fuels policy.

SAPIA argued that this was necessary because the RSA liquid fuel supply industry was unique, arising from:

- Constrained domestic production of fuel products which necessitate periodic imports.
- Shared logistics infrastructure between the coast and inland markets.
- An integrated supply chain whereby constraints at any point in the chain affect the entire supply chain.

- The inland market's dependence on the integrated logistics chain for production and imports from the coast (Durban).

SAPIA's first 2020 application differed from the 2015 application in that it specifically excluded "day-to-day" practices/interactions between SAPIA's members and third-party owners and operators of supply chain infrastructure that were previously subject to exemption since 2011.

These day-to-day practices included the following:

**Durban to Inland Market Area**

Co-loading and co-freighting of crude oil

Operation of the Single Buoy Mooring (SBM)

Operation of the Durban Southern Tank Farm

Port operations - Durban

Pipeline scheduling operations

Depot Infrastructure operations

Coastal shipping

Joint Bunkering

**Western and Northern Cape fuel markets**

Port operations - Cape Town

Port operations - Mossel Bay

Port operations - East London

Port operations - Port Elizabeth

Depot Infrastructure operations

Coastal shipping

Joint bunkering

**Eastern Cape fuel markets**

Port operations - East London

Port operations - Port Elizabeth

Depot Infrastructure operations

Coastal shipping

Joint bunkering

**Airport infrastructure operations**

OR Tambo

Cape Town

Note: We have used an organising format according to respective geographic fuel market areas which, as will become clearer in the report, is a useful approach to analysing and pinpointing specific supply insecurity issues and the potential solutions to insecurity.

In engaging SAPIA on their 2020 application, the dtic noted that SAPIA had failed to comply with the two conditions attached to the designation for the period 1 January 2020 to 31 December 2020. These were that SAPIA engage with the Competition Commission to include proposals to mitigate information-sharing risks and develop proposals for sector transformation.

Consequently, the dtic only extended designation for three months to 31 March 2021 to allow for engagements to take place.

Between October 2020 and May 2021, the SAPIA-dtic engagement focussed on industry transformation commitments sought by the dtic in terms of its interpretation of Section 10(3)(b)(iv) of the Competition Act which empowers the Competition Commission to exempt specific industry practices if they contribute to:

- *"the economic development,*
- *growth,*
- *transformation or*
- *stability of any industry designated by the Minister, after consulting the Minister responsible for that industry".*

In response SAPIA insisted that, since their application was made solely on the grounds of "security of liquid fuel supply and the economic stability of the petroleum industry" and not on any of the other criteria outlined in Section 10(3)(b)(iv), they were not obliged to adhere to any conditions relating to economic development, growth or transformation. Furthermore, SAPIA have taken the stance that the dtic Minister must only consider "security of liquid fuel supply and the economic stability of the petroleum industry" issues in deciding whether to designate or not (SAPIA, 2021a).

The dtic rejected SAPIA's proposal to exclude day-to-day interactions and asked SAPIA to submit a revised designation application which included detailed risk-mitigation measures and measures to support the smaller independent firms involved in the petroleum industry.

Following further discussion, and on the request of the dtic, SAPIA agreed to include the day-to-day interactions in its application for designation and exemption. The revised application was resubmitted on 9 July 2021.[1]

To facilitate this process, the dtic extended the designation to 31 December 2021 and the Competition Commission in turn extended the exemption to that date.

In the light of the closure of the Engen and SAPREF refineries, further extensions were granted to 28 March 2024 to allow time for the dtic to review the historic designation process more thoroughly; analyse supply security and competition policy risks; and to assess mitigation options.

[1] SAPIA (2021b) Revised Application for exemption by SAPIA on behalf of its Members. 9 July. 2021.

## 3. RSA FUEL PRODUCT SUPPLY-DEMAND PROJECTIONS 2022-2035

The most recently available liquid fuel demand projections date back to 2017.

At that time, national fuel product demand was expected to grow between 2-3% a year until 2021 with growth tapering off thereafter.

This outlook has changed substantially, and demand is less likely to grow, given recent environmental policy objectives, planned clean fuel specifications, improved combustion engine efficiencies and the growth of electric vehicles.

**Table 1: RSA liquid fuel demand projections 2016-2046**

| LIQUID FUELS PRODUCT | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2026 | 2031 | 2046 |
|---|---|---|---|---|---|---|---|---|---|
| Jet fuel | 3.00 | 3.13 | 3.25 | 3.55 | 3.71 | 3.94 | 4.95 | 5.60 | 8.14 |
| Diesel | 14.56 | 15.22 | 15.87 | 16.49 | 17.09 | 17.66 | 20.64 | 22.05 | 27.82 |
| Petrol | 13.46 | 13.65 | 13.83 | 14.00 | 14.16 | 14.25 | 15.32 | 15.33 | 15.19 |
| **Total** | **31.02** | **32.00** | **32.95** | **34.04** | **34.97** | **35.85** | **40.90** | **42.98** | **51.15** |
| *Billion litres a year* | | | | | | | | | |

*Source*: Transnet. 2017. Pipeline Development Plan – Long Term Development Planning framework.

While stagnant or reduced demand may partly mitigate overall national supply insecurity, the impact on supply security in the inland market is more dependent on the logistics supply system via the multi-product pipeline between Durban and the inland market.

Future demand projections will be critical to assess the adequacy of existing pipeline and storage infrastructure as well as the required investment in capacity expansion. Time has not allowed for this in this study which has focussed on current constraints and on measures required to mitigate supply insecurity.

**Table 2: TPL Pipeline utilisation projections 2016-2046**

| Liquid Fuels Pipeline | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2026 | 2031 | 2046 |
|---|---|---|---|---|---|---|---|---|---|
| DJP | 2.644 | 2.557 | 2.56 | 0 | 0 | 0 | 0 | 0 | |
| MPP24 | 3.257 | 3.485 | 4.3 | 7.4 | 7.9 | 8.9 | 11.3 | 13.2 | 25.3 |
| NGP | | 0 | 0 | 0 | 0 | | | 0 | |
| Alternative Supply Corridor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 10.9 |
| **Total** | **5.90** | **6.04** | **6.86** | **7.40** | **7.90** | **8.90** | **11.30** | **13.20** | **36.20** |
| *Billion litres a year* | | | | | | | | | |

*Source:* Transnet, 2017. Pipeline Development Plan – Long Term Development Planning framework.

Refining capacity in South Africa consists of the Astron refinery in Cape Town, PetroSA gas-to-liquids refinery at Mossel Bay, the SAPREF refinery and Enref refinery in Durban, the Natref refinery at Sasolburg and the Sasol I and II synfuel plants at Secunda.

Summarised in Tables 3 and 4 are South Africa's overall refined petroleum product production capability and national demand changes from 2020 to 2022.

**Table 3: RSA petroleum product supply-demand system physical structure and capacity (2020)**

| RSA MARKET DEMAND | 2020 DEMAND M3 | % OF TOTAL NATIONAL DEMAND | MAIN DOMESTIC SUPPLY |
|---|---|---|---|
| Inland market (includes Gauteng, Free State, Northwest, Limpopo and Mpumalanga) | 12 740 197 | 55% | 10 860 000 (Sasol + Natref) |
| KwaZulu Natal | 4 484 433 | 19% | 12 000 000 (Engen + SAPREF) |
| Eastern Cape | 2 090 255 | 9% | (Engen + SAPREF) |
| Western and Northern Cape | 3 870 430 | 17% | 5 400 000 (Astron + PetroSA) |
| **Total** | **23 185 316** | **100%** | |

**Table 4: RSA Domestic refinery production capacity 2020 to 2022**

| RSA DOMESTIC REFINERY PRODUCTION CAPACITY | NAMEPLATE REFINERY CAPACITY | | REFINERY PETROLEUM PRODUCTION CAPACITY* AVAILABLE IN 2022 M3/ANNUM |
|---|---|---|---|
| | IN BARRELS/DAY | PETROLEUM PRODUCTS PRODUCTION CAPACITY* IN M3/ANNUM | |
| Engen Refinery Durban [2] | 120 000 | 4 800 000 | |
| SAPREF Refinery Durban [3] | 180 000 | 7 200 000 | 1 800 000 |
| Natref Refinery Sasolburg | 108 000 | 4 860 000 | 4 860 000 |
| Sasol II and III Refinery Secunda | 150 000 | 6 000 000 | 6 000 000 |
| Astron Refinery Cape Town [4] | 90 000 | 3 600 000 | |
| PetroSA Refinery Mossel Bay [5] | 45 000 | 1 800 000 | |
| **Total** | | **28 260 000** | **12 660 000** |
| **Petroleum products shortfall requiring to be imported** | | | **15 600 000** |

* Petroleum Products Capacity in $m^3$/annum excludes refinery fuel oil production. It is assumed that the Petroleum Products Capacity (white oil yield) is 80% for all Refineries except Natref which is 90%.

Other assumptions in the above table include:

- $1m^3$ = 6.3 barrels
- Operational capability of the refinery is equivalent to 90% of nameplate capacity.
- Refineries operate 350 days/annum. The remaining 15 days/annum are deemed for maintenance.

Salient observations from the above tables are:

- In 2020, Durban/KZN and the inland markets absorbed 74% of total national demand.
- Up until 2020, South Africa's overall refined petroleum product production capability (28 million $m^3$) capacity exceeded national consumption (23 million $m^3$). However, the refineries were operated well below their nameplate capacity as lack of investment prevented them from

[2] Engen refinery has not been operating since December 2020.
[3] SAPREF has not been operating since April 2022.
[4] Astron refinery was shut down after a fire in July 2020 and was only expected to start up in 2023.
[5] PetroSA GTL refinery has not been operating since December 2020 due to lack of indigenous gas feedstock availability.

meeting the Clean Fuels 1 specifications for 95 octane unleaded petrol and 50ppm sulphur for diesel. Hence national consumption in 2020 was already in part met from imported petroleum products.

- Over the period 2020 and 2022 several refineries in South Africa were not operating:
  - Astron refinery was shut down after a fire in July 2020 and was only expected to start up at the end of December 2022.
  - Engen refinery in Durban was permanently shut down after a fire/explosion in December 2020.
  - PetroSA Gas-to-Liquid (GTL) refinery in Mosel Bay stopped operating since December 2020 due to lack of indigenous gas feedstock availability.
  - Shell and BP took a commercial decision in the first quarter of 2022 to stop operating SAPREF and the refinery has not been operating since the KZN floods in April 2022.

The refinery closures have reduced annual petroleum product production refinery nameplate capability by 55% from beginning of 2020 (28.3 million $m^3$) to by end of 2022 (12.7 million $m^3$). Thus, South Africa has been made reliant for more than 55% of petroleum product requirements on imports.

- The shortfalls in the Eastern Cape, Western Cape and Northern Cape have been met through imported petroleum products.
- Shortfalls in the inland market have been met by:
  - The then-Engen and SAPREF refineries via the Multi-Product Pipeline (MPP) from Durban to Jameson Park Gauteng and then through the Transnet Pipeline's existing inland pipeline network and/or by road tankers to oil industry inland storage facilities.
  - Imported finished petroleum products supplied via the Durban harbour berthing and storage facilities at Island View through the MPP to Gauteng (Jameson Park) and then through the Transnet Pipeline's existing inland pipeline network and/or by road tankers to oil industry inland storage facilities.
  - Durban via road/rail tank cars from the oil industry's Durban storage facilities to the oil industry inland storage facilities (mainly during inland shortage periods).
  - Jet fuel shortfall, particularly at OR Tambo International Airport, is supplied via rail tank cars from Durban.
- Transnet Pipelines replaced the ageing and constrained Durban-Johannesburg pipeline (DJP) in 2017 with the MPP[6] and currently operates at 1 - 2 million litres an hour or typically 42,000$m^3$ a day (14 million $m^3$ a year) which is sufficient to meet current inland market requirements of around 13 million cubic metres a year. The MPP design capacity can be extended to transport around 25 million cubic metres a year through addition of booster pumps and by having Accumulation Tanks at the injection point at Island View, Durban and at the termination point in Jameson Park, Gauteng. Currently there are only Accumulation Tanks at the termination point in Jameson Park.

The closure of Engen refinery in December 2020 and SAPREF in April 2022 has resulted in substantial increase of imported petroleum products. This has further affected the petroleum product supply

[6] Note the envisaged MMP project design entailed construction of accumulator tanks at both Island View Precinct in Durban and at Jameson Park in Gauteng. However, accumulator tanks have only been constructed at Jameson Park in Gauteng.

logistics infrastructure from Island View Durban to the Inland Market. Supplying petroleum products to the Inland Market has placed greater strain on storage capacity, MPP pipeline infrastructure, and berthing facilities at Island View.

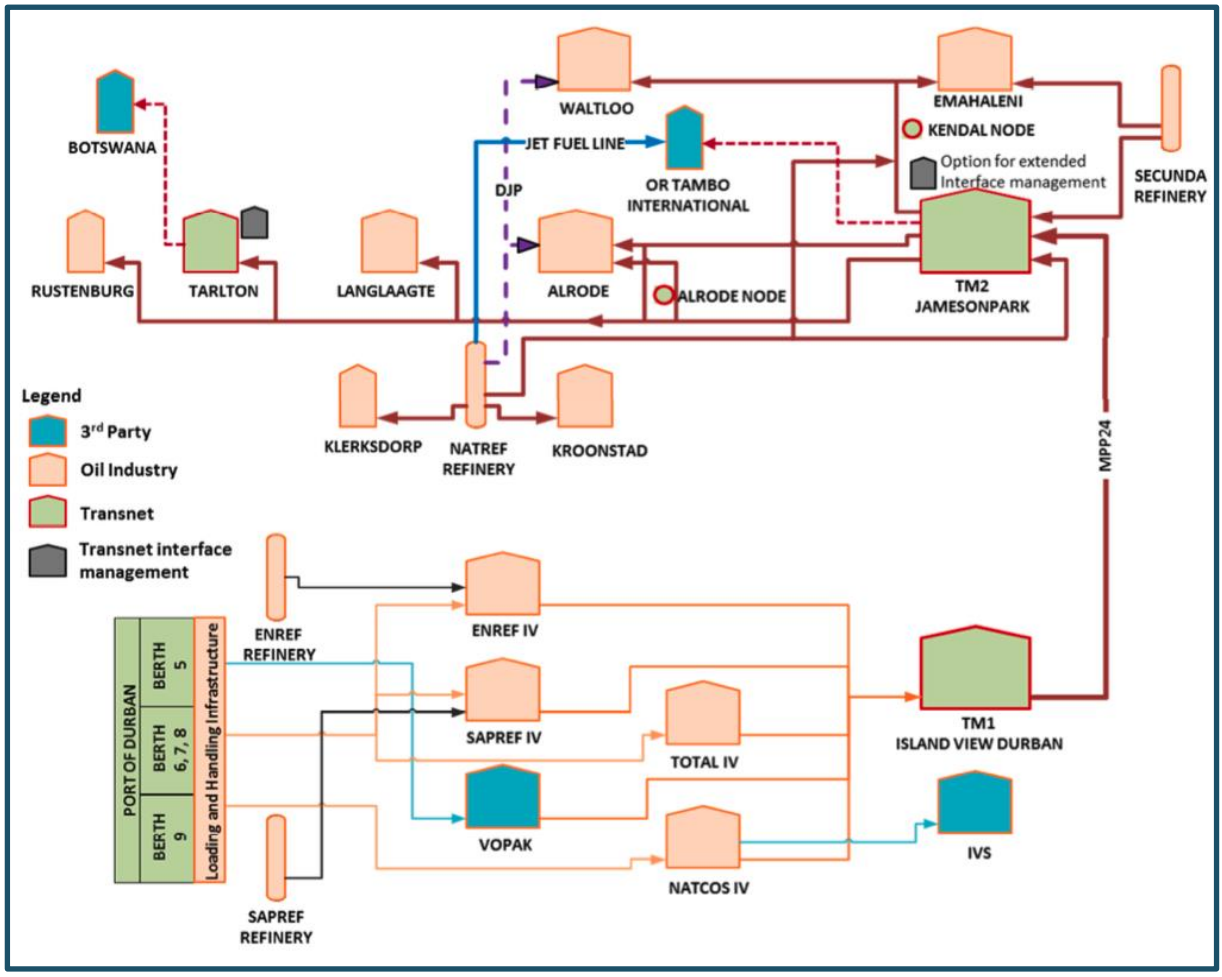
Understanding these constraints has been a major part of this investigation.

## 4. DURBAN TO INLAND MARKET – PETROLEUM PRODUCTS LOGISTICS SYSTEM

The inland market constitutes around 55% of total national demand for fuel products. A further 19% is consumed in the KZN region.

These two regions are dependent on the logistics system outlined below.

**Figure 1 : Durban to inland market pipeline system and tank storage facilities**




*Source:* Transnet, 2017. Pipeline Development Plan – Long Term Development Planning framework.

Refined petroleum products from Durban's Engen and SAPREF refineries are despatched either by road tanker from the refinery sites or from refined petroleum products routed to storage tanks owned by the respective oil companies located in the Island View precinct in Durban harbour. Engen only despatch refined petroleum product by road tanker from the refinery site, while Shell and BP primarily despatch refined petroleum product by road tanker from Island View and only some specific products from the refinery site.

Petroleum products imported through the shipping berths in the Durban harbour primarily by the major oil companies at Island View, Durban are routed to the respective oil company storage facilities either at Island View or at the respective Durban refinery sites.

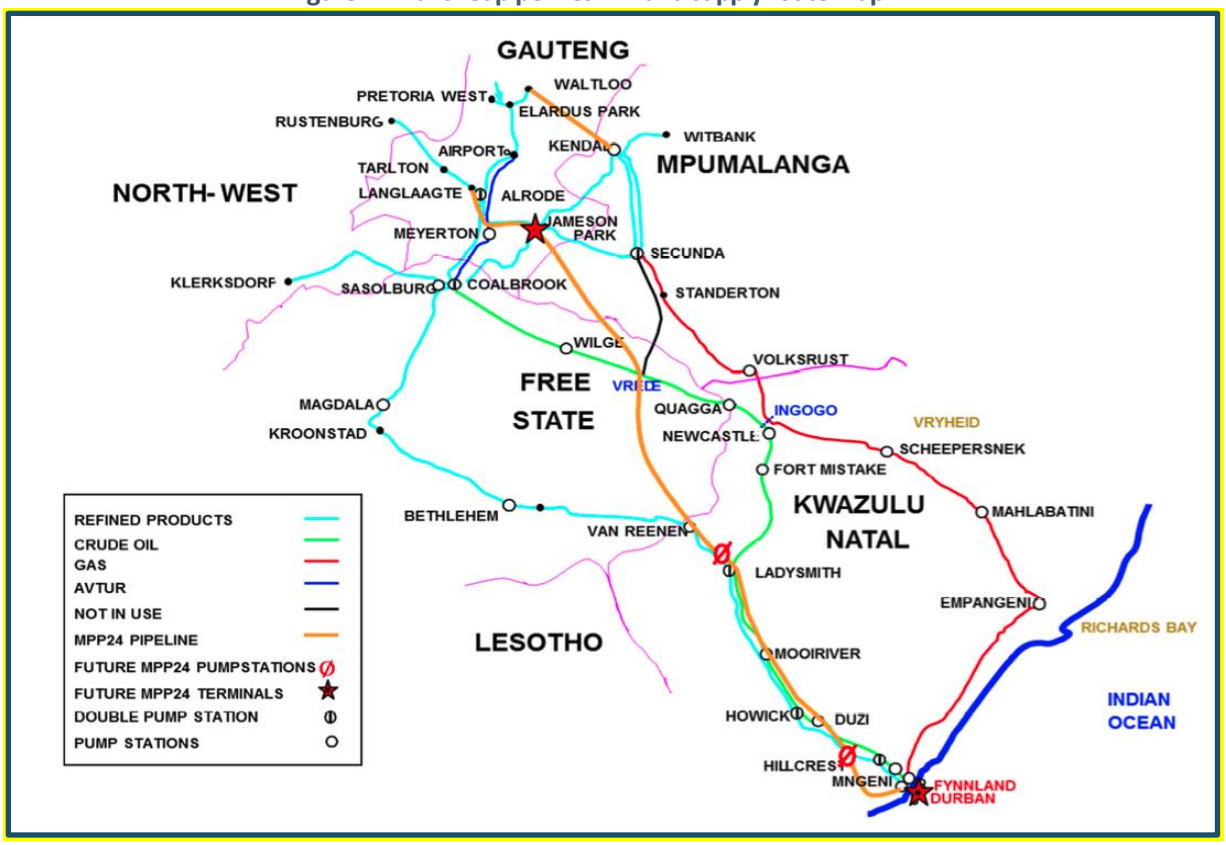
Fuel products are supplied to the inland market through Transnet Pipelines' (TPL) 24-inch Multi-Product Pipeline (MPP) from Island View to TPL's main inland terminal at Jameson Park in Heidelberg, Gauteng. The overall Transnet-owned pipeline system is depicted in Figure 2. These consist of the:

- Durban-Coalbrook (Natref) crude oil pipeline.
- Durban-Johannesburg (DJP) pipeline.
- Multi-Product pipeline (MPP) which has replaced the DJP.
- Inland pipeline network.
- Secunda-Durban Methane Rich Gas pipeline (MRG, also referred to as the Lily pipeline).[7]

The inland market is also supplied with petroleum products from Natref in Sasolburg; from Sasol's Coal-to-Liquids plants in Secunda; and from TPL's Jameson Park terminal via the TPL's inland pipeline network to storage depots owned by the oil companies and some third-parties. Respective fuel companies' customers are supplied by road tankers and/or rail from these depots.

TPL transfers petroleum products from Jameson Park to the adjacent privately-owned Vopak depot at Lesedi for onward road transport to other oil companies' storage facilities or directly to oil companies' customers.

**Figure 2 : Transnet pipelines – Inland supply route map**




*Source*: Transnet, 2017. Pipeline Development Plan – Long Term Development Planning framework.

[7] The MRG pipeline from Secunda to Durban was created by using the remaining portions of the 18-inch crude oil pipeline (COP) and the remaining portion of old 16-inch DWP product pipeline, after reconfiguring of portion of the old 16-inch DWP product pipeline from Durban to crude oil service at Ingogo.

## 4.1. Petroleum product supply from Durban refineries to oil company-owned tank farms at Island View

Until its closure in December 2020 after a fire, the Engen-owned Enref refinery supplied petroleum products to Island View for injection into TPL's MPP to supply the inland market.

Similarly, until April 2022 when the plant was mothballed pending a possible sale or closure, the BP/Shell-owned SAPREF refinery supplied petroleum products to Island View for supply to their local customers and for onward injection into TPL's MPP to supply the inland market.

The petroleum products are then injected by TPL directly from the oil companies' storage facilities into the Multi-Product Pipeline (MPP) at Island View.

All refined products are imported through the Island View shipping berths and Island View tank farms.

## 4.2. Transnet National Port Authority's berthing facilities for handling imported petroleum products in Durban

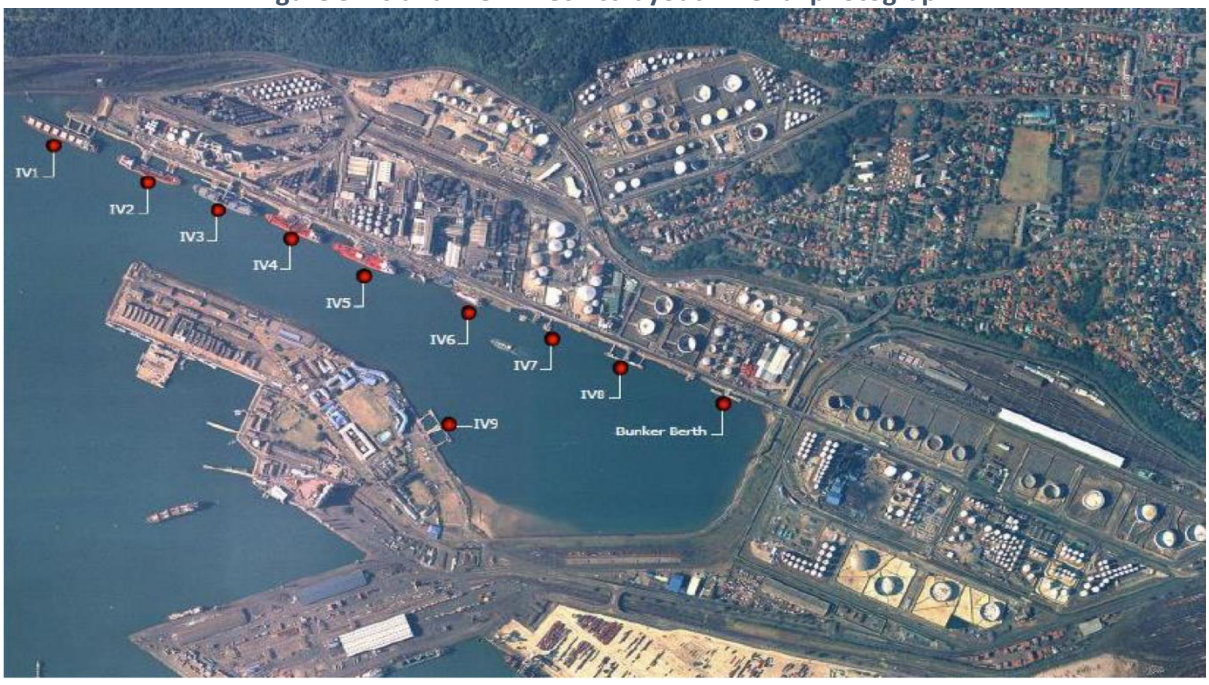
Transnet National Port Authority (TNPA) is the owner and lessor of properties at the Durban port. The Island View Precinct is a petrochemical hub in the Port of Durban. Most land is occupied by terminal operators involved in the movement and storage of South Africa's petroleum products (e.g. petrol, diesel, jet fuel, marine fuel oil, etc), chemicals and vegetable oils.

The 2017 profile of the Island View precinct was as follows:

**Table 5: Durban port Island View precinct – Physical lease and tank storage data**

| | |
|---|---|
| Land leased to tenants | 1 230 847m$^2$ |
| Number of tenants | 15 |
| Total number of berths | 10 |
| Number of storage tanks | 656 |
| Total capacity of storage tanks and silos | 1 776 846m$^3$ |

**Figure 3: Island View Precinct layout – Aerial photograph**




*Source:* Transnet National Port Authority, n.d. (b). Island View Strategy Port of Durban.

The Durban berthing and offloading infrastructure is more complex than at other ports. Several TPNA-owned berths at the Island View Precinct have been leased to the petrochemical industry on long-term leases. The imported petroleum products are discharged at Durban port berths 2, 5, 6, 7, 8, 9 and 10 (Bunker berth) as shown in the figure above and transferred via a pipeline network to the oil industry and independent Vopak storage facilities in the Island View precinct.

Table 6 provides details of the berth lessors, berth operators and what the berth is used for.

**Table 6: Durban port: Analysis of berth capacity and operation**

| BERTH NUMBER | LESSORS | OPERATOR | BERTH CAPABILITY AND USAGE |
|---|---|---|---|
| Island View No. 2 | | | This berth is primarily used for discharging base oils and chemicals. |
| Island View No. 5 (Draught = 10.6m) | | SAPREF | This berth is not being used for discharging petroleum products. |
| Island View No. 6 (Draught = 8.9m) | BP, Shell and Total | SAPREF | Discharging /loading of Avgas, kerosene, jet fuel, , Petrol, Diesel and Marine Diesel Fuel (MDF) and Marine Fuel Oil (MFO).<br>The berth has three booms for white oils and one for black oils.<br>Bunkering facilities available for MDF and MFO are by barge.<br>Simultaneous discharging and loading is not possible.<br>Linked to oil industry and VOPAK storage facilities via three 10-inch pipelines for petroleum products and 6-inch for LPG.<br>Maximum overall length of ship (LOA) is 168m. |
| Island View No. 7 (Draught = 11.9m) | BP, Shell and Engen | SAPREF and Engen? | Discharging /loading of petrol, diesel, and LPG and MFO.<br>The berth has thee booms for white oils; one for black oils and one for LPG.<br>Bunkering facilities available for MDF and MFO.<br>Simultaneous discharging and loading is not possible.<br>Linked to oil industry and VOPAK storage facilities via 10-inch pipelines.<br>Maximum LOA is 168m. |
| Island View No. 8 (Draught = 12.0m) | BP, Shell and Engen | SAPREF and Engen? | Discharging / Loading of Avgas, Kerosene, jet fuel, Petrol, Diesel, MDF and MFO).<br>The berth 3 booms for white oils and<br>1 boom for black oils.<br>Linked to oil industry storage facilities via 10 inch pipelines.<br>Maximum LOA is 168m |
| Island View No. 9 (Draught = 12.2m) | Sasol and Total | Natcos (a Sasol-Total JV) | Discharging small crude oil cargoes that cannot be discharged at the crude oil SBM.<br>Bunkering facilities available for MDF and MFO.<br>Linked to Natcos storage facilities via a pipeline.<br>Maximum LOA is 168m. |
| Island View No. 10 | BP, Shell and Engen | | Discharging / Loading of Black oils and small cargos of crude oil. |
| *Note:* berth capacity for discharging imported petroleum products is reduced by the frequency of loading petroleum products for supplying other coastal ports in South Africa. | | | |

*Source*: Author's compilation following discussions with SAPIA and Transnet Pipelines.

The TNPA has a “first come, first served” scheduling rule for vessels carrying petroleum products to prevent berthing schedulers abusing their position. All vessels report to the harbour master upon arrival at the port, and vessel agents monitor this process to prevent incurring demurrage or unnecessary delays.

SAPREF is the manager of terminal facilities at berths 6, 7 and 8. It receives information from the parties using the berths, develops a schedule for all the vessels docking at Island View and publishes this to all the companies involved including the Transnet Port Terminals (SAPIA 2015, Application for Exemption, 21 December, Para 144-154). It is understood that SAPREF applies a first-come-first-served rule in accordance with Transnet Port Terminal’s Standard Operating Procedures.

Transnet Pipelines is not directly involved with importing petroleum products via the berths.

Volumes are not shared on the schedule, and only the handling companies know what volume a ship is discharging (e.g. Vopak will handle vessels discharging to their terminal, Engen and SAPREF etc.). Contractual arrangements and competition law prevent sharing information with other companies.

SAPREF is not involved in wharfage payment (which reflect volumes and prices) for respective fuel products discharged and such payments are conducted bilaterally between the individual importer and SARS.

In accordance with the schedule, the terminal operator discharges petroleum products from the ships and pumps the products into the respective Island view storage tank farms owned by Engen, SAPREF, Total, Natcos and Vopak.

## 4.3. Transfer of fuel from oil company-owned tank farms to Transnet Pipelines (TPL) Island View MPP injection point

The petroleum products are discharged from the shipping berths into the respective importer’s tank farms at Island View.

After discharging from the ships, the respective fuel products are quality checked by the respective product owner in compliance to SANS1590 specification for pipeline products before being injected into the pipeline in accordance with TPL’s Shippers Manual (Transnet, 2022b).

The petroleum products are then injected directly from the oil company’s storage facility into the Multi-Product Pipeline (MPP).

The original MPP project included accumulation-tankage facility at the TPL’s TM1 site in Island View, but after construction in 2014, the tanks failed, due to design error. The tanks were never replaced.

The Joint Bunkering Service Arrangement ceased in 2014. However, bunkering services in the Durban harbour are provided using barges. The oil company’s black oil storage facilities are still used to store MDF and MFO.

The oil companies own and control 89% of the volumetric capacity of the petroleum product storage tankage at Island View. This impediment to prospective new entrants to the oil industry contributes to supply insecurity.

Table 7: Durban port Island View fuel product storage capacity 2020

| | DESCRIPTION | NO OF LICENCES ISSUED | LICENCED CAPACITY IN (M3) | % ALLOCATION |
|---|---|---|---|---|
| **KwaZulu-Natal Province** | Total licensed capacity | 31 | 1 561 150 | 100% |
| | | | | |
| | Total owned by oil majors | 17 | 1 382 470 | 89% |
| | Total owned by non-integrated wholesalers and ACSA | 14 | 178 680 | 11% |
| | | | | |
| **Durban** | Independent storage operators capacity in Durban | 2 | 155 085 | 100% |
| | BTT Durban | 1 | 18 930 | 12% |
| | Vopak | 1 | 136 155 | 88% |

*Source*: NERSA, 2020.

Only one independently owned petroleum product storage tank farm of Vopak[8] is operated as an open-access facility at Island View.

The Bidvest BTT Island View Storage (IVS) facility operated between 2010 and 2020 as a combined petroleum product and chemical storage facility. In 2020, following the cancellation of the main contract to store oil products, NERSA approved IVS's request for the revocation of its fuel product licence. IVS currently only operates as a chemicals tank farm (NERSA, 2020).

## 4.4. Durban-Inland market – Fuel product supply security issues

### 4.4.1. Adequacy of petroleum product storage capacity at Island View[9]

There are five storage terminals at the Island View Precinct:

- Enref IV owned by Engen.
- SAPREF IV owned by a Shell-BP JV.
- Total IV owned by Total.
- Natcos IV owned by a Sasol-Total JV,
- Vopak Terminal owned by Vopak.

Following the closure of Engen and SAPREF refineries, an increasing amount of fuel products has been imported through the Island View terminals. The storage tanks that the operating refineries used for refined petroleum products are also used to accommodate increased petroleum product imports.

In the absence of historic and real time data on the capacities and availability of oil company-owned terminals in the Island View Precinct and oil company-owned tankage at the Engen and SAPREF refinery sites, it is difficult to determine whether storage tank capacity is adequate to avert supply insecurity. A number of reported disruptions have required intervention from the DMRE-convened

[8] Vopak Terminal Durban (Pty) Ltd is a partnership between Vopak (70%), a global tank storage company and South Africa's black-owned Reatile Chemicals (30%).
[9] Information based on discussions with Transnet Pipelines and SAPIA.

Logistics Planning Team committee. This suggests that the increased volume of imports required to replace Engen and SAPREF production, and operational complexity associated with this (see below section on Transnet Pipelines operational impediments), may mean that storage capacity at Island View is inadequate.

The independently owned Vopak terminal commissioned in 2018 has enhanced capacity in Durban, but it has effectively played a role as a proxy for the TPL not having constructed an accumulation tankage facility at the TM1 site in Island View. Vopak Durban is used mainly by the oil companies. Even though Vopak operates on an open-access basis, there no independent parties seem to be trying to use Vopak, perhaps because most independent parties cannot sustain the cost of importing large ship vessel volumes.

The planned addition of TPL's 150 million litres of accumulation tankage capacity will improve availability of tankage for increased petroleum product imports in the short to medium term. This will add flexibility to the logistics system and may also open access for third parties.

The petroleum industry has made little investment in coastal storage capacity over the past two decades. Oil companies maintain that even if storage capacity is inadequate, the short-term land leases in place with TNPA at Island View disincentivise firms investing in increased storage infrastructure. TNPA plan to re-negotiate lease agreements with oil company owners of storage facilities in the Island View precinct. As part of the renegotiation, it is expected that there will be an exchange of information on the future investment plans of the oil company tenants and the measures planned and adopted to accommodate third-party new entrants. The TNPA may attach some conditions to the renegotiated leases.

### 4.4.2. Transnet Pipelines – Petroleum product transport scheduling issues

TPL schedules, plans and operates the pipeline in accordance with the procedures laid out in the TPL Shipper's Manual.

Individual oil company customers must supply TPL with the following information:

- A five-year forecast of intended volumes to be transported in the Pipeline System. The forecast data must include product grade, intake point, delivery point and volume per year.
- A forecast of indicative orders for the forthcoming period.
- Firm monthly orders by the 25th of the month before the month to which the firm monthly order applies.
- Editing the firm weekly order before 14:00 on Tuesdays for the following week's intakes.

With the commissioning of the MPP in 2017, TPL introduced the fungibility principle, where the oil companies no longer received their own product but rather product of the same specification from any other company injecting product into the TPL pipeline network system. Hence, in 2017, the operational and management control of the pipeline network moved from the oil companies to TPL. TPL assumed the scheduling responsibility, with some coordination issues covered by the DMRE-convened Heads of Supply (HOS) and/or Logistics Planning Team (LPT) committees.

In terms of the Shipper's Manual, TPL undertakes to deliver the product between 7-10 days from injection.

It has been reported that the oil companies do not always stick to the firm orders for a myriad of reasons. This creates untold pipeline scheduling problems for TPL in meeting scheduling commitments and adds to overall supply insecurity.

With the commissioning of the MPP, TPL's operating model shifted to an arms-length one-to-one relationship with individual oil companies as detailed in TPL's Conveyance Agreement, which has been incorporated into TPL's Shippers Manual.

In accordance with the Shippers Manual each company only receives information about its own deliveries and does not receive information about the deliveries of its competitors.

As per the Shippers Manual, scheduling of intakes is planned monthly in advance with weekly adjustments intended to provide sufficient time for orders to be amended. TPL compiles a weekly schedule of deliveries to each destination and delivers accordingly.

Planning and Scheduling procedures, as detailed in the TPL's Shippers Manual of TPL's Conveyance terms and conditions, Chapter 7 (Transnet, 2022b), also define standard operating procedures (SOP) and how deviations from scheduling plan and unplanned events are to be handled as well as how scheduling disagreements are addressed.

TPL'S pipeline network scheduling is frequently disrupted by oil companies' deviation from Shippers Manual procedures through their minimisation of working capital, and just-in-time supply of petroleum product to TPL for injection into MPP. This short provisioning of planned injections results in the regular adjustment of planned pipeline injection schedules and effectively places the onus on TPL to resolve potential Inland Market stock-outs. This is an important contributor to supply insecurity.

Invariably, the burden of the regular crises arising from "tightlining" falls on TPL to play the role of logistics coordinator and adjust TPL operations to solve these crises.

### 4.4.3. Transnet pipelines – Supply insecurity resulting from absence of accumulator tanks at Island View Durban

The original MPP pipeline system design included matching accumulation tanks at the Island View injection point and at the inland receiving Jameson Park terminal. The Durban TM1 accumulation tanks were built but failed in 2014 and were not rebuilt.

In the absence of accumulator tanks at Island View, TPL has since 2017 been operating the MPP in what is referred to as "tightlining" whereby petroleum products are injected directly from one or more of the oil companies and/or Vopak storage facilities into the MPP.

This is not optimal and is an important contributor to inland supply insecurity.

Increased utilisation of the existing oil industry storage tanks and independent Vopak tankage at the Island View to cope with the increased petroleum product imports arising from the shutdown of the Engen and Shell/BP SAPREF refineries also limits tankage availability required for injection into the MPP at Island View.

The MPP transports different fuels without a separating barrier. For example, on any day along the full length of the pipeline, there might be several different fuel products being pumped one after the other within the pipeline. The product on either side of the different fuels (interphase separation section) mixes and is degraded and requires to be reprocessed or blended into other product pools once discharged at Jameson Park.

It is understood that for the MPP a minimum product volume (slug) of 10 million litres is required in order minimise the quantum of off specification interphase slug volume that needs reprocessing. The off-specification petrol/diesel interphase volume has to be road bridged to TPL's Tarlton

reprocessing facility and blending into diesel/petrol as Tarlton is licensed under the Customs and Excise Act to administer the duties and levies pertaining to the petrol/diesel interphase.

TPL is constrained in optimising petroleum product slug sizes injected into the MPP as TPL is dependent on the same tanks to facilitate injection into MPP. Smaller petroleum product slug sizes result in higher interphase mixtures at the discharge point in Jameson Park, which have to either be reprocessed or blended into other product pools.

Having accumulator tanks at Durban would allow TPL to send larger slugs of specific fuels, thereby minimising the number of off-specification interphase mixtures.

Furthermore, the accumulation tanks would add around 180 million litres of fuel storage capacity, which translates to an additional 3-4 days of inland market demand. Had the accumulation tanks been in place, supply insecurity would have been lower during periods of crisis.

The risks to petroleum products supply security were exposed in 2022 by the simultaneous floods in Durban affecting refining production, associated destruction of the rail freight capacity to supply the inland market, and damage caused by pipeline theft.

Furthermore, with the closure of Engen and SAPREF refineries, the security of petroleum product supply is now totally dependent on the capability and capacity of the Durban Port to handle the imports of petroleum products to supply to the KwaZulu Natal and the Inland markets.

#### 4.4.3.1 TPL's plans to solve petroleum product tankage constraints at Island View

At the same time as TNPA is reissuing Island View property leases, TPL has commissioned the reconstruction of the accumulator tankage facility at the TM1 site at Island View with tankage capacity that matches the accumulator tankage facility at Jameson Park in accordance with the MPP pipeline project design. The tankage capacity at Island View of 180 000$m^3$ will mirror the tank sizes and usage at Jameson Park. The project is expected to be commissioned in 2026 and should contribute to reducing supply insecurity and increase the logistics system's capacity to overcome supply shocks.

In a joint venture project with CEF, TPL are considering converting three unused Natcos crude oil tanks to diesel service with a storage capacity of 150,000$m^3$. If this project is approved and constructed, the additional national storage capacity should reduce supply insecurity as well as provide access to tankage at Island View for new entrants wanting to import diesel.

When TPL-related logistical problems arise, TPL needs conversation with its customers. Where there are customer-related problems, TPL engages in dialogue with specific customers. For example, in 2022 the jet fuel shortage at ORTIA was partly resolved through an emergency use of the MPP for a slug of jet fuel, something parties had to co-ordinate.

In the past, the Logistics Planning Task Team would have applied an "equality-of-misery approach" to any adverse petroleum product shortages. Now TPL must approach the customer responsible for the petroleum product shortage for resolution before the problem is taken to the Logistics Planning Task Team. It is TPL's view that the Logistics Planning Task Team could play a much more active role during crises.

A prudent level of buffer petroleum product stocks should be retained along the Durban-inland market logistics system.

The proposed 2012 DMRE Strategic Stock discussion document needs to be reviewed and adopted. This will require some investment in associated storage capacity and the timeline to implement this will need to be shortened.

### 4.4.4. Absence of a real-time fuel logistics monitoring system

The high-level information available in the public domain does not provide a detailed understanding of the tank farm volumes and operations at Island View. Such detail could be used to assess the adequacy of buffer stock levels of in the fuel logistics system.

NERSA collects information on oil company-owned excess tank capacity which it publishes (see Section 12 below) to assist new fuel market entrants. However, NERSA cites confidentiality on the actual volumetric data. Analysis of the NERSA-published data indicated that between 2020 and 2021, there was no excess capacity available for third parties and only some limited excess capacity for petrol.

The DMRE-convened Logistics Planning Team maintains a high-level colour coded indication of tankage and supply capacity at key nodes in the logistics system (see below).

This issue is the subject of recommendations (see below) on maintaining a more accurate real-time fuel logistics monitoring system as a prerequisite to reducing supply insecurity.

TPL believes designation and exemption will be perpetually necessary unless:

- A single independent entity manages a real-time dashboard of petroleum product stock of all competing parties in the petroleum product market at each critical node of the petroleum product logistics system between Durban and the inland market. The absence of such a real-time monitoring system will exacerbate the periodic occurrence of petroleum product shortage and crises.
- TPL has information on the used storage capacity at the customers' storage facilities or where customers are holding crude oil or petroleum product stocks.

TPL also suggested that, while the TN1 accumulation tank project is underway, the process of creating an independent monitoring system could begin by building on the existing neutral forum (involving TPL, TNPA, ports, ullage controller etc) that is helping coordinates petroleum product amalgamation at Durban prior to pipeline injection.

### 4.4.5. TPL pipeline network disruptions through fuel theft and sabotage

Over the past five years, theft of fuel from TPL pipelines, which results in the MPP pipeline operation being shut down for repairs, has increased fuel supply insecurity. In 2022, Transnet reported some 48 incidents to environmental authorities arising from third-party tampering with the pipeline and product theft in various locations (Transnet, 2022a, p.143).

An additional 31 incidents were reported arising from train derailment, theft and vandalism of Transnet infrastructure, including spillage of diesel, coal, transformer oil, etc.

Transnet has convened a dedicated team to prevent theft and to ensure that perpetrators are charged and prosecuted. This team includes members of the Hawks, SAPS Crime Intelligence, the State Security Agency, the National Prosecuting Authority (NPA), local SAPS services, and community policing forums.

The 2020 cyber-attack on Transnet's container logistics management system suggests that such risks exist in the management of the MPP pipeline as well.

Clearly pipeline network disruptions through fuel theft and sabotage pose an additional risk to petroleum product supply security.

### 4.4.6. Third party access to the TPL's pipeline network

All six major oil companies (Astron, BP, Shell, Engen, Sasol, Total) and PetroSA are TPL's customers. TPL has no third party/new entrants as customers.

In support of TPL's open access policy, TPL has implemented a new entrant on-boarding process to facilitate new entrants and strongly supports Historically Disadvantaged South African (HDSA) companies wanting to enter the petroleum products wholesale and distribution business. None of the 39 local companies TPL has to date provisionally approved for participation in the pipeline network are currently operational.
Hurdles to using the TPL pipeline network include:

- The tightlining operation of the MPP which does not allow TPL to use accumulation tankage at Jameson Park for third party access.
- Funding required by third parties to participate in the petroleum product market.
- Access to storage facilities at the coast to land imported petroleum products.
- Access to TPL's TM1 injection point at Island View for onward transportation via the MPP to Jameson Park.
- Lack of rail/road loading facility at TPL's Jameson Park accumulator facility.

Should third parties be given access to TPL's Jameson Park storage facility, the only way of moving their product by road would be via a pipeline linking TPL's Jameson Park storage facility to independently owned Vopak's Lesedi storage facilities, which have road-loading capability. However, to date, TPL advise that only the established oil majors are using Vopak.

Third parties approved by TPL to access its pipeline network to transport petroleum products to the inland market still face the challenge of negotiating access to storage facilities owned by the major oil companies.

In recent years the oil majors have been disposing of their more marginal fuel depots to independent depot owners and this trend, if it continues, may further facilitate the entry of third-party fuel suppliers.

## 4.5. Operational constraints at TPL's Jameson Park accumulator storage facility

TPL's Jameson Park Accumulator Storage Facility, commissioned in 2017, was primarily designed to discharge petroleum products from the 24-inch diameter MPP for onward transportation via the TPL's existing inland pipeline network. The Jameson Park facility has 180,000$m^3$ (or 180 million litres) of tankage capacity configured for utilisation as follows:

- 3 tanks with a total capacity of 60,000$m^3$ for Unleaded Petrol 95 (ULP95);
- 1 tank with a capacity of 20,000$m^3$ for Unleaded Petrol 93 (ULP93);
- 3 tanks with a total capacity of 60,000$m^3$ for 500 ppm Low Sulphur Diesel (LSD);
- 1 tank with a capacity of 20,000$m^3$ for 50 ppm Ultra Low Sulphur Diesel (ULSD);

- 2 tanks with a total capacity of 20,000$m^3$ for jet fuel.

The Jameson Park facility is also configured to receive petroleum products from the Natref refinery at Sasolburg and Sasol CTL 2 and 3 at Secunda via TPL's inland pipeline network.

There is no road or rail loading facility at Jameson Park as it was intended only as an onward transportation link via the TPL's existing inland pipeline network to TPL's customers' storage facilities. Hence the Jameson Park facility is not designed to be used as a storage facility. Consequently, the facility cannot be used consistently for third party storage.

The facility is also supplies the adjacent Vopak's Lesedi terminal through a one-way pipeline link. The Vopak Lesedi terminal customers can only access their petroleum products via its road loading facility as the terminal is not linked to TPL's inland pipeline network and has no rail loading facility. The Vopak terminal is only being used by major oil companies to serve their customers in the eastern part of Gauteng.

According to TPL, third parties are negotiating with Vopak to use the Lesedi terminal.

A major weakness at TPL's Jameson Park terminal is the lack of facilities to handle petroleum product interphases from the MPP (See above for more detail). Currently the off-specification petrol/diesel interphase volume has to be road bridged to TPL's Tarlton reprocessing facility as Tarlton is the only facility licensed under the Customs and Excise Act to administer the duties and levies pertaining to the petrol/diesel interphase. Also, there is no facility to handle the jet fuel/diesel interphase for jet fuel transported via the MPP other than through the Natref refinery. Jameson Park is not licensed by SARS under the Customs and Excise Act to administer the duties and levies related to the blending away of products recovered from reprocessing petroleum product interphases.

TPL must urgently install facilities to handle petroleum product interphases from the MPP and obtain a licence from SARS under the Customs and Excise Act to administer the duties and levies for blending away products recovered from reprocessing petroleum product interphases. This is also essential for enabling jet fuel to be transported to ORTIA via the MPP. Otherwise, the use of the MPP faces a serious constraint, particularly with the increased reliance on imported petroleum products to meet the inland market demand.

### 4.5.1. Usage of TPL's Jameson Park as a buffer stock-holding facility

An average pipeline pumping rate of 40 million litres a day suggests that the accumulation capacity of 180 million litres at Jameson Park holds approximately four days of inland market consumption and that constructing a similar sized accumulation facility at Durban would add a further four days of fuel consumption reserves.

Transnet Pipelines management believes this level of buffer stock capacity insufficient for supply security. They maintain TPL lacks resources to make good this deficiency and they support the proposal that licensed petroleum product suppliers should implement their Basic Fuel Price (BFP) obligations to maintain 25 days of commercial stock (discussed in section 16) and also be obliged to carry a designated quantum of strategic fuel stocks as proposed in the DMRE's 2012 Strategic Stock Policy (discussed in section 18).

To reduce petroleum product supply insecurity, petroleum product buffer/strategic stocks should always be more than normal planned market demand. This can alleviate the regular product shortage events that require the petroleum industry to be designated and exempted from competition policy.

To achieve this, the petroleum product storage facilities would have to be expanded. In our view, the ideal location to decrease inland market petroleum product supply insecurity would be at Jameson Park.

### 4.5.2. TPL'S Jameson Park capacity expansion potential

According to the TPL, Jameson Park has enough space for additional petroleum product storage capacity for holding petroleum product buffer/strategic stocks.

Expansion of petroleum product storage facilities at Jameson Park together with road and rail loading facilities would help Transnet achieve its stated intention to provide access to the petroleum industry for third parties/new entrants. Given TPL's financial constraints, this project is a priority for them.

## 4.6. Investigation conclusions – Transnet Pipelines' constraints to supply security and third party access

Constructing and commissioning the Multi-Product Pipeline (MPP) in 2017 to replace the ageing Durban-Johannesburg Pipeline (DJP) helped reduce inland market supply insecurity. However, the pipeline has operated sub-optimally since commissioning due to the lack of fuel product accumulation tanks at the injection point of Transnet Pipelines (TPL) Island View terminal. The additional volume of fuel product accumulation tanks could have been used during past periods of crisis and fuel shortage to supply approximately 3-4 days of inland market demand.

TPL's 2022 plan to construct the 180 million litre accumulation facility at Island view is essential to reduce inland market supply insecurity and should be actively supported by the dtic and the DMRE.

TPL is also considering repairing an existing tank to accommodate imported jet fuel from berth in preparation for emergency transportation via the MPP for ORTIA.

Also, under investigation is a project to convert three unused Natcos crude oil tanks to diesel service to increase the much-needed storage capacity at Island View and provide access to tankage at Island View for new entrants wanting to import petroleum products.

If funding of the above projects faces a shortfall, it is recommended that the department of trade, industry and competition (the dtic) and DMRE develop supportive funding options that may include the involvement of the Central Energy Fund (CEF) and the Industrial Development Corporation as well as the reallocation of the commercial stock component of the BFP, which in 2020 amounted to around R1.6 billion.

Additional Island View accumulation capacity will enable the MPP to meet current and near future inland market requirements. A substantial increase in market demand will mean the TPL will have to plan for greater pump station capacity.

In parallel with the construction of the accumulation facility, TPL cite the need for a more comprehensive, dynamic, and independent monitoring system to track the volumes of fuel products across the Durban-Jameson Park logistics route, to include ullage at the depots owned by TPL customers. TPL propose that the monitoring system starts by building on the existing Durban forum involving TPL, TNPA, ports, and ullage controllers. We recommend that the LPT urgently institute such processes to strengthen the monitoring and early warning system (see separate section on this issue below).

Urgent action is also required by TPL to install facilities to handle petroleum product interphases from the MPP and to obtain a licence from SARS under the Customs and Excise Act to administer the duties and levies pertaining related to the blending away of products recovered from reprocessing petroleum product interphases.

# 5. KEY TNPA OPERATIONAL/STRUCTURAL ISSUES IN THE DURBAN PORT THAT WOULD AFFECT PETROLEUM PRODUCT SUPPLY SECURITY TO THE INLAND MARKET

## 5.1. Durban port berthing capacity

With the closure of Engen and SAPREF refineries, the petroleum products supplied to market by these refineries of approximately 12 000 000m3/annum will have to be met from imports.

How much petroleum product can be imported into Durban will be governed by the vessel size that can be accommodated at the dedicated petroleum product berths. The vessel size that can be accommodated at berth is determined by the berth draught limitation and the length of the vessel that can be accommodated at the berth.

The estimated annual volume of petroleum products that can be imported to Durban Port via the dedicated petroleum product berths is determined by, based on experience:

- Petroleum product vessel cargo size, which has tended to be 40,000$m^3$.
- Overall time required for a vessel to berth, offload the petroleum product and disengage from berth. This tends to be 36 hours or 1.5 days.
- Number of berths where petroleum products can simultaneously be discharged. This tends to be two vessels at a time.
- Time berths are offline for maintenance. This tends to be 10% of the time or some 36 days per berth.
- The time and frequency the berth is required for loading vessels with petroleum products for supplying other coastal ports in South Africa. This tends to be one vessel per berth per month or 12 vessels per year per berth.

Based on the above estimates, the annual estimated petroleum product berthside import capability is calculated to be 16,000,000$m^3$ or 16 billion litres. Weather related delays of vessels entering the harbour may reduce this estimated capacity.

With a more optimised time estimate for berthing a vessel, offloading the petroleum product and disengaging from berth, of 30 hours or 1.25 days, the annual estimated petroleum product import capability could be increased to 19,200,000 $m^3$ or 19.2 billion litres.

The TNPA planning data indicates that Durban port capacity for liquid fuels ranges between 16 and 21 billion litres a year while the anticipated imports for 2023 are estimated to be circa 14 billion litres a year. This suggests that TNPA berthing capacity is adequate for imports to replace the Engen and SAPREF refinery production.

According to TNPA planning data (Transnet, 2017), petroleum product imports through Durban for 2022 were expected to amount to 12.8 billion litres (petrol, diesel, and kerosene). In 2023 the imports were anticipated to rise to 14.5 billion litres, based on the same demand pattern as 2022. TNPA's stated port capacity for petroleum product imports varies between 16 and 21 billion litres a year.

Should the inland Natref refinery (4 860 000m3 a year) and Sasol II and III (6 000 000 m3 a year) close down, the current projected capacity of the Durban Island View berths will not be adequate for fuel product demand in the inland market.

A more accurate assessment of the petroleum product import capability of the Durban port can only be ascertained from a detailed study which takes into account the current and future berth capacity given the Durban Port Master Plan and its impact on petroleum product operations at the Durban port.

## 5.2. TNPA's Island View Precinct Durban Development Strategy

In 2016 TNPA published its comprehensive Island View Precinct Development Strategy (see Transnet National Port Authority, n.d. (a))

TNPA's plan anticipated the future increase in demand for petroleum products, particularly by the Inland Market. In the absence of expansion of refining capacity, the Inland Market can only be supplied with imported petroleum products through the Durban port berths, through the Island View storage facilities via the MPP pipeline.

TNPA's precinct development objectives are to:

- Improve fuel supply security, and facilitate investment in critical national fuel import infrastructure.
- Make port operations in the Island View area more efficient.
- Dilute the concentration of leaseholder rights by existing incumbents in RSA's fuel industry at the Island View site by facilitating access to new entrants as operators of Island View fuel infrastructure, in accordance with the Petroleum and Liquid Fuels Charter, which outlines a minimum of 25% black participation in the liquid fuel industry.

To achieve the above, TNPA plan to unbundle petroleum product berth operatorship leases from the petroleum product storage facility leases.

The TNPA strategy revolves around four interlinked actions:

- Unbundling berthing and storage leases and appointing an independent berth operator to handle ship-to-shore berth operations as well as the maintenance of fixed and marine discharging/loading arms infrastructure,
- Mandating lessee investments in facilities and,
- Decreasing concentrated ownership/control by old-order petroleum industry incumbents, which may contribute to reducing supply insecurity.
- Investigating berth infrastructure options to accommodate ships with larger cargo-carrying capacity.

The unbundling proposal partly relates to the practice of managing berth access through the "leasing arrangements entitlements". These effectively benefit existing oil company incumbents over third party entrants because oil companies have first preference on any excess berthing capacity. This disadvantages third parties. However, counter to this is the view that few, if any, third party fuel importers can finance and import a vessel carrying a full petroleum product cargo.

Historically, lessors in the Island View Precinct have enjoyed tenancy of more than 50 years, leading to slow transformation within the precinct. TNPA has also invested in berth infrastructure but, according to TNPA, investments in terminals by operators are lagging. Since 2016, TNPA's Island

View strategy has been the subject of discussion with the oil industry but it has neither been finalised nor implemented. As most of leases between the oil industry and the TNP have expired, the berths and petroleum product lessors are operating on a month-to-month basis.

In 2022, TNPA decided to review the Port Master Plan and the IV Precinct Strategy. The review is expected to be completed by end-August 2025. In the interim, the Transnet Board has approved the extension of leases that were on month-to-month arrangements to regularise them through a supplementary three-year agreement effective from 1 September 2022.

As part of the 2022 IV Precinct Strategy review, TNPA intends to extend current month-to-month berthing and fuel storage leases for a further three years, ending at end-August 2025.

In TNPA's long term lease negotiations with the oil industry lessors of berths and land on which their storage facilities and associated pipeline networks are located, the TNPA is seeking an investment commitment from the oil industry into the ageing storage facilities and associated pipeline networks.

This, together with the appointment of an independent berth operator aims to reduce petroleum product supply insecurity and facilitate access to new entrants to the oil industry storage facilities and associated pipeline networks at Island View.

In response, the oil industry commissioned an economic impact assessment of TNPA's strategy. This concluded that TNPA's investment conditionality was not acceptable because the industry had already invested R28 billion in the precinct area. Furthermore, SAPIA objected to the TNPA approach on ownership not applying to other ports as well.

Engagements continue as part of the 2022 Island View Precinct Strategy review (Transnet National Port Authority, n.d. (a)).

### 5.2.1. Impact of Island View turning circle on fuel product supply security

The TNPA's Port Development Master Plan (TNPA, 2022) proposes to increase the Island View turning circle to accommodate larger vessels by 2035. It is understood that, to achieve this, Berth 9 would have to be demolished to widen the turning circle for the larger vessels.

It is also understood that this project will encroach on Transnet Pipelines' crude oil pumping station terminal, which will need to be relocated. Furthermore, overall berthing capacity may be reduced as the demolition work might impact the Vopak, Engen and SAPREF terminals' operations. Given the increased reliance on imported petroleum products, this project could increase supply insecurity risk.

Careful coordinated planning between TNPA, TPL and the oil industry players operating in the Island View Precinct will be essential to minimise supply insecurity risk from the proposed project.

### 5.2.2. Vessel berthing operations

Although TNPA is the owner of the dedicated petrochemical berthing facilities in the Durban Port, the berthing facilities, linked to the petrochemical industry storage facilities in the Island View precinct, are leased to and operated by the petrochemical industry. TNPA exercises some control over the operation of the berthing facilities by setting operating procedures for the petrochemical industry to manage the berthing operations. The TNPA has procedures that include setting standards/monitoring the efficiency of berth usage in the context of requiring lessors of land/facilities to use such facilities for throughput and not as the long-term storage of cargo. The

TNPA has a system called Terminal Operator Performance Standards (TOPS) [10] (Transnet, 2016) which is intended to monitor:

- Terminal berthing delays.
- Berth productivity.
- Ship working (operating) hours.
- Truck turnaround time.
- Truck queuing outside terminal.
- Rail turnaround time.
- Cargo dwell time in terminal.
- Terminal throughput.
- Tank turns (to range between one and two per month for chemicals, and between three to seven days for petroleum products).

The TOPS system, if effectively applied across all the petroleum product storage terminals at Island View, could reduce petroleum product supply insecurity through:

- Providing data on volume flows of petroleum products and potential capacity constraints.
- Providing information on excess storage capacity available for use to new entrants to the petrochemical industry.
- Improving the operational efficiency of fuel tank terminals.

## 5.3. Investigation conclusions on the Durban Port issues that may affect petroleum product supply security to the Inland Market

Summarised below are observations and recommendations from our analyses of the Durban Port operations:

- Based on information in the public domain and through engagement with industry participants, the current Durban port and berth capacity appears to be adequate for anticipated additional fuel product imports in 2023 arising from the closure of the Engen and SAPREF refineries. However, it may be prudent for a detailed study to be undertaken to ascertain the potential risks to sustaining such increased petroleum product imports.
- The issues around TNPA's planned separation of leases for berth operatorship and for land/storage terminals should be tackled urgently. This should increase competition and open up space for independent fuel market participants.
- TNPA's planned 2025 long-term open market lease tender for separate Island View berthing and storage facilities should be prioritised and expedited s to facilitate new infrastructure investment and reduce associated supply insecurity.
- TNPA's plan to increase the Island View turning circle by 2035 to accommodate larger vessels may harm supply security. The next annual review of TNPA's port development Master Plan should ensure that the turning circle project does not do this.

[10] This information is sourced from TNPA's recently proposed tender for a 25-year lease at Richards Bay.

- The DMRE should invoke their regulatory authority to obtain directly the regular tank turn information required of TNPA leaseholders. Such information should be incorporated into our proposed real-time national fuel supply monitoring system.

## 6. CAPACITY OF TPL'S MULTI-PRODUCT PIPELINE TO CARRY FUEL PRODUCTS FROM DURBAN TO THE INLAND MARKET

In 2008, construction began to replace the ageing and capacity-constrained Durban-Johannesburg pipeline (DJP) with a new Multi-Product Pipeline (MPP). The planned completion date of 2010 was delayed to 2013 due to internal contracting deficiencies which escalated the cost from R9.5 billion to R23.4 billion. (Gigaba, 2012).

The original MPP pipeline project design entailed construction of a 24-inch diameter pipeline with accumulator tanks at both Island View Precinct in Durban and at Jameson Park in Heidelberg, Gauteng. The estimated maximum design capacity of the MPP is 25 million $m^3$ per year. To achieve the maximum design capacity additional booster pumps would have to be installed.

The original plan for accumulator tanks at Island View terminal (TM1) was for 11 petroleum product tanks totalling 220,000$m^3$ as follows (Transnet, 2017):

- 4 tanks with a total capacity of 80,000$m^3$ for Unleaded Petrol 93 (ULP93);
- 1 tank with a capacity of 20,000$m^3$ for Unleaded Petrol 95 (ULP95);
- 3 tanks with a total capacity of 60,000$m^3$ for 500 ppm Low Sulphur Diesel (LSD);
- 1 tank with a capacity of 20,000$m^3$ for 50 ppm Ultra Low Sulphur Diesel (ULSD);
- 2 tanks with a total capacity of 40 000$m^3$ for jet fuel.

The tanks were intended to draw petroleum products from the Engen and SAPREF refineries as well as imported petroleum products routed into respective oil company-owned storage terminals at Island View. The petroleum products were then intended to be routed into the TPL accumulator tanks for injection into the new MPP.

A matching profile of accumulator tanks were to be built at the inland termination point of the new MMP at Jameson Park. The tanks at Jameson Park consisted of nine petroleum product tanks with a total of 180,000$m^3$ as follows:

- 3 tanks with a total capacity of 60,000$m^3$ for Unleaded Petrol 93 (ULP93);
- 1 tank with a capacity of 20,000$m^3$ for Unleaded Petrol 95 (ULP95);
- 3 tanks with a total capacity of 60,000$m^3$ for 500 ppm Low Sulphur Diesel (LSD);
- 1 tank with a capacity of 20,000$m^3$ for 50 ppm Ultra Low Sulphur Diesel (ULSD);
- 2 tanks with a total capacity of 20,000$m^3$ for jet fuel.

The Jameson Park facility was designed to act as an inland hub, drawing petroleum products from the coast as well as from the Natref and Sasol Secunda plants for onward supply to the oil industry terminals via TPL's existing inland pipeline network. The jet fuel storage facility at Jameson Park was to be linked to the ORTIA storage facility.

The objectives of the Accumulation Tanks were to:

a) Decouple and insulate pipeline product scheduling between Island View and Jameson Park from oil industry petroleum product storage facilities, thereby enabling TPL to optimise MPP operation.

b) Compensate for supply (Durban) and demand (Inland market) variations by providing a buffer stock of product.

c) Provide independent open-access storage facilities to third-party new entrants. (See Table 7 in section 4.3 which indicates that integrated oil majors controlled and used 89% of fuel storage facilities in Durban), most of which are geographically located in and around Island View.

d) The matching accumulation tank farms were necessary to maximise individual fuel slugs and to optimise pipeline operation and minimise fuel losses in the slug interfaces.

e) Improve fuel product security of supply.

In 2014, during testing, tank of accumulator tank at Island View (A04) failed the hydrostatic test (Brown, 2014). Soon after, the contractor Group 5 terminated construction of tank A12 due to foundation movement. Following the subsequent legal dispute, Transnet terminated the TM1 accumulation project and, later in 2016, contracted the IGS/Turnmill JV to demolish the tanks.[11]

In 2017 the MPP was commissioned with accumulator tanks only at Jameson Park, with petroleum product injection at Island View directly from the oil industry storage facilities. The impact of not having accumulator tanks at Island View is that TPL is not able to optimise the scheduling and operation of the MPP thereby limiting the carrying capacity of the MMP.

Currently the MPP operates at typically 1.75 million litres/hour or 42,000$m^3$ per day (14 million $m^3$ per year) which is sufficient to meet current inland market requirements of circa 13 million $m^3$ a year. The current operating capacity of the MPP is achieved with 3 booster pumps over and above the injection pumps at TM1 site Island View. The booster pumps are located at Twini, Hilltop and mNambithi.

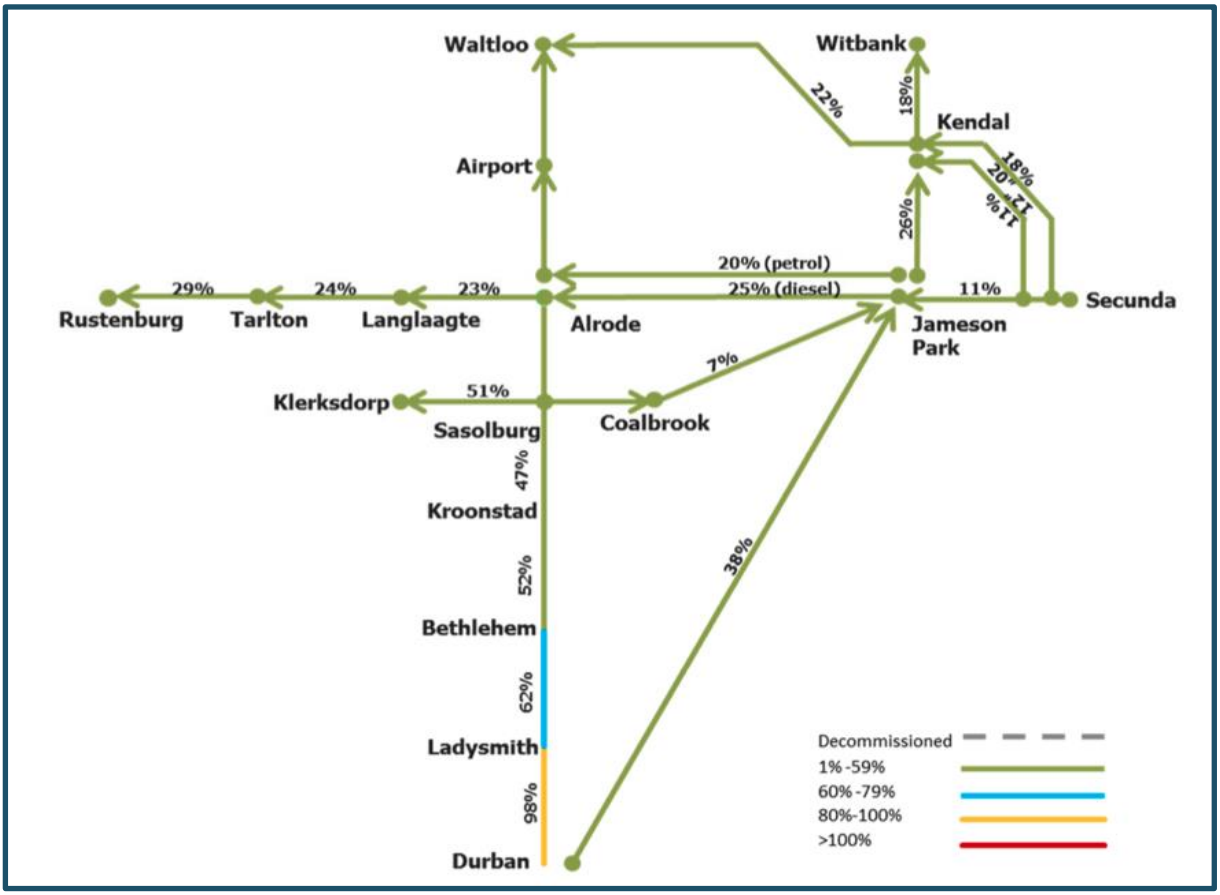
The pipeline's design capacity of 25 million m3 a year can be achieved through the addition of booster pump stations.

[11] The IGS/Turnmill contract covered other parts of the MPP project and was the site of fraud involving a senior Transnet executive who was subsequently dismissed (http://www.saflii.org/za/cases/ZAST/2021/2.pdf). He was recently ordered by the Special Tribunal to compensate Transnet in the sum of around R26 million. Special Tribunal orders ex-Transnet exec, contractor to pay back R26.4m to SOE (ewn.co.za)

## 7. INLAND MARKET SUPPLY SECURITY FROM JAMESON PARK VIA TRANSNET PIPELINES (TPL) INLAND PIPELINE NETWORK

This information in this section is based TPL's 2017 Long Term Planning Framework.

**Figure 4: Transnet Pipelines – 2016 Network utilisation (average monthly pipeline demand profile)**




*Source:* Transnet, 2017. Pipeline Development Plan – Long Term Development Planning framework.

TPL delivers petroleum products to oil companies' storage facilities from Jameson Park to Alrode and then via the inland pipeline network.

The TPL inland pipeline network is configured as follows:

| | |
|---|---|
| Secunda to Jameson Park | 16 inch |
| Secunda to Kendal | 20 inch and 12 inch |
| Kendal to Waltloo | 16 inch |
| Jameson Park to Alrode | 2 x 16 inch |
| Alrode to Langlaagte | 16 inch |

The MPP is connected from Jameson Park to the old Durban-Johannesburg (DJP) pipeline system at Alrode via two 16 inch pipelines. The inland portion of the existing 12-inch DJP network extends to Kroonstad[12], Alrode (Alberton), Langlaagte (Johannesburg), Tarlton (Krugersdorp), Rustenburg,

[12] The 12-inch DJP pipeline from Sasolburg to Kroonstad was planned to be decommissioned in 2022.

Waltloo (Pretoria), ORTIA (Kempton Park) via Coalbrook in Sasolburg where it is connected to the Natref and Sasol Secunda's pipeline at Kendal. It is now connected to Jameson Park.

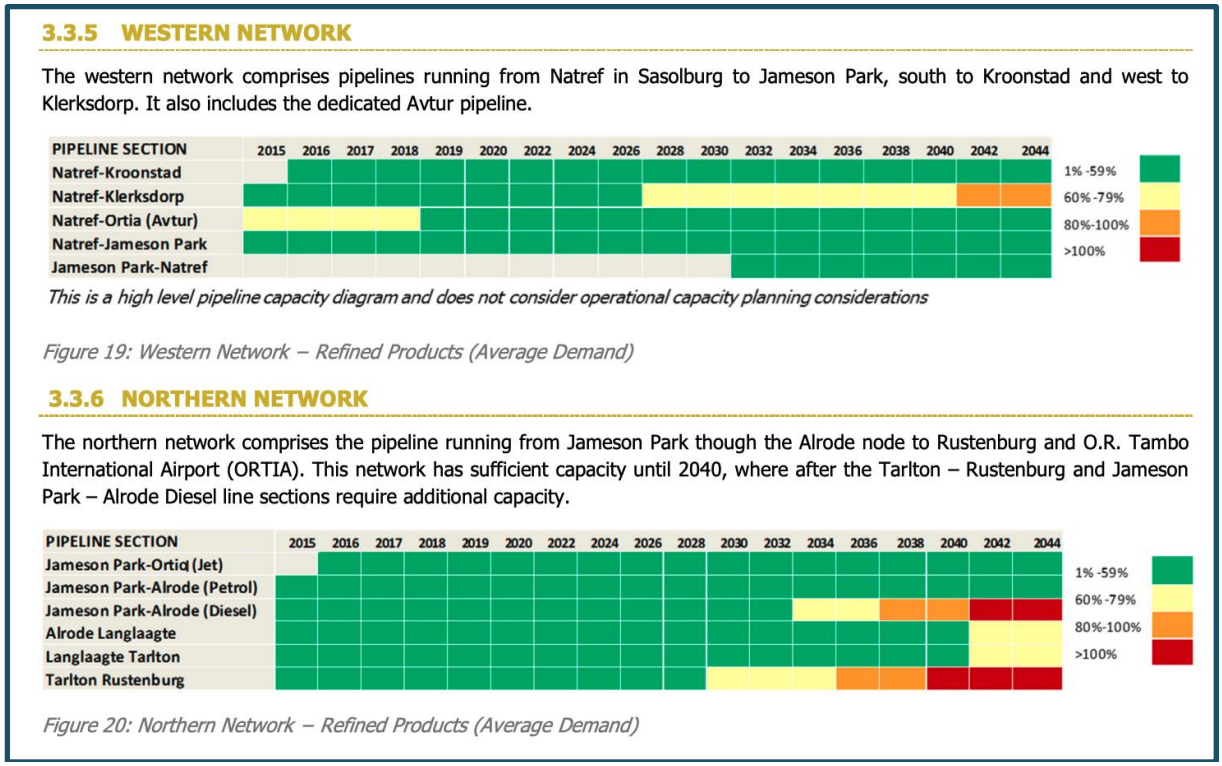
TPL also delivers product from Jameson Park to the adjacent Vopak Lesedi Terminal via pipeline, where Vopak have road tanker loading facilities.

At Tarlton, TPL delivers product by pail and road. TPL operates a rail loading gantry at the Tarlton Storage facility. Tarlton mainly supplies Botswana and the Klerksdorp region.

TPL does not play a role in on-railing product to non-pipeline linked depots. The planning for the rail distribution is, however, done by Transnet Freight Rail (TRF) in coordination with the owner of the petroleum product.

While supply security risks in the logistics route from Durban to Jameson Park are considerable, the inland market supplied from Jameson Park to TPL's inland pipeline system does not appear to be constrained, with substantial excess pipeline capacity across all routes as reported in 2017.

**Figure 5: Transnet Pipelines – 2016 Western and Northern Network utilisation (average monthly pipeline demand profile)**




Source: Transnet, 2017. Pipeline Development Plan – Long Term Development Planning Framework.

Demand has shifted from the West Rand to the East Rand region making the West Rand depots less relevant. This is one of the reasons that Shell and BP closed their Langlagte depot in an associated arrangement with Vopak at its Lesedi Terminal adjacent to TPL's Jameson Park facility.

In conclusion, there appear to be no substantial supply security issues in the logistics system between Jameson Park and inland market fuel depots.

Third parties have succeeded to a small extent in entering the market through fuel terminal/depot ownership and operation. Recently, oil company incumbents have also been disposing of their less profitable outlying depots to independent black-owned firms.

However, third parties seeking to enter the inland fuel supply market do face obstacles.

- Despite TPL reporting that they have approved access to the pipeline for 39 new entrant companies, new entrants still have to negotiate storage access at Durban (Vopac and other oil company depots), TPL pipeline access, Vopak at Lesedi and delivery to customers.
- The inland market fuel price contains an added cost for transporting fuel from the coast (regulated fuel price zone differentials). This deemed cost does not adequately cover the triple handling of product between Durban and the inland customers that are incurred by new entrants to the industry whose margins are further reduced.
- For new entrants to succeed it is likely that the incumbent oil majors must agree to a volume commitment reserved for these new entrants.
- While this may help in the short term, it appears inevitable that, for new entrants to be sustainable players in the volume-intensive fuel industry, they will have to pool resources, increase the scale of operations, and also invest in storage along the pipeline as well as outlying depots.

# 8. WESTERN CAPE AND NORTHERN CAPE FUEL MARKETS – STRUCTURAL AND OPERATIONAL ISSUES AFFECTING SUPPLY SECURITY

Analysis of the supply-demand profile of the Western and Northern Cape petroleum products market areas suggests few issues contribute to supply insecurity.

Supply insecurity is rarely mentioned in our analysis of the DMRE-convened Heads of Supply (HOS) minutes between 2017 and 2022 and Logistics Planning Team (LPT) minutes between 2021 and 2022. This suggests that the investments made in storage and pipeline infrastructure have largely addressed supply insecurity in this region of South Africa.

## 8.1. Cape Town petroleum product infrastructure

The region is primarily supplied by the Astron (previously known as Chevron/Caltex) refinery in Cape Town.

A fire in July 2020 led to the closure of the refinery from July 2020 to the end of 2022, during which demand in this geographic area was supplied through imports of petroleum products. In December 2022, the refinery was restarting after significant investment to enable production of clean fuels. This will contribute to sustained supply security in this region.

Additional investments made recently also add to supply security and include:

- Astron Energy converted a black oil pipeline into white oil service. Previously, all product movements for loading ships, discharging from ships, and transferring from one storage facility to another were dependent on this common product pipeline.
  - This constraint has been addressed by converting a black oil pipeline from the berths to diesel service and pipeline operations have been optimised by investing in automation. The system is now capable of multiple operations such as discharging two vessels at the same time.
- Berthing constraints due to wind conditions have been mitigated by the installation of a wind speed anemometer.
- The independently owned Burgan Terminal was commissioned and is being used by Shell and other smaller third party petroleum product wholesalers.
- Gantry Capacity at the Astron refinery was upgraded to increase efficiency and turnaround times.

- Astron Energy installed anemometers (wind speed and direction monitors) at the tanker as south-eastern winds had a negative impact on vessel operations.
- The Sunrise LPG terminal was commissioned and has played a critical role in supplying LPG since the fire at Astron Energy's refinery.
- Two Cape Town berths for oil and chemical industry use are leased by TNPA to Astron Energy, which manages and operates the berths on behalf of other oil companies. Functions include berth scheduling, berth utilisation, and communication with TNPA and berth users.
- Astron Energy engages bilaterally with individual berth users.
- Astron Energy also owns the white product pipeline between its refinery and the berths. This also connects to the Burgan, Montague Gardens (50% SFF and 50% BP) and Montague Gardens (Engen) storage facilities. Commercial contracts oblige Astron to supply existing users.

The above investments have substantially reduced infrastructure constraints in Cape Town.

### 8.2. Cape Town bunkering operation

A joint bunkering service (JBS) has been managed since 2012 by Chevron (since rebranded Astron Energy). According to SAPIA, only Astron Energy uses the joint bunkering service because no other parties have shown interest in doing so. Astron Energy imposes no restrictions on the accommodation of third parties at the JBS.

### 8.3. Mossel Bay petroleum product infrastructure

Until the PetroSA GTL refinery in Mossel Bay stopped operating in December 2020 because indigenous gas feedstock became unavailable, all movements of petroleum products in Mossel Bay were managed by PetroSA. The region was supplied from the GTL refinery and/or imports by PetroSA.

No pipeline or storage infrastructure in Mossel Bay can be shared with third parties, as all of the tankage is in the PetroSA refinery itself.

Since the PetroSA refinery shut down, companies have been supplying this region via Cape Town or whenever PetroSA has product to supply.

In conclusion, there appears to be little supply insecurity in the Western Cape and Northern Cape.

## 9. EASTERN CAPE FUEL MARKET AREA – STRUCTURAL AND OPERATIONAL ISSUES AFFECTING SUPPLY SECURITY

### 9.1. East London Port – Vessel berthing, storage and TNPA leasing constraints

No constraints are reported to fuel imports into East London. Total Energies, Engen, Astron Energy and Wasa (formerly BP) each own independent depots.

Between 2015 and 2022, the only negative for security of supply is that all the leases are on a month-to-month basis, pending TNPA decision on incorporating the depots inside the port boundaries. SAPIA advise that their members will await the Transnet section 56 process before undertaking any future investment at the port.

### 9.2. Port Elizabeth Port – Vessel berthing, storage and TNPA leasing constraints.

TNPA owns the common user tanker berth at Port Elizabeth and tanker discharge facilities are jointly owned by Shell, Engen, Astron Energy and Total.

Shell was previously responsible for berthing and pipeline scheduling and coordination services to Astron Energy, BP, Total and Sasol. Shell has ceased operations in PE and has put the terminal on maintenance at care. Astron Energy has taken over the activities of a housekeeper on behalf of the Joint Venture.

The only issue that might decrease supply security is TNPA's plan to close the Dom Pedro fuel terminal and to transfer the fuel product terminal to Ngqura. TNPA informed the oil industry that the terminal would relocate to Ngqura by 2019, but the new facility was never built.

The TNPA then ordered the industry to evacuate by 30 April 2022, a decision that followed a successful appeal by SAPIA members to the Port Regulator of South Africa (Ports Regulator of South Africa, 2022). TNPA has indicated that Dom Pedro will shut down by 31 December 2025 and the tank farm will relocate to Ngqura.

Supply security has been enhanced by the recent refurbishing of the jetty and pipeline to ensure operational integrity.

In conclusion, supply insecurity in the Eastern Cape market areas is at risk if the timeline and process for replacing Dom Pedro fuel import facilities at Ngqura are suboptimal.

# 10. AIRPORT INFRASTRUCTURE OPERATIONS – JET FUEL SUPPLY INSECURITY

## 10.1. OR Tambo International Airport (ORTIA)

ORTIA is the largest consumer of jet fuel, also known as AVTUR (Aviation Turbine Fuel), in South Africa.

ORTIA is supplied from:

- Jet fuel produced at the Natref refinery via a dedicated TPL pipeline linking Natref to ORTIA jet fuel storage facilities.
- Synthetic jet fuel produced by Sasol CTL plants at Secunda via a 94km 16-inch dedicated pipeline to Natref (Coalbrook) links into the jet fuel pipeline from Natref refinery to ORTIA.
- The balance of the jet fuel required at ORTIA is directly railed from Durban to ORTIA jet fuel storage facilities. This jet fuel, previously supplied from the now shut-down Engen and SAPREF refineries, is supplied from imports.

### 10.1.1. Commercial fuel supply system - ORTIA Airport Fuelling Services (ORTAFS)

ACSA owns and leases the ORTIA fuel storage facility to a consortium of oil companies consisting of Puma Energy, BP, Engen, Sasol (through its wholly owned subsidiary, Exel), Shell and Total. During 2022 BP acted as the nominated operator of the OR Tambo Airport Fuel Facility.

Airlines tender directly with fuel suppliers, and suppliers direct the facility manager (BP) to supply the fuel to their respective customers.

ORTAFS records and reports on tankage stock levels to facility participants. They are directly responsible for ordering, scheduling, and maintaining their respective stocks levels of jet fuel. ORTAFS effectively provides non-profit jet fuel receipt, storage, distribution and into-plane services to its participants or their related companies.

Third party fuel suppliers can access the ORTAFS facility under the provisions stipulated in the ACSA-ORTAFS lease agreement.

The practices associated with the ORTAFS system do not appear to violate the Competition Act because:

- No competitively sensitive information is exchanged.
- Confidentiality protections ensure information is used for strictly operational purpose only and is not disseminated.
- Only aggregated information is received.
- The arrangements mirror international best practice.

Any stock shortfall by a party to the ORTAFS agreement can contract on an open market basis with competitors who have stock surpluses.

However, supply insecurity arises when there is a physical shortage of jet fuel in the overall logistics system straddling the refining and import centre of Durban and OR Tambo Airport.

### 10.1.2. Factors contributing to supply insecurity at OR Tambo Airport

Supply insecurity arises:

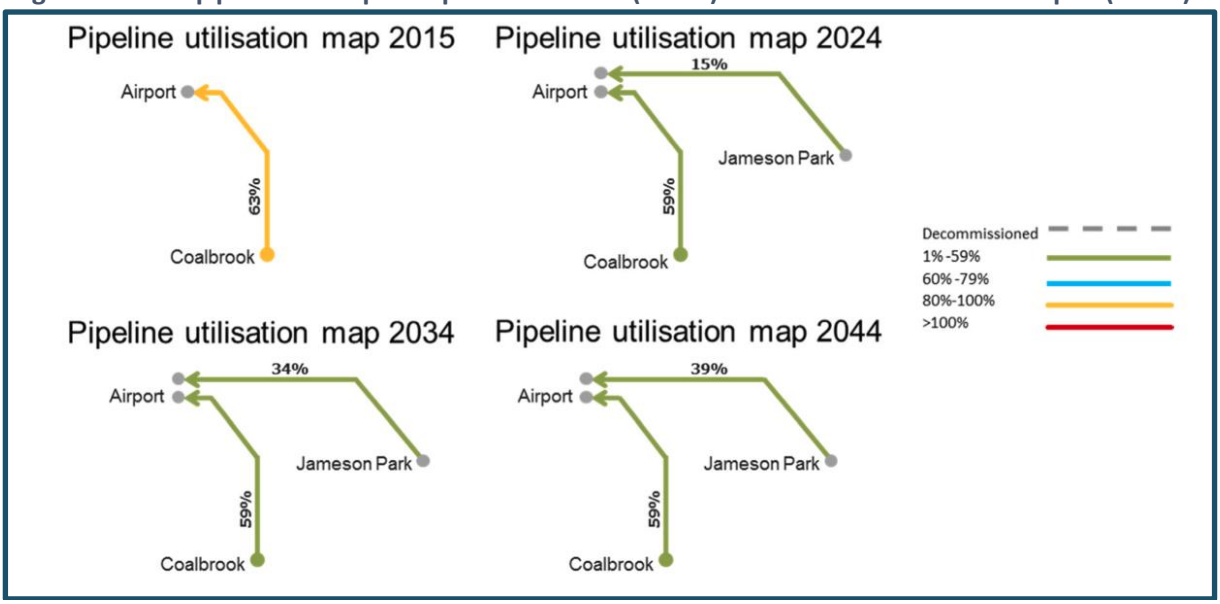
- During Natref disruptions and when factors affect the rail supply from Durban.
- From imported jet fuel vessel delays.
- From inability to supply jet fuel through the MPP due to insufficient jet fuel storage/accumulation capacity at Island View.
- Unreliable transport of jet fuel supply by rail due to cable theft on the Transnet Freight Rail (TFR) network and its impact on deliveries.

### 10.1.3. MPP pipeline – inability to transport jet fuel from Durban to ORTIA

The MPP pipeline from Durban to Jameson Park was originally designed to transport jet fuel from Durban to Jameson Park from where it was to be injected into an existing 16-inch pipeline to supply jet fuel from Natref to ORTIA via Alrode.

The original MPP configuration envisaged the construction of 150 million litres of fuel product accumulation tanks at Island View, including a dedicated jet fuel tank. Corresponding 150 million litres of tanks were also planned at Jameson Park. The Jameson Park facility was constructed but the Island View tanks were not completed.

**Figure 6: Jet fuel pipeline development plan – Coalbrook (Natref) to OR Tambo International Airport (ORTIA)**




*Source:* Transnet, 2017. Pipeline Development Plan – Long Term Development Planning framework.

To date, the MPP has not been used for jet fuel for two reasons:

- There is no dedicated jet fuel accumulation tank at TNP's TM1 Island View terminal. Capacity was originally planned with the MPP project, but the tanks failed and were not rebuilt. A jet fuel receiving accumulator tank was built at Jameson Park but has not been used for jet fuel.
- The MPP pipeline operates in a sub-optimal mode that complicates pipeline transport of jet fuel.
    - Jet fuel needs to be injected as a slug with diesel products on either side of the jet fuel slug to ensure quality retention.
    - Jet fuel has a high sulphur content while CF1 and CF2 diesel has a much lower sulphur specification.
    - In the absence of accumulation tanks at the Durban TM1 terminal, slug sizes are small. This results in jet fuel specification problems and intermixture problems when discharging at Jameson Park.
    - TPL's product interphase reprocessing facility (for all off-spec slug interphase volumes) is located at TPL's Tarlton depot. TPL normally blends what interphase it can at Jameson Park and/or transports it via pipeline to Tarlton for reprocessing and subsequent blending into the appropriate diesel pool.
    - The problem may be further exacerbated by the introduction of bio-diesel which contains fatty acid methyl esters, which are incompatible with jet fuel. To avoid cross-contamination, TPL does not intend to transport bio-diesel through its pipeline network.

During the 2022 ORTIA jet fuel stock-out, SAPIA members collectively engaged with Transnet Pipelines (TPL). SAPIA identified a small 3.8 million litre[13] tank at the Engen refinery. The Imported jet fuel was discharged from the Island View berth to the Engen tank and pumped to Jameson Park. However, TPL could not send this on directly to ORTIA via the pipeline to Alrode due to specification requirements. TPL had to pipe this from Jameson Park to Natref for reprocessing and blending to specification before it was piped to ORTIA from Natref.

We understand that the CEF also proposed to supply 1.5 million litres but they were not part of the ORTIA JV and had to sell this to one of the JV partners.

It has also been suggested that the stock-out might also have been exacerbated by some holders of jet fuel stock who chose to hold back their stockholding to undermine competitor jet fuel suppliers' commercial relationships with airline customers. We did raise this with SAPIA but they dismissed the suggestion.

TPL advise that with a 22 million litre slug of jet fuel, the interphase mixture loss is around 1 million litres on either side or 10% of the slug.

The MPP currently cannot sustainably supply ORTIA, and when it does, this displaces diesel pipeline injection and adds to inland market diesel supply insecurity.

Should more regular small slug batches of jet fuel through the MPP be needed, TPL advise that it plans to use the refurbished Island View tank T2107 and route the slug from Jameson Park to Natref tanks. The intermix on either side of slug will be sent to Tarlton for reprocessing.

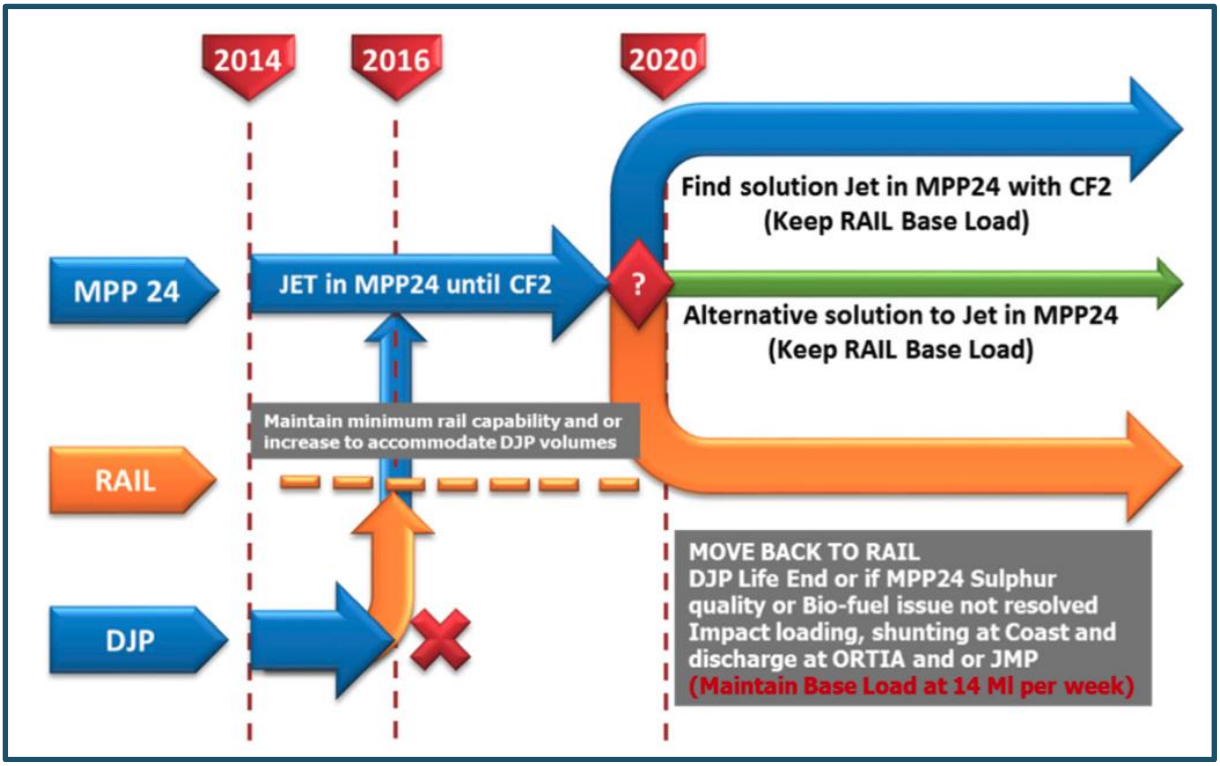
[13] TPL said they used an old seven million litre Engen tank which was filled with a 5 million litres slug of jet fuel. The discrepancy in volumes was not resolved.

### 10.1.4. TPL options for ORTIA supply security

TPL continues to evaluate least-cost options to maintain supply security of jet fuel to ORTIA. Drawn from TPL's 2017 Pipeline Development Plan, the figure below depicts the options to manage the impact of jet fuel supply to ORTIA.

The options also require anticipation of clean fuel specifications as well as the introduction of biofuels.

Figure 7 : Future options to supply jet fuel from Durban to OR Tambo International Airport (ORTIA)




Source: Transnet (2017) Pipeline Development Plan - Long Term Development Planning framework. https://www.transnet.net/BusinessWithUs/LTPF%202018/5.%20LTPF%202017_Pipeline.pdf

### 10.1.5. New dedicated jet fuel pipeline from Jameson Park to ORTIA

Once ORTIA jet fuel demand exceeds the existing system's supply capacity, TPL plans to install a dedicated jet fuel line directly from Jameson Park TM2 to ORTIA. This will require re-batching and quality certification facilities at TM2 before transfer to ORTIA.

This pipeline was part of the original MPP plan and is referred to at PL6 to be phased in accordance with ORTIA demand.

Recent reports of the possible closure of Natref may accelerate the timeline for this expansion.

### 10.1.6. Impact of lack of Durban accumulation facility on jet fuel supply security to ORTIA

The lack of accumulation capacity for jet fuel at TPL's Island View terminal constitutes an important risk to future ORTIA supply security.

In recent discussions, TPL maintain that the lack of jet accumulation tankage at Island View does not currently pose a major threat to ORTIA supply because 80% of jet supply is sourced from Natref and

Sasol Secunda. As the MPP requires a minimum slug critical mass of 20 million litres, TPL maintain that this smaller consignment demand is more appropriately serviced by rail and there is generally adequate rail capacity to meet short-term shortfalls and/or surges in demand.

TPL advise that if this dynamic changes and aggregated demand volume increases, it will re-evaluate the sustainable supply of jet fuel via MPP.

Should the MPP be required more regularly to transport jet fuel, jet fuel accumulation capacity will be required at TPL's TM1 site to increase the slug size to around 20 million litres and avert routing the slug from Jameson Park to Natref for quality improvement.

This option is being considered as part of the planned investment in accumulation capacity at TPL's Island View site. The original damaged jet fuel tank T2107 could be repaired to accommodate jet fuel received directly from shipping berths and then settled and pumped to tank A04 and then into the pipeline. If

### 10.1.7. Fuel specification issues associated with MPP transport of jet fuel

To use the MPP for transporting jet fuel some problems need to be resolved:

- The jet fuel specification has a maximum sulphur content of 3000 ppm whereas CF1 specification diesel is 50 ppm. The conveyance of jet fuel with the 50 ppm diesel will require facilities to manage the jet/diesel interphase at Jameson Park. The facilities to manage the at Jameson Park need to be designed to cope with the lower Clean Fuels 2 10 ppm diesel sulphur specification.
- Jameson Park is not licensed by SARS and thus the jet/diesel interphase cannot be blended into diesel since there is no mechanism to apply duties and levies in accordance with the Customs Act. No company that has a conveyancing agreement with TPL will accept such product from Jameson Park in its diesel until it has been licensed due to the potential of administrative action by SARS.

It is our understanding that TPL's facility at Tarlton, which manages the petrol/diesel interphase, is licensed under the Customs and Excise Act to administer the duties and levies pertaining to the petrol/diesel interphase.

### 10.1.8. Impact of mooted Natref permanent closure on jet fuel supply to ORTIA

If Natref closes, ORTIA jet fuel supply will require accumulation facilities at Durban as well as the dedicated new PL6 pipeline directly from Jameson Park to the ORTIA tank farm.

In conclusion, the supply security of jet fuel to ORTIA can be improved by building TPL's jet fuel accumulation tanks at Island View as well as by resolving problems of handling of the jet fuel/diesel interphase at Jameson Park.

## 10.2. Cape Town International Airport (CTIA)

CTIA is the second largest consumer of jet fuel in South Africa.

Astron Energy (previously Chevron) supplies CTIA with jet fuel by road from its refinery in Milnerton. This is supplemented by imports through Cape Town harbour. After the fire at the Astron refinery in July 2020, all jet fuel requirements were imported. After the refinery was restarted in 2023 it resumed jet fuel supply.

A consortium of Shell, BP, Astron and Total operate the jet fuelling facility at CTIA via an unincorporated joint venture. Shell is the appointed operator of the JV. A lease agreement between

ACSA and the Cape Town International Airport Fuel Services JV requires CTIAFS to provide refuelling and related services to all airlines at CTIA.

Airlines tender directly with fuel suppliers and suppliers direct the facility manager (Shell) to supply the fuel to their respective customers.

SAPIA argue that the practice does not contravene the Competition Act because:

- No competitively sensitive information is exchanged.
- Confidentiality protections ensure information is used for strictly operational purposes only, and is not disseminated.
- Only aggregated information is received.
- The arrangements mirror international best practice.

Supply insecurity has arisen due to import vessel delays as well as by the lack of reasonable stocks of jet fuel to address periodic supply shortfalls.

### 10.3. King Shaka International Airport, Durban

Before they closed, Engen and SAPREF refineries in Durban supplied jet fuel. Now King Shaka International Airport is dependent on jet fuel imported via Durban harbour. The jet fuel is supplied by road.

Apart from the pipeline logistics issues specific to jet fuel supply to ORTIA, overall supply security could be improved by creating strategic stock capacity (see policy section below).

## 11. NATIONAL FUEL PRODUCT SUPPLY SECURITY MANAGEMENT SYSTEM

The Department of Minerals Resources and Energy (DMRE) oversees national fuel product supply security through the Heads of Supply (HOS) and Logistics Planning Team (LPT) forums.

In the oil industry the supply departments deal with the day-to-day market supply of petroleum products and supply chain disruptions while the planning departments deal with crude procurement, refinery optimisation, and shutdown planning. The planning departments would interact with supply departments during planned and unplanned refinery shutdowns.

The HOS and LTP Committees were historically modelled on the oil industry Supply and Planning departments and their respective functions are outlined in the Table 8.

**Table 8: Summary of Coordinating Committee Functions – Heads of Supply, Logistics Planning Team, SAPIA Security of Supply**

| 10 | HEADS OF SUPPLY COMMITTEE | LOGISTICS PLANNING TEAM COMMITTEE | SAPIA SECURITY OF SUPPLY COMMITTEE |
|---|---|---|---|
| Main Participants | DMRE (Chair and convener);<br>SAPIA and its members;<br>TPL,<br>TFR;<br>TNPA<br>NERSA, and<br>All interested industry | DMRE (chair and convener);<br>Astron Energy, Engen,<br>PetroSA, Sasol, Shell, TotalSA;<br>SAPIA;<br>TPL;<br>TFR; | SAPIA and its Members |

| | | | |
|---|---|---|---|
| | players | TNPA,<br>NERSA. | |
| Role of the Committee | Monitor developments in the national liquid fuels supply position to anticipate and prevent potential disruptions and emergencies.<br>Sharing and updating the refinery shutdown schedule;<br>Sharing information on any unexpected events at their refineries that could develop into threats to supply security;<br>General feedback from Transnet on the status of pipeline, rail and port infrastructure, highlighting issues that could threaten supply;<br>Specific feedback from Transnet on the status of liquid fuel transport infrastructure at ORTIA, and feedback from Transnet on on-going infrastructure developments that may affect security of supply | Refinery status - Planned and unplanned refinery shutdowns;<br>Product sourcing plans (import and production plans);<br>Status of primary distribution facilities - logistics constraints;<br>Status of Transnet Pipelines network, transportation capabilities and performance;<br>Current and forecast demand;<br>Stock holdings at key points;<br>Shipping issues;<br>Liquid fuel supply to airports;<br>Other operational issues. | SAPIA and its members meet before all HOS meetings to discuss the more specific operational actions relating to security of supply due to be discussed at the HOS meeting.<br>This allows SAPIA and its members to align on certain aspects before the HOS meeting which, in turn, helps the meeting to be run more efficiently.<br>This discussion is necessary because HOS meetings involve other participants, and supply security issues are not dealt with in sufficient detail to guide HOS members remediation actions.<br>SAPIA's Security of Supply Committee reports directly to the DMRE, with updates following these Security of Supply Committee meetings. |

The oil industry, collectively represented through the South African Petroleum Industry Association (SAPIA) also operates a separate Security of Supply Committee.

After January 2021, the functions of the LPT and HOS committees have largely combined with meetings taking place simultaneously to cover the status of:

- Refinery and shutdown scheduling.
- Imports.
- Primary distribution facilities.
- Liquid fuel supply to airports.
- Shipping issues.

Through these forums, the DMRE and industry participants address issues arising and maintain a high-level dashboard of the state of supply. The dashboard is colour coded (red, yellow and green) to indicate the geographic location of supply constraints. It is also colour coded to prevent the sharing of individual company's commercial information.

Analysis of past meeting minutes confirm that supply insecurity is largely confined to the Durban – Inland Market geographic areas.

Analysis also identifies a major deficiency in the monitoring system. While it may be adequate for collective sharing and discussion and serves to address current short-term bottlenecks of the existing "tightlined" logistics system, it is largely backward looking and incapable of functioning as an early warning system.

Our understanding is that the DMRE does not collect and/or collate any further detailed fuel stockholding and fuel flow information outside of these forums.

Some recommendations are made below to correct this.

Analysis of the operation of the HOS and LPT highlights the root cause of supply insecurity as the lack of any commercial and/or strategic stockholding of fuel products. This relates to DMRE policy issues.

Oil companies operate their fuel product logistics systems rationally and, in particular, seek to reduce the working capital associated with maintaining fuel product stockholdings. This results in the just-in-time structure of the Durban-Inland market logistics network, a structure which increases the risk and frequency of supply shortages and perpetuates the need to exempt the industry from the Competition Act. However, during the investigation, it was not clear why individual oil company shortfalls could not be negotiated in the open market instead of being brought to the DMRE-convened forums for resolution. In the case of the 2022 jet fuel shortage and disruption at OR Tambo airport, we understood that after a jet shipment from the Durban was delayed, the oil companies that had a jet fuel deficit could not conclude a mutually beneficial commercial agreement with SASOL/Natref. SASOL/Natref had jet fuel stocks available but did not hold the commercial agreement with airline customers. It required the matter to be tabled at the LPT for resolution.

From our perspective, these forums essentially provide cover for oil market participants to pursue their (rational) objective of minimising the cost of storage buffers and the quantum of fuel in the Durban-Inland market pipeline (maximise stock turns).

The net effect is to shift the costs of disruption onto the transporters TPL and TFR. It also undermines the integrity of Competition Policy by allowing the oil market oligopoly to collude in resolving market shortages, shortages which are directly related to their (rational) practices of minimising stockholdings.

## 12. ENHANCING THE EXISTING NATIONAL FUEL PRODUCT SUPPLY MANAGEMENT SYSTEM WITH REAL-TIME INFORMATION CURRENTLY COLLECTED BY GOVERNMENT DEPARTMENTS, GOVERNMENT AGENCIES AND SOES

This section attempts to examine in detail the systems, processes and practices through which information about fuel product stocks and flows is collected, collated and shared.

**Table 9: Existing fuel logistics data repositories**

| 10 PHYSICAL LOCATION OF FUEL PRODUCT STOCKS AND FLOWS | 10 HOLDER OF LIVE VOLUME INFORMATION | 10 REGULATIONS AND PROCEDURES REQUIRING DISCLOSURE OF LIVE OIL PRODUCT STOCK VOLUMES |
|---|---|---|
| Imports of finished products | Oil company importers and DMRE import control department | Petroleum Products Act |

| | | |
|---|---|---|
| Fuel vessel berthing and discharge at ports (fuel product imports) | Berth operator.<br><br>Transnet Port Operations. | |
| Durban->Jameson Park pipeline route | Transnet Pipelines | TPL contractual relationships with oil company customers |
| Storage facilities at refineries | Individual oil companies | HOS/LPT protocols. Oil companies supply the DMRE with limited information (green, yellow, red) on stock levels at their refineries and depots. Specific volume data is not supplied. |
| Storage depots | Individual oil companies, Vopak Durban, Vopak Jameson Park, Burgan Cape Town | HOS/LPT protocols. Oil companies supply the DMRE with limited information (green, yellow, red) on stock levels at their refineries and depots. Specific volume data is not supplied.<br><br>Oil company infrastructure capacity utilisation according to SAPIA is monitored by NERSA. Companies submit monthly storage capacity availability data which NERSA publishes. If 3rd parties are denied access, they have a right to approach NERSA for resolution. |
| OR Tambo International Airport and Cape Town International Airport | OR Tambo Airport Fuel Services (ORTAFS)<br><br>Cape Town Airport Fuel Services (CTAFS) | |

*Source:* Authors compilation.

We find that there are six separately operated systems whereby real-time data (or near real-time data) on physical volumes of petroleum products is collected.

**System 1 – DMRE Fuel Product Import Control System**

- DMRE Import control regulations require all licensed fuel importers to obtain a permit from the DMRE for the fuel grade and volume of products to be imported.
- This requirement stems from the DMRE's objective to monitor and manage the balance between imports and exports and enables the DMRE to ascertain from other oil companies whether any of them has local volumes available.
- The import application form IE461 (Appendix 1) requires disclosure of fuel type, volume and value and anticipated date of vessel discharge at Durban and other RSA ports.
- The DMRE recommends approval of import applications and Import permits are issued by the International Trade Administration Commission (ITAC).

**System 2 – Berthing facility data**

- The operators of berthing facilities at Durban (Island View), Port Elizabeth, East London, Mossel Bay and Cape Town schedule and maintain a forward-looking real-time system of vessels using (and scheduled to use) fuel discharge berths.

- Fuel volume discharge data is collected by the berthing operator.
- The information is shared with Transnet Port Operations, which provides vessel piloting services to the ships entering port.
- SAPREF/Engen operates the Durban Island View berthing and pipeline scheduling facilities for berths 5, 6, 7, 8 and 10 for BP, Shell, Engen and Total.
- Natcos (JV between Sasol and Total) operates the Durban Island View berthing and pipeline scheduling facilities for berth 9 for Sasol and Total.
- Engen operates the East London berthing facilities.
- Astron Energy operates the Port Elizabeth berthing facilities.
- PetroSA operates the Mossel Bay berthing facilities.
- Astron Energy operates the Cape Town berthing facilities.

**System 3 – NERSA-required fuel product storage facility utilisation and excess capacity available to third parties**

- NERSA legislation and regulation require the owners and operators of licensed petroleum product storage facilities to supply monthly data on total storage facility volume capacity, and data on the actual volume planned to be used, and volumes of capacity available for use by third parties.
- This detailed monthly inventory and oil movement information is transmitted via a structured Excel-based system to NERSA on a confidential basis.
- NERSA receives and collates this data monthly and publishes a schedule of specific fuel depots where capacity is available for third party access every six months. Volumetric data is not disclosed publicly.
- NERSA also receives notice of requests by third parties for access to infrastructure owned and operated by licence-holders.
- The NERSA information is valid on a monthly basis and is not a real time system. However, the time period matches the 25 days of market volumes that the BFP system compensates oil companies for.

**System 4 – TNPA-required coastal fuel tank storage filling and discharge volumetric data**

- TNPA lease conditions require fuel terminal lessors to provide TNPA with tank turn information. This includes the volumes of fuel products in each of the licensed storage tanks and the frequency of filling and discharging the respective products.
- TNPA's rationale for this is to ensure that the operator of the terminal does not use the terminal for long-term storage.
- The frequency and format detail of the information supplied to TNPA by oil companies was requested from SAPIA. SAPIA advised that they do not know this and that oil companies should be approached directly.
- Time did not allow for this step. However, it is clear that detailed volumetric data of tank ullage, injection and discharge in Durban and other ports is supplied by oil companies to TNPA as a condition of their leases and that such information could also be requested by the DMRE in terms of DMRE-related legislation and regulation.

**System 5 – Transnet Pipelines – Fuel product pipeline scheduling data**

- Transnet Pipelines maintain a forward-looking real-time system of fuel product volumes planned for injection by various oil company customers as well as fuel products that are flowing:
    - From the Durban MPP terminal to the main inland terminal at Jameson Park.
    - From Jameson Park to other inland depots via Transnet-operated pipelines.
- Transnet Pipelines contributes some of this information to the HOS and LPT committee systems.

**System 6 – DMRE-convened HOS and LPT Committees**

- The information about the physical location and stock quantum of fuel products flowing through each major node of South Africa's national fuel supply logistics system is shared, collated and tracked under a system managed by the DMRE using the forums of the HOS and LPT.
- Individual oil company fuel product logistics data is supplied to the DMRE to produce a weekly forward-looking dashboard which indicates the stock levels at each of the main supply points and storage depots across the country. Actual volumes are not stated.
- Instead, the dashboard uses a 3-colour coding system (red, yellow and green) to identify points of supply constraints. This is intended to minimise the exchange of individual competing oil company's actual physical stock.
- The colour coding system is not uniform. The volume relating to "red" for company A may not be the same volume for "red" reported by company B.
- Consequently, the main dashboard collated under the DMRE's HOS and LPT committee system is backward looking and may not be accurate enough, or the HOS/LPT adequately equipped, to anticipate future supply shortages. This is partly due to the tightness of the logistics pipeline and partly due to a lack of detailed and comprehensive real-time fuel stocks and flow data.
- This, in full circle, leads to SAPIA's motivation for the perpetual retention and exemption of the HOS and LPT from the Competition Act.

## 12.1. What is required to institute a forward-looking real-time system which reflects the current and forecast state of the national fuel product system?

The DMRE-convened LPT is the main system that monitors the state of national fuel product stocks as well as the flows of product through the TPL-operated NMP.

As outlined above and elsewhere in this report, the system is subjective, backward looking and inadequate to determine future constraints.

We recommend that the LPT dashboard system be substantially expanded to incorporate all of the data collected by the respective agencies listed above. It would include:

- Scheduled and current imported fuel volumes.
- Storage tank volumes at Island View.
- Scheduled and current fuel volumes in the TPL pipeline between Durban and Jameson Park.
- Jameson Park, Vopak-Lesedi and other inland market depot storage volumes.

The DMRE's regulatory powers should be invoked to obtain actual volume information, initially weekly. We expect that, in terms of improving foresight of supply security to the inland market, TPL will need to play an important role in instituting and enabling the proposed system.

The supply dashboard should be accompanied by an equally accurate demand profile. We understand that the DMRE already has a monitoring system of national fuel consumption at magisterial district level in place.

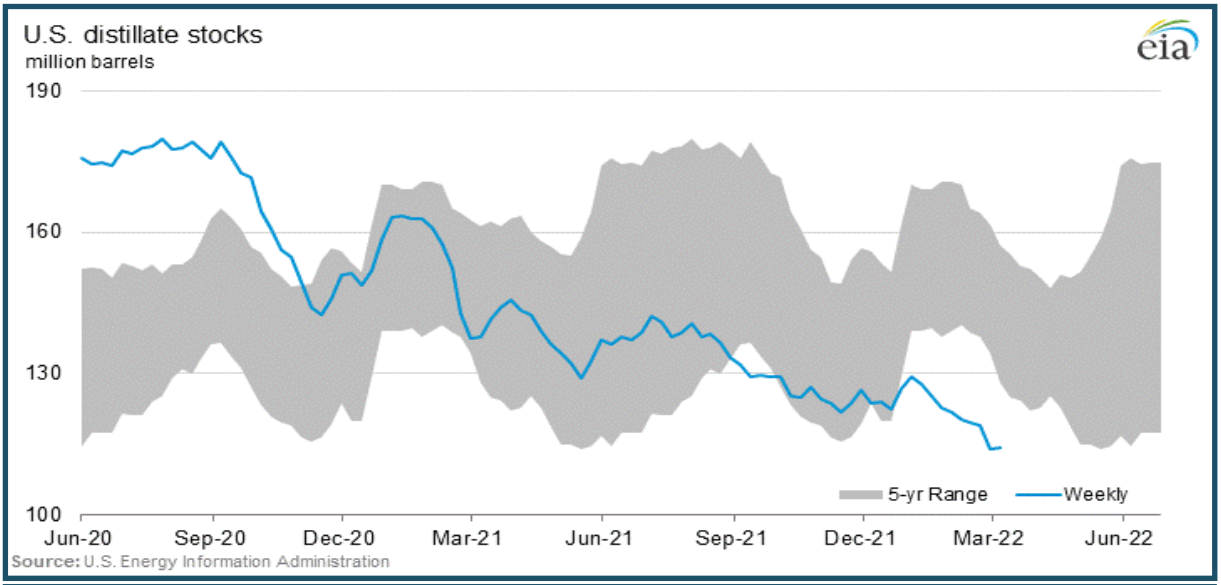
Such a system already exists in the public domain for electricity supply, with regular updates from the main supplier Eskom on supply security.

Replicating this for liquid fuel would lead to a system similar to those of other jurisdictions such as the USA and the UK.

The UK's DMRE equivalent is statutorily obliged to publish an annual assessment of the state of energy security, including the security of liquid fuel supply (UK Government, 2021).

The published stock position in the US (see Table 11) could be replicated for the RSA logistics system. Such a system was originally proposed in the 2007 ESMP.

**Table 10: Energy Information Agency – Monthly status of United States distillate stocks**




**Total distillate stocks *(million barrels)*** more stock data ›

| | Year ago | Most recent | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 03/12/21 | 03/11/22 | 03/04/22 | 02/25/22 | 02/18/22 | 02/11/22 | 02/04/22 | 01/28/22 |
| U.S. | 137.7 | 114.2 | 113.9 | 119.1 | 119.7 | 120.3 | 121.8 | 122.7 |
| East Coast (PADD 1) | 46.3 | 31.5 | 31.5 | 33.2 | 33.6 | 33.9 | 32.8 | 35.6 |
| New England (PADD 1A) | 9.8 | 5.7 | 5.5 | 6.0 | 5.9 | 5.5 | 5.0 | 5.2 |
| Central Atlantic (PADD 1B) | 24.3 | 14.9 | 15.0 | 16.5 | 16.6 | 17.1 | 16.6 | 17.1 |
| Lower Atlantic (PADD 1C) | 12.2 | 10.9 | 11.0 | 10.7 | 11.1 | 11.2 | 11.2 | 13.3 |
| Midwest (PADD 2) | 25.8 | 29.6 | 30.5 | 30.9 | 31.9 | 31.7 | 32.0 | 31.7 |
| Gulf Coast (PADD 3) | 48.8 | 37.0 | 36.3 | 38.0 | 36.9 | 37.6 | 39.9 | 38.6 |
| Rocky Mountain (PADD 4) | 4.1 | 4.0 | 3.9 | 4.0 | 4.1 | 4.0 | 4.0 | 3.9 |
| West Coast (PADD 5) | 12.8 | 12.1 | 11.7 | 13.0 | 13.1 | 13.2 | 13.1 | 12.9 |

*Source:* EIA This Week In Petroleum Distillate Section - U.S. Energy Information Administration. https://www.eia.gov/petroleum/weekly/distillate.php

## 13. MANAGEMENT OF COMMERCIAL STOCK POLICY

We have analysed the DMRE's commercial stock policy, which was built into the BFP formula from inception. The formula was developed to provide appropriate and fair compensation to oil market participants for holding 25 days of coastal commercial stock of fuel products.

### 13.1. The Basic Fuel Price system

The BFP recovered by manufacturers (refiners) and wholesalers of petroleum products is determined according to the following formula (DMRE, n.d.):

BFP = Free on Board Price + Freight Costs + Insurance + Demurrage + Product Loss + Stock financing + Cargo Dues + Coastal Storage.

Our understanding is that The Basic Fuels Pricing (BFP) methodology assumes that market participants incur stockholding and associated costs in maintaining 25 days of coastal commercial stockholding and the formula compensates the market participants in the following amounts:

**Coastal storage**

This is to recover the cost of providing storage and handling facilities at coastal terminals. In 2002, the typical international storage rate was assessed as US$3 a ton or 2.5 SA cents a litre per month. The BFP only provides for 25 days and the initial value when BFP was implemented amounted to 2.083 c/l. This element is adjusted on an annual basis by the increase in the Producer Price Index (PPI).

**Stock financing**

Stock financing cost is based on (i) the landed cost values of refined petroleum products, (ii) 25 days of stockholding and (iii) the ruling prime interest rate less 2 percent.

Petrol prices are regulated at the pump, so oil companies receive the BFP price which includes compensation for maintaining and financing 25 days of coastal stockholdings of petrol.

The diesel price is not regulated. The DMRE publishes a wholesale price, but this is indicative only. Oil companies therefore do not receive a deemed component of coastal storage and stock financing for diesel sales.

### 13.2. DMRE's Basic Fuel Price Structure Review 2018

In 2018, in terms of the Petroleum Products Act, the DMRE proposed to review the BFP structure and, on the compensation for an assumed 25 days of stockholding, it proposed the following:

> *"11. Coastal Storage Stockholding Costs*
>
> *The coastal storage is one of the deemed elements of the BFP because, the majority of the importers utilise their tankage within the refineries and not stand-alone storage facilities. The only exception is in Island View in Durban, where most of the storage tanks are owned by local oil companies, exceptions include storage facilities owned by Island View Storage and VOPAK who primarily serve the chemical industry. However, they do offer limited storage to the local oil industry (RSA, 2018:7).*
>
> *11.1 Current BFP position*
>
> *Currently the Basic Fuel Price formula caters for 25 days storage and none of the refiners keep stock for 25 days because it is in their interest to get the products into the market as quickly as possible. It is unlikely that the independent wholesalers would keep products for 25 days. None of the oil companies have coastal storage except the storage tanks that are integrated to*

*their refineries. This item was included in the BFP formula because it is a deemed pricing mechanism which assumes that all the petroleum products consumed in South Africa are imported, and therefore would require storage at the harbour. It was not part of the In Bond Landed Cost formula the BFP replaced.*

*11.2 New proposed position by the department*

*The department recommends that the coastal storage element should be reduced from 25 days to between 10-15 days based on the fact that oil companies normally keep commercial stock of petroleum products that would last for 10-15 days during unplanned shutdowns. The actual number of days will be determined once the department has obtained submissions from the stakeholders.*

*12. Stock Financing Costs*

*Most of the oil companies obtain financing at an interest rate below the prevailing prime rate, i.e. at prime rate minus 2. The Department recommends this element should be retained in line with 11.2 above.*

*13. Conclusion*

*The department had engagements with SAPIA members, the Deputy Harbour Master, Platts, Argus, and Thompson Reuters as part of the investigations. It was envisaged that the revised BFP formula would be implemented in 2019 after extensive consultation with all the stakeholders. The department would consolidate all comments and/or inputs from all stakeholders and conduct a workshop before finalising its position on the BFP review. The Department believes that the import parity principle should be maintained for imported petroleum products, but the BFP should be un-deemed to reflect the actual cost of landing products at South African ports."*

## 13.3. Basic Fuel Price review – Current status

Following the consultation process, the DMRE reported in November 2019 that the draft document had been revised in the light of stakeholder views and was being internally reviewed (PMG, 2019).We understand that the review proposals/recommendations were not implemented at the time and that the deemed nature of the BFP, including the compensation to oil companies for coastal commercial stockholding and financing costs have continued to apply.

## 13.4 Calculating the magnitude of compensation to oil companies under the BFP Commercial stock clauses – "Coastal Storage" and "Stock Financing Cost"

Using current BFP parameters, the dtic investigation estimated the current compensation values for "Coastal Storage" and "Stock Financing" in the BFP calculations for October 2022.

**Table 11: Oil company compensation for Coastal Storage and Stock Financing Cost**

| Product | Product F.O.B. Price | | Coastal Storage | | Stock Financing Cost | |
|---|---|---|---|---|---|---|
| | in US c/l | in SA c/l | in SA c/l | in SA R/$m^3$ | in SA c/l | *in SA R/$m^3$* |
| 95 Unleaded Petrol | 62.976 | 1 123.920 | 7.138 | 71.38 | 6.355 | *63.55* |
| 93 Unleaded Petrol | 61.899 | 1 104.710 | 7.138 | 71.38 | 6.253 | *62.53* |
| 50 ppm Diesel | 91.181 | 1 627.289 | 7.138 | 71.38 | 9.064 | *90.64* |
| 500 ppm Diesel | 90.762 | 1 619.761 | 7.138 | 71.38 | 9.029 | *90.29* |

*Source:* DMRE.

By our estimate, in 2020, the 11.7 billion litres of petrol sold in South Africa would have conferred a benefit of some R1.57 billion for petrol.

Had the price of diesel not been deregulated in 2013, the 8.7 billion litres of diesel sold in South Africa would have conferred a benefit of some R1.4 billion for diesel. However, oil companies did receive the benefit for diesel between the introduction of the BFP in 2003 and 2013.

## 13.5. Impasse between SAPIA and DMRE on whether oil companies are complying with the commercial stockholding formula

**SAPIA's view on Commercial Stockholding obligations**

In discussion with SAPIA, SAPIA maintain the following:

That licence-holders do hold commercial stocks, but they are not obliged by any BFP regulations to adhere to the deemed 25-day BFP allowance for stockholding.

In SAPIA's response to our clarification questions of 7 November 2022, SAPIA state:

> *Commercial stock is the holding of sufficient stock by an organisation such that it can run its operations efficiently and with minimal cost due to the opportunity cost of holding excess stock – an opportunity cost which is not recoverable in a price regulated market. Each company would define their own levels of commercial stock to be held dependent on their customer profile, location, risk of supply and so on…...*
>
> *…….SAPIA is unable to provide the number of days of commercial stock held by its members as this is commercially sensitive information…….*
>
> *…….With respect to the financing charge in the BFP there has been a lot of confusion on this figure and what this means. Paragraph 23 of the Moerane Report stated that:*
>
> *"On the issue of compensation, the Investigating Team considers that there is no legal basis for requiring the oil companies to compensate consumers for the fuel shortages experienced in December 2005. This is because there is no evidence that the allowance for stock holdings included in the BFP can be translated into a commitment by the oil companies to hold these stocks."*
>
> *This contradicts the assertion that oil companies have unduly benefitted from the stock holding component in the BFP.*
>
> *For information, the original number of days to finance stock holding was 30 days but was changed to 25 days after negotiation between SAPIA members at the time and the Director General of the erstwhile Department of Energy when negotiating the structure and implementation of the BFP.*
>
> *The 25 days should thus not be the focus of attention but rather the origin of the 30 days. This comes from the necessity to finance stock that has been purchased in open contract with third party suppliers and takes into account the contracts of sale, pricing, payment, shipping of product to destination ports, demurrage, discharge and holding in stock (VM) prior to distribution into open Market (SAPIA, 2022).*

SAPIA does not retain individual industry licence-holders' stockholding information as this is commercially confidential information.

**The DMRE's view on Commercial Stockholding obligations**

The DMRE's view was captured in the draft 2018 BFP review document wherein it pointed out that oil companies were benefiting from the deemed compensation for coastal stockholding and associated financing costs but were not retaining the expected 25 days of coastal stocks:

*Currently the Basic Fuel Price formula caters for 25 days storage and none of the refiners keep stock for 25 days because, it is in their interest to get the products into the market as quickly as possible. It is very unlikely that the Independent Wholesalers (IW) would keep products for 25 days. In fact, none of the oil companies have coastal storage except the storage tanks that are integrated to their refineries. This item was included in the BFP formula because, it is a deemed pricing mechanism which assumes that all the petroleum products that are consumed in South Africa are imported and, therefore, would require storage at the harbour. In fact, it was not part of the IBLC formula that was replaced by the BFP.*

The BFP review proposed to remove the deemed components of the BFP formula to reflect the actual cost of landing products at South African ports. The DMRE in 2022 noted in discussions that this view had not changed and that the coastal commercial stockholding has been an issue of contention with the oil industry for some time.

No mechanism is currently in place to monitor the actual number of days of commercial stock other than the information that is used to develop the supply security dashboard within the Logistics Planning Team (LPT).

It was pointed out that prior to 1994, oil companies had to provide an audited stockholding position every quarter to the DMRE. And while the DMRE has not demanded evidence of stockholding from licence-holders, it was evident from the frequency of recent stock-outs and supply insecurity incidents that licence-holders were not retaining anything near the 25 days stockholding even though they were being compensated for this.

This was a completely rational practice by the oil companies but it directly contributed to supply insecurity and was an important contributor to the frequency of supply stock outs and shortages. Therefore, the DMRE advised that they intended to regulate the 25-day requirement under the Petroleum Products Act. The matter was to be tabled at the 23 January 2023 workshop with industry with a targeted implementation date by June 2023.

## 13.6. Investigation conclusions – Commercial stockholding

We do not find SAPIA's arguments to be convincing, particularly their reference to the 2006 Moerane Commission's comments. Moerane's investigation found no evidence that oil companies were holding 25 days of stock, and, in Moerane's view, firms were not obliged to hold 25 days of commercial stock. However, it cannot be disputed that oil companies received compensation to defray the cost of holding 25 days of commercial stock.

By our estimate, in 2020, the 11.7 billion litres of petrol sold in South Africa would have conferred a benefit of some R1.57 billion for petrol. Had the price of diesel not been deregulated in 2013, the 8.7 billion litres of diesel sold in South Africa would have conferred a benefit of some R1.4 billion for diesel. However, oil companies did receive the equivalent of valued at some R3 billion (2020) for both petrol and diesel from the introduction of the BFP in 2003 to 2013.

We therefore maintain that oil companies have benefited by around R3 billion a year in 2020 terms since the implementation of the BFP from 2003 to 2013 and by around R1.6 billion a year since 2014 without retaining the 25 days of commercial stock that they have been compensated for.

Viewed differently, South African fuel consumers have effectively been overcharged by around R3 billion a year to the benefit of oil companies.[14]

We therefore recommend:

- That the DMRE strengthen the integrity of the LPT monitoring system by including detailed volumetric data reflecting actual real-time commercial fuel stocks rather than the prevailing opaque colour coded dashboard. Such information could be sanitised to ensure that no individual commercial information is shared.
- That the DMRE's proposal to regulate the 25 days of commercial stockholding requirement by July 2023 under the Petroleum Products Act be supported and that this be included as a condition of any Designation and Exemption granted to SAPIA.
- An alternative recommendation is to implement the 2018 BFP review proposal to remove the deemed 25-day commercial stock and financing components of the BFP. If the DMRE adopts this approach, we recommend that the commercial stock and financing elements (amounting to around R1.6 billion a year) be retained as a Strategic Stock/Fuel Product Security levy and reallocated so as to finance the 2012 Strategic Stock Policy which required the construction and maintaining of 14 days of in-line strategic stock of fuel products.

## 14. ENERGY SECURITY MASTER PLAN (ESMP)/20-YEAR LIQUID FUELS ROADMAP

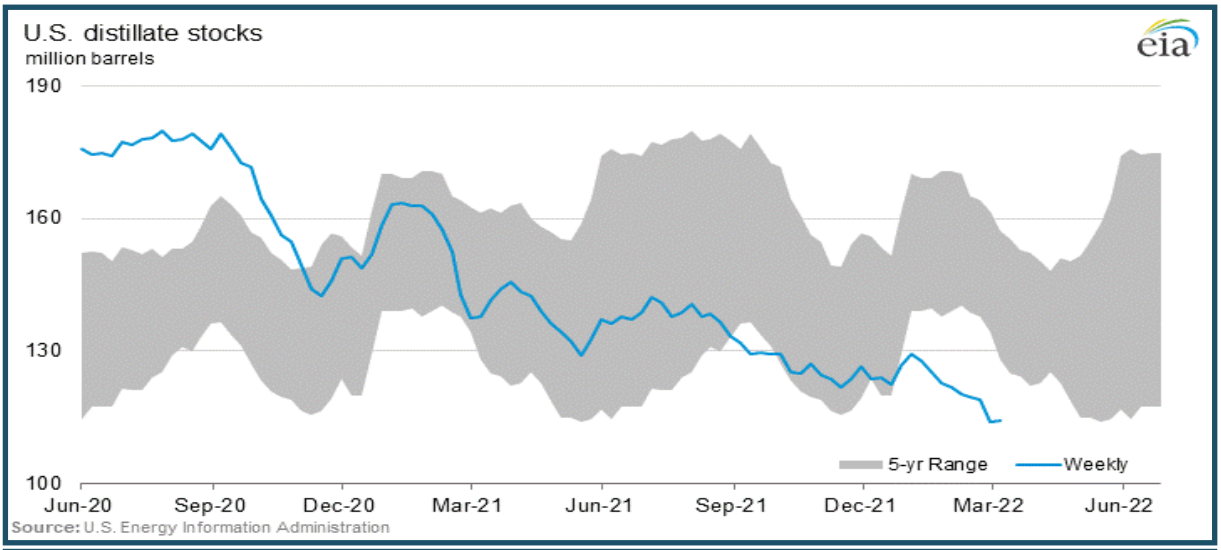
The Energy Security Master Plan (ESMP) 2007-2025 assessed the potential impact that a shortage of liquid fuels would have on the petroleum industry and the national economy and proposed mitigation measures (RSA, 2007).

We briefly reviewed the ESMP and list its main objectives below:

- Based on RSA's unique situation and existing regulated fuel system, the policy approach to achieve energy security favours central government planning vs market signalling.
- Policy aims to adopt global fuel specifications.
- Thirty percent of all crude oil imports should be procured through PetroSA and PetroSA should purchase its own crude-oil Very Large Crude Carrier (VLCC) tanker.
- Import policy should limit imports to the extent that it provides regulatory certainty to potential investors in local production of liquid fuels.
- It should be ensured that the country holds appropriate quantities of strategic stocks of finished products and crude oil.
- The oil industry (including ACSA and Eskom for Open Cycle Gas Turbine (OCGT) operations) should be obliged to hold 28 days of commercial stock and be compensated with costs recovered from consumers through the regulated BFP price mechanism.
- An independent operator should manage port petroleum handling facilities to improve coordination with pipeline operations and promote access for new participants.
- Planning and implementing State and private infrastructure investment should be coordinated.
- This should be facilitated by the creation of an "independent energy planning coordinator".
- An integrated energy modelling and monitoring capability similar to the US Dept. of Energy's Energy Information Administration which produces, for example, regular stockholding information of fuel products, should be created.

[14] This issue, together with other detailed concerns regarding the BPF components is also cited in a recent analysis by Crompton, et al. (2020) Petrol price regulation in South Africa – is it meeting its intended objectives –- wp2020-140.

**Table 12: US EIA – Monthly reporting of national fuel product stockholdings**




**Total distillate stocks *(million barrels)*** more stock data ›

| | Year ago | Most recent | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 03/12/21 | 03/11/22 | 03/04/22 | 02/25/22 | 02/18/22 | 02/11/22 | 02/04/22 | 01/28/22 |
| U.S. | 137.7 | 114.2 | 113.9 | 119.1 | 119.7 | 120.3 | 121.8 | 122.7 |
| East Coast (PADD 1) | 46.3 | 31.5 | 31.5 | 33.2 | 33.6 | 33.9 | 32.8 | 35.6 |
| New England (PADD 1A) | 9.8 | 5.7 | 5.5 | 6.0 | 5.9 | 5.5 | 5.0 | 5.2 |
| Central Atlantic (PADD 1B) | 24.3 | 14.9 | 15.0 | 16.5 | 16.6 | 17.1 | 16.6 | 17.1 |
| Lower Atlantic (PADD 1C) | 12.2 | 10.9 | 11.0 | 10.7 | 11.1 | 11.2 | 11.2 | 13.3 |
| Midwest (PADD 2) | 25.8 | 29.6 | 30.5 | 30.9 | 31.9 | 31.7 | 32.0 | 31.7 |
| Gulf Coast (PADD 3) | 48.8 | 37.0 | 36.3 | 38.0 | 36.9 | 37.6 | 39.9 | 38.6 |
| Rocky Mountain (PADD 4) | 4.1 | 4.0 | 3.9 | 4.0 | 4.1 | 4.0 | 4.0 | 3.9 |
| West Coast (PADD 5) | 12.8 | 12.1 | 11.7 | 13.0 | 13.1 | 13.2 | 13.1 | 12.9 |

*Source:* U.S. Energy Information Administration. Weekly Petroleum Status Report. Available at: https://www.eia.gov/petroleum/supply/weekly/

SAPIA maintains that the ESMP consultation process (entitled Project Delta) was interrupted by the supply security activities around the 2010 World Cup and that the DMRE did not advance the process to refine and adopt the ESMP after 2010.

Furthermore, SAPIA stated that *"the ESMP project could not be implemented in 2007 as this was prior to the exemption and industry players could not engage collectively without the risk of competition law investigation. To the best of our knowledge, since the designation of the industry and the various exemptions, there have been no further steps taken to resume the implementation of the ESMP."*

In discussion with the dtic investigation team, the DMRE advised that the 2007 ESMP was effectively superseded in 2014 by the 20-year liquid fuels road map.

This document is not available in the public domain, but we understand that its main thrust and recommendations included:

- Ensuring the retention and expansion of domestic refining capacity as an important pillar supporting supply security.

- Increasing the capacity of petroleum product storage and handling infrastructure, particularly along the Durban – Inland market corridor.
- Specifically recommending the incorporation of biofuels and clean fuels into the fuel product logistics system.

No progress was made with both the 20-year roadmap document and the ESMP draft policy, partly due to organisational changes within the DMRE after 2014.

Changes since 2014 in the South African oil industry require a further updating of the ESMP/ 20-year Liquid Fuels Roadmap. The main ones are:

- Energy security has been influenced more by the decisions of private sector participants across the value chain and not by central planning or coordination.
- Despite several attempts to implement tighter fuel specification, policymakers have failed to overcome private sector resistance. The timeline for clean fuels has slipped by around a full decade from when it was planned to be implemented.
- Crude oil strategic stocks continue to be unusable in RSA refineries.
- CEF strategic crude oil stocks have been plundered, compromised and more recently have been sold to provide short-term once-off relief/subsidy to fuel consumers.
- Domestic refining capacity has declined substantially with the closure of Engen, SAPREF and PetroSA.
- Import policy has been extremely liberal and has never been invoked to facilitate investment in domestic refining/production.
- Apart from the multi-product pipeline (MPP), little investment has been made across the oil industry value chain.
- No independent planning coordination capacity has been created.
- Only limited short-term planning and coordination takes place in the DoE's HOD and LTP committees.
- Limited US EIA-type modelling and monitoring capacity has been built – limited liquid fuel information is published by the DMRE.
- Commercial and strategic product stocks are nowhere near the 28-day ESMP target.
- The most important supply security risk identified in 2007 was the limited capacity of the DJP product pipeline. This risk was eliminated by the construction of the MPP which came into service in 2017, much later than the planned 2010.
- Apart from this few of the measures proposed have been implanted and the policy has been overtaken by events, as outlined in this investigation.

The DMRE confirmed that it intended to progress and complete the ESMP/ 20-year Roadmap process during 2023.

## 14.1. Investigation conclusions – Energy Security Master Plan/20-Year Liquid Fuels Roadmap

The DMRE's plan to progress and complete the ESMP/20-year Roadmap process by the end of 2023 is supported.

However, we recommend that this process on a stand-alone basis should not delay the planned implementation of the BFP review, strategic stocks, clean fuels and biofuels policy finalisation as they are important components of the ESMP/20-year plan.

The ESMP was adopted by the Competition Commission and the dtic in 2011 as the guiding framework against which the designation and exemption award needed to be measured and reported.

We propose that any decision to grant designation and exemption of SAPIA's current 2021 application should be conditional on progress against the work programmes for the BFP Review, strategic stocks, clean fuels and biofuels policy finalisation.

# 15. STRATEGIC STOCK POLICY

The DMRE's 2012 strategic stock policy draft was based a combination of the work done for the 2007 Energy Security Master Plan and another study by the Fuel Supply Strategy Task Team.

We have analysed the 2012 strategic stock policy draft document and note the following policies that were proposed to reduce supply security risks:

- Targeted level of strategic stocks:
  - Based on the 1998 Energy White paper of 90 days (based on IEA member country norm).
  - Reduced to 60 days of net imports.
  - Government (SFF) to maintain - 60 days of net imports.
  - Licensed Manufacturers - 14 days of market share of refined product stocks.
  - Wholesalers - 14 days of market share of refined product stocks.
- Criteria for stock levels:
  - 21-42 days to reach RSA.
  - 10-14 days to offload, refine and transport to inland market.
- Strategic stocks to be financed by a method other than the fuel levy.
- Stock levels to be reviewed every three years.
- The multi-product pipeline (MPP) volume was increased from 16" to 24" to accommodate increased product stocks financed by a security-of-supply component of the fuel levy.
- Strategic stocks to be held in line with the fuel product logistics system so as to be turned around within three months.
- Commercial stocks to be replenished with 3-6 weeks.
- The strategic stock policy estimated the costs of storage tank infrastructure required to achieve the policy objective in Table 13.

**Table 13: DMRE (2012) Comparison of costs and infrastructure requirements for strategic stocks of refined products at stock holding levels of 30, 60 and 90 days respectively**

**Table 1: Summary of infrastructure and inventory requirements in 2010 [Net Imports]**

| Total Strategic Stocks | 30 Days | 60 Days | 90 Days |
|---|---|---|---|
| Refined products(Net Imports | 10 | 18 | 60 |
| Crude Oil | 14 (No increase in stocks) | 42 (Increase by 28 days) | 30 (Increase by 10 days) |
| Volume stored (in refined products) | .676 billion litres | 1.22 billion litres | 4.06 billion litres |
| Tanks required | 35 | 62 | 203 |
| Depot Capex | R3.15 billion | R5.58 billion | R18.27 billion |
| Inventory Costs@ R4/per litre | R2.71 billion | R4.87 billion | R16.23 billion |
| Tariff Payback 10 years | R0.03 per litre | R0.06 per litre | R0.23 per litre |

** Assuming tanks of 200 000 $m^3$ capacity each

Note: The depot capital Expenditure (CAPEX) is a ± 50% magnitude estimate, all figures based on 2005 economic assumptions.



- The implementation proposal was that:
  - Licensed manufacturers and wholesalers to be given three years from 2012 to construct additional capacity for 14 days strategic stock.
  - Stock to be kept as part of normal supply chain to allow for constant rotation for diesel, petrol, jet fuel and LPG.
- Licensed participants be obligated to report actual current stock levels, per product, per region to a centralised stock reporting system.
- The system to maintain an event and early warning management system.
- System to include mechanisms to deal with shortfalls, maintenance outages, and unexpected loss of capacity.

- The National Liquid Fuels Emergency Management Team and the LPT to be convened if trigger levels are reached.

## 15.1. SAPIA's view on strategic stocks

SAPIA provided the Investigation Team with its response to the DMRE's 2012 Strategic Stock policy draft. SAPIA's position is summarised:

- SAPIA supports the institution of a national strategic stocks petroleum policy.
- SAPIA's estimated cost of DMRE's draft proposal is circa R100 billion and therefore it should be preceded by a Regulatory Impact Assessment which considers the alternatives to holding strategic stock and the affordability of strategic stock.
- SAPIA regards commercial stocks as being driven by operational requirements and are determined by specific market conditions whereas strategic stock is held in reserve in case of a catastrophic event.
- Fuel market activity by private entities should be independent of strategic stock obligations.
- Strategic stocks should be held by government and/or independent entities and not by licensed manufacturers and wholesalers.
- Commercial and strategic stocks should be held separately to ensure a clear separation of control and management but they should be located close to the Durban-Gauteng pipeline.
- Clarity is needed on the proposed working rules and remuneration framework.
- The timeline of three years for the construction of infrastructure is optimistic. SAPIA estimate that it will take between five and eight years to construct the estimated 700 million litres of product tankage to meet 14 days of strategic stock.
- The proposed penalties are unduly onerous.
- The strategic stock policy needs to also consider the introduction of Clean Fuels II, biofuel blending and evolving environmental legislation.
- SAPIA also attached its own estimate of the cost of implementing a 14-day strategic stock policy, an estimate which appears to be significantly higher than the DMRE's proposal.

Table 14: SAPIA 2013 Strategic Stock Cost calculation

## Annexure 2: Illustration of Strategic Stock Cost – 14 days' stockholding of fuel

**Stategic Stock Calculation - 14 Days**

| | | | Comment |
|---|---|---|---|
| Total Asset Value | 8 832.0 | RM | Ex RAS Template for SS |
| Capacity | 947.0 | ML | Ex RAS Template for SS |
| **Investment Value per ML** | **9.3** | RM | |
| | | | |
| Slate Volumes - 2012 (Petrol & Diesel) | 21 666.3 | ML | Excl IP and LPG |
| Days Sales | 59.4 | ML | |
| Strategic Stock Days Requirement | 14.0 | | Policy Driven |
| **Industry Stock Volume Required** | **831.0** | ML | |
| | | | |
| Industry Stock Volume Required | 831.0 | ML | |
| Construction Cost per ML | 9.3 | RM | |
| **Total Construction Cost** | **7 750.8** | RM | |
| | | | |
| Industry Stock Volume Required | 831.0 | ML | |
| Product Cost | 11.4 | R/L | Gauteng WSLP Mogas 95 (incl. duties & levies) |
| **Total Product Value** | **9 451.4** | RM | |
| | | | |
| Total Construction Cost | 7 750.8 | RM | |
| Total Product Value | 9 451.4 | RM | |
| **Total Investment Cost** | **17 202.1** | RM | For Industry |
| | | | |
| WACC | 15.6% | | RAS Wholesale |
| | | | |
| Required post-tax income to remunerate investment | 2 679.5 | RM | |
| Tax | 1 042.3 | RM | |
| Operating Cost | 498.6 | RM | Rough Assumption |
| **Total Income Required** | **4 220.5** | RM | |
| | | | |
| Total Income Required | 4 220.5 | RM | |
| Slate Volumes - 2012 (Petrol & Diesel) | 21 666.3 | ML | |
| **Required Margin** | **19.5** | cpl | |

Source: SAPIA, 2013b. Communication with DMRE – Comments on draft Strategic Stocks Petroleum Policy and Implementation Plan

In response to further questions posed to SAPIA, SAPIA responded:

- Strategic stock is stock mandated by government to be held either by commercial entities (oil companies or other mandated parties) or by State-owned entities. Strategic stock is designed to allow for the mitigation of supply interruptions caused by a major interruption to the supply of product to an economy. In terms of OECD guidelines this amounts to 90 days stockholding, which includes both crude oil and finished product. The Moerane Commission of Inquiry into the December 2005 shortages examined this issue. At paragraph 20 of the Moerane Report, it was found that that:
- *"In line with international practice, Government is responsible for holding strategic crude oil stocks to protect the country's economy against possible disruption in global crude oil supplies. The country does not hold strategic refined product inventories. Instead, the oil companies hold commercial quantities of refined product inventories to enable them to supply their customers timeously. These stocks proved to be inadequate in December 2005*."

- In South Africa the Draft Strategic Stock Policy recognised that in a price- regulated environment, the cost of holding such stock would need to be carried in the price structure of petrol and diesel. In free market economies the cost of mandated strategic stock would be built into the cost at which they sell their product to consumers.
- Nothing has been implemented by the DMRE since the publication of this draft policy and therefore, currently no oil companies are required to hold any strategic stock.

## 15.2. DMRE view on strategic stock and Strategic Stock Policy status

The 2012 Strategic Stock Policy Draft has not been updated since 2012 when it was tabled at Cabinet, who merely noted the document. Cabinet then tasked the DMRE and National Treasury to develop a funding mechanism and revert.

We understand that the funding mechanism, involving a small portion of the fuel levy and certain percentage of SFF's income, was proposed to National Treasury in 2013 but, since then, no progress has been made on the draft policy.

During the investigation, the DMRE advised that finalising the Strategic Stock Policy was a priority and that it was included in the DMRE's 2023 Annual Performance Plan.

The timeline for this process was to table the draft policy at an important workshop with the petroleum industry around 23 January 2023 which would cover a number of other key industry issues, including the closure of parts of South Africa's refining capacity.

The DMRE originally targeted the completion and implementation of the Strategic Stock Policy by December 2023, but the timeline has been extended. It is not clear when completion is envisaged.

## 15.3. Investigation conclusions and recommendations – Strategic Stock Policy

This investigation has identified the following as major contributors to supply insecurity:

- The minimisation of commercial stockholdings of fuel products by oil companies together with,
- The lack of strategic stocks of fuel products and its required infrastructure.

The absence of a formalised system of prudent commercial and strategic petroleum product stock holdings contributes substantially to supply insecurity and the inability of the logistics system to cater for periodic supply disruptions. This means that there will be a permanent need for designation and exemption if petroleum product reserves/strategic stockholdings are not instituted.

- A formalised system of strategic product stock is urgently required and is supported by SAPIA in principle.
- The DMRE is prioritising the completion and implementation of the Strategic Stock Policy and regulations by December 2023.
- The strategic stock proposals for crude oil must be amended to take account of the closure of the Engen and SAPREF refineries.

We therefore recommend that designation and exemption be made conditional on SAPIA and the DMRE accelerating the DMRE Strategic Stock Policy development programme.

We also recommend that the DMRE's review process involving the amendment and/or withdrawal of the BFP compensation components for coastal commercial stocks and financing costs (see separate section of this report) be considered as one possible source of financing for the Strategic Stock Policy.

## 16. CLEAN FUELS POLICY

In June 2012, the DMRE published regulations which required sulphur levels in petrol and diesel to be reduced to 10ppm by July 2017.

Following considerable interaction with and resistance from oil refiners, the DMRE extended the implementation date from July 2023 to July 2027.

The industry has argued that the failure to finalise the policy and regulations has resulted in deferment of refinery investment. Whatever the reason, the closure of the Engen refinery is directly related to the upgraded fuel specifications and inadequate investment in the refinery. Similar reasons lie behind the decision by Shell and BP to mothball and put the SAPREF refinery up for sale. The 2022 flood damage has further impacted on the viability of SAPREF.

In contrast, the fire-damaged Glencore Astron Milnerton Refinery was repaired and upgraded and started refining in the last quarter of 2022 to Clean Fuels 1 specifications. The Astron refinery is planning specific capital expenditure to achieve Clean Fuels 2 specification production by July 2027. This will strengthen supply security in South Africa's Western and Northern Cape petroleum products markets.

The reduction of domestic refining capacity in Durban directly contributes to supply insecurity in the inland market, and places additional strain on berthing and fuel import infrastructure.

We therefore recommend that any decision to designate and exempt the sector be conditional on a clear timeline and work programme between SAPIA and the DMRE to implement the Clean Fuels 2 policy and regulations.

## 17. COASTAL AND INLAND DEPOT INFRASTRUCTURE OPERATIONS – SPECIFIC IMPEDIMENTS FACED BY THIRD PARTIES IN ACCESSING FUEL STORAGE AND LOGISTICS INFRASTRUCTURE

The ownership of coastal fuel terminals and inland fuel depots varies from sole ownership to joint ownership by the main oil companies.

Depot operations are normally managed by one company with accommodation agreements with other industry participants. The depot operator has detailed knowledge of all individual depot users' stock positions.

### 17.1. Access to oil company-owned fuel discharge, loading and storage infrastructure

In discussions with SAPIA, SAPIA asserted that, over and above contractual requirements, obligations under the Petroleum Pipelines Act and the Petroleum Products Act make it compulsory to make uncommitted capacity available to third parties on commercial terms. This legal obligation is embedded in relevant licence conditions and is enforced by NERSA.

SAPIA acknowledged the market power wielded by joint infrastructure operators and the potential for abuse, but maintained that any bias can be addressed during the infrastructure allocation processes, which are planned and scheduled a month in advance.

SAPIA cited the example of the existing framework that governs scheduling of infrastructure in Cape Town whereby all parties that have tanks or depots are expected to nominate a berthing slot two

months in advance. Burgan can receive product from the Astron Energy Refinery and via imports into their facility. This will apply to any other third party which has depots to be serviced via the berth and Astron Energy's pipeline.

SAPIA maintain that the practice of joint operatorship does not contravene the Competition Act because:

- Scheduling information does not give any meaningful competitive insights.
- Loading and discharging volumes do not provide any competitively relevant insights.
- Confidentiality protections ensure information is used for strictly operational purposes only and is not disseminated.
- Substantial efficiencies achieved through joint ownership significantly outweigh any potential anti-competitive effects.

The potential for exclusion of third parties is mitigated by:

- Berths - Transnet Port Operations first come first serve vessel berthing access.
- Storage terminals
    - TNPA requires lessors to supply tank turn data.
    - NERSA licensing obligations require storage terminal owners to submit excess available capacity information, which NERSA publishes every six months.

Furthermore, SAPIA maintains that the interdependence of industry participants across different market locations around the country acts as a deterrent to abuse of such power lest they be subjected to the same abuse in joint infrastructure allocations elsewhere. This response applies to all locations where infrastructure is shared and operated by one of the existing market participants.

NERSA advised that, according to the data that they had collated, only around 5% of total national petroleum loading and discharge, pipeline and storage, infrastructure is accessed by third parties. Furthermore, approximately 20 third parties are accessing and/or have accessed infrastructure facilities. Of the 20 third-party companies, one is accessing more than 50% of the total third-party allocation.

SAPIA asserts that NERSA is responsible for ensuring equitable access to petroleum pipelines, loading facilities, and storage facilities and believes that the NERSA system is dynamic enough to identify where capacity might exist for third parties so that they can approach the respective terminal operators on a commercial basis (NERSA, n.d. (a)) SAPIA acknowledge that this system is imperfect as there has not been substantial participation by third parties and there is scant evidence of complaints by potential entrants. SAPIA conclude that obtaining finance for a "user-utilisation-or-pay" agreement is the main impediment.

SAPIA also stated that their members have been willing to facilitate third-party access in exchange for some quid-pro-quo, and cited the 30% set-aside proposal made during the BEE Code negotiations.

## 17.2. MPP pipeline access and road-loading infrastructure at Jameson Park

To access the MPP pipeline, the applicant needs firm contractual arrangements with storage facilities in Durban at the injection point of the pipeline, contractual arrangements with Transnet Pipelines to transport the fuel to the Transnet Pipelines inland terminal at Jameson Park, as well as

firm contractual arrangements to transfer the product from Jameson Park to the Vopak Lesedi terminal which has road-loading facilities.

## 17.3. Financing petroleum product transactions

NERSA reports that third parties sometimes obtained access agreements but could not use facilities because they could not secure funding.

The requirement by SARS for up-front payment of duties on imported fuel products has been cited as an important impediment.

As a proactive measure in 2021, through a NERSA initiative, two financial institutions have set up pilot programmes to fund new trading entrants.

Arising from these efforts, NERSA recorded that in 2021 four third parties have signed agreements with one licensed facility.

## 17.4. NERSA – Third Party access to Petroleum Storage Infrastructure

The National Energy Regulator Act of 2004 makes NERSA responsible for regulating the petroleum pipeline industry in terms of the Petroleum Pipelines Act of 2003. This is effected by the licensing conditions that petroleum storage facility licence-holders are obliged to follow (NERSA, 2022).[15]

NERSA's mandate covers loading facilities, pipelines and storage facilities. It does not cover refinery infrastructure capacity (covered by the DMRE) or capacity at port berth discharging facilities (covered by Transnet Port Operations). NERSA also regulates the tariffs charged by owners and operators of licensed facilities (NERSA, n.d. (b)).

NERSA's support for third-party access to petroleum storage infrastructure takes four forms:

- Monitoring and publishing uncommitted fuel storage capacity owned by all petroleum storage facility licence-holders.
- Monitoring all third-party access applications made to licence-holders of petroleum storage facilities and intervening when requested to by a third party. This is a recent proactive measure applied by NERSA as NERSA did not receive formal complaints by third parties under the previous system. Previously, third parties were not obliged to copy their access applications to NERSA. Since implementing this, NERSA has only received one complaint which was dismissed because the third party had not followed due process. (See below on key impediments to third-party access)
- Approving the capacity allocation processes practised by petroleum storage licence-holders.
- Highlighting important third-party impediments (financing in particular) which are outside the control of NERSA.

### 17.4.1. NERSA – Monitoring and publishing uncommitted fuel storage capacity

NERSA publishes a list of petroleum storage facilities that may have uncommitted capacity. The licensed owners are obliged to make these facilities available for rental by third parties.

[15] Typical licence wording is detailed at: https://www.nersa.org.za/wp-content/uploads/2021/03/COL-AM1-Engen-Petroleum-Operation-Storage-Klerksdorp-2020.pdf

Licensed owners of petroleum storage infrastructure provide NERSA with a forward-looking 12-month schedule of planned utilisation of individual licence-holders' fuel product storage tanks at their respective depots and terminals.

A spreadsheet-based volume reporting template details the planned operational capacity of each tank, monthly product stock volume movements by the owner of the tank, and monthly product stock volume movements of third parties accessing the facility. NERSA uses this data to estimate the unallocated capacity in each tank and publishes a monthly report on all national storage tanks with unallocated capacity and which third party entrants to the fuel industry can use to seek product allocations. A sample of the list of uncommitted diesel storage capacity is shown in Table 15.

**Table 15: NERSA – Uncommitted capacity – Diesel50 and Diesel500 - six monthly report sample**

**Uncommitted Capacity: Diesel50 & Diesel500**

NATIONAL ENERGY REGULATOR OF SOUTH AFRICA

**Published: 04-Feb-22**

**Products and Months for the Uncommitted Capacity**

| No. | Facility Name | Province | 01-Feb-22 | 01-Mar-22 | Contact Details (Please copy NERSA at this email address: pipelines@nersa.org.za) |
|---|---|---|---|---|---|
| 1 | TOTAL EAST LONDON | Eastern Cape | | Diesel50 | Ms Beverly Mohammed, Tel: 011 778 2352, Email: beverly.mohammed@total.co.za |
| 2 | Engen Elliot | Eastern Cape | Diesel50 | Diesel50 | Ms Isolde Hesse, Tel: 021 403 5118, Email: Isolde.Hesse@engenoil.com |
| 3 | Engen Aliwal North | Eastern Cape | Diesel50 | Diesel50 | Ms Isolde Hesse, Tel: 021 403 5118, Email: Isolde.Hesse@engenoil.com |
| 4 | Engen Queenstown | Eastern Cape | Diesel50 | Diesel50 | Ms Isolde Hesse, Tel: 021 403 5118, Email: Isolde.Hesse@engenoil.com |
| 5 | Engen Bethlehem | Free State | Diesel50 | Diesel50 | Ms Isolde Hesse, Tel: 021 403 5118, Email: Isolde.Hesse@engenoil.com |
| 6 | Total Bethlehem | Free State | Diesel50 | Diesel50 | Ms Beverly Mohammed, Tel: 011 778 2352, Email: beverly.mohammed@total.co.za |
| 7 | Engen Frankfort | Free State | Diesel50 | Diesel50 | Ms Isolde Hesse, Tel: 021 403 5118, Email: Isolde.Hesse@engenoil.com |
| 8 | Shell Kroonstad | Free State | Diesel50 | Diesel50 | Ms Nomonde Mekuto, Tel: 011 996 7147, Email: Nomonde.Mekuto@shell.com |
| 9 | Astron Energy & Total Kroonstad | Free State | Diesel50 | Diesel50 | Ms Lulama Skota, Tel: 011 280 2094, Email: Lulama.Skota@astronenergy.co.za |
| 10 | Engen Kroonstad | Free State | Diesel50 | Diesel50 | Ms Isolde Hesse, Tel: 021 403 5118, Email: Isolde.Hesse@engenoil.com |

*Source*: Uncommitted-Capacity-in-2023-24-Published-February-2024.pdf (nersa.org.za)

New entrants use the published information to contact and negotiate access with the respective storage infrastructure operators. NERSA is also empowered to handle complaints by third parties who cannot conclude agreements with licensed storage owners. NERSA recently amended the reporting system and mandated third parties to copy all requests for access to NERSA, thereby adopting a more pro-active approach to supporting new entrants.

In 2020-21, one of the NERSA licensees signed four new entrants to use its petroleum storage facilities (coastal and inland). Other licensees made offers to third-parties to use their inland petroleum storage facilities, but those were not taken up.

NERSA also approves and publishes the capacity allocation process followed by respective licence-holders to accommodate third parties. The NERSA website lists 44 such allocation mechanisms (NERSA, n.d. (c)).[16]

**Table 16: NERSA – Petroleum storage License holder capacity allocation process**

| | |
|---|---|
| | • Burgan Cape Terminals Capacity Allocation Mechanism._22/02/2022 |
| | • Royal Energy Terminal Allocation Mechanism in Klerksdorp._18/02/2022 |
| | • PetroSA Capacity Allocation Mechanism Voorbaai Tank Farm._18/02/2022 |
| | • Strategic Fuel Fund Association (SFF) Capacity Allocation Mechanism Milnerton and Saldanha Bay._18/02/2022 |
| | • P Trimborn Agency Capacity Allocation Mechanism Pietermaritzburg._18/02/2022 |
| | • Econ Oil Capacity Allocation Mechanisms Bethlehem and Ermelo._18/02/2022 |
| | • Royal Energy Terminal Allocation Mechanism in Langlaagte._18/02/2022 |
| | • Avedia Energy Capacity Allocation Mechanism Saldanha Bay._18/02/2022 |
| | • Island View Storage (trading as BTT) Capacity Allocation Mechanism Richards Bay and Isando._18/02/2022 |
| | • Auto Commodities Northern Cape Capacity Allocation Mechanism Kimberley._18/02/2022 |
| | • Automotive Gas Oil Capacity Allocation Mechanism._18/02/2022 |
| | • Astron Energy Capacity Allocation Mechanism_18/02/2022 |
| | • KZN Oils Capacity Allocation Mechanism Ladysmith._18/02/2022 |
| | • Q4 Depot Capacity Allocation Mechanism Delmas_18/02/2022 |
| | • PetroSA Capacity Allocation Mechanism for Bloemfontein and Tzaneen_25/09/2020 |
| | • BF DIstributors Allocation mechanism_25/09/2020 |
| | • BP ATLANTIC Storage capacity Allocation Mechanism_25/09/2020 |
| | • Alrode Depot Allocation Mechanism Nov 2014_25/09/2020 |
| | • Auto Commodities Uncommitted Capacity Mechanism final_25/09/2020 |
| | • Allocation Mechanism_25/09/2020 |
| | • Allocation Mechanism Vermaas Brandstof_25/09/2020 |
| | • Allocation Mechanism Submission ACSA OR Tamb King Shaka CTI airports_25/09/2020 |
| | • Wozani Berg Storage Capacity Allocation Mechanism(1)_25/09/2020 |
| | • Transnet Storage Capacity Allocation Mechanism Tarlton_25/09/2020 |
| | • Vopak Durban Terminal Capacity Storage Allocation Mechanism_25/09/2020 |
| | • Texan Petroleum storage capacity allocation mechanism_25/09/2020 |
| | • Total Storage Capacity Allocation mechanism_25/09/2020 |
| | • Sunrise Energy (Pty) Ltd Petroleum Storage in Saldanha Bay Allocation Mechanism_25/09/2020 |
| | • SHELL SA Capacity Allocation Mechanism 2012 SN F docx_25/09/2020 |
| | • Stormcrow Allocation mechanism_25/09/2020 |
| | • Sasol Oil Storage Capacity Allocation Mechanisms_25/09/2020 |
| | • SAPREF Storage capacity Allocation Mechanism_25/09/2020 |
| | • Natcos Storage Capacity Allocation Mechanism revised_25/09/2020 |
| | • Power Petroleum Distributors Storage Capacity Allocation mechanism_25/09/2020 |
| | • Engen Petroleum Refinery Allocation Mechanism June 2016_25/09/2020 |
| | • Mpumalanga Petrolem CC Storage Capacity Allocation Mechanism_25/09/2020 |
| | • Hammertone Fuels Uncommitted Capacity Allocation Mechanism(1)_25/09/2020 |
| | • Engen Petroleum Storage Capacity AlAllocation Mechanism_25/09/2020 |
| | • BPSA Allocation Mechanism v1 2011_25/09/2020 |
| | • Easigas Storage Capacity Allocation_25/09/2020 |

[16] The full list of allocation mechanisms is available at: https://www.nersa.org.za/petroleum-pipelines-overview/petroleum-pipelines-third-party-access/

| | |
|---|---|
| | • Dream World Investment Capacity Allocation Mechanism_25/09/2020 |
| | • CHEVRON ALLOCATION MECHANISM 2016 _25/09/2020 |
| | • BP Drakensberg Allocation Mechanism_25/09/2020 |
| | • BP North West Storage Capacity Allocation Mechanism_25/09/2020 |

*Source:* NERSA, n.d. Petroleum Pipelines Third Party Access.

## 17.5. Investigation conclusions – Third party access

Third-party access is regulated by NERSA and the Competition Commission (through associated conditions previously attached to designation and exemption).

Third party access is protected by the Competition Act. Recent cases include Burgan access to vessel discharge pipeline owned by Astron (formerly Chevron) in Cape Town.

The NERSA system monitors and publishes storage terminal licence holders' surplus capacity. However, the six-month frequency of publication does not really facilitate third-party access as third parties tend to operate on the margins of existing markets, often on short-term contracts.

We recommend that licence holders submit monthly forecasts of anticipated excess capacity as well as the previous month's actual capacity utilisation and that NERSA collect and publish this information on a monthly rather than a six-monthly basis.

New entrants will not be able to compete with established oil companies until:

- More open-access accumulation capacity is built at Durban.
- More open-access storage capacity is built at Durban.
- Access is provided to logistics storage and road-loading capacity at Jameson Park, Vopak and other inland depots.
- New entrants achieve larger scale operations commensurate with the capital-intensive nature of the fuel industry through joint ventures and/or mergers.
- In the interim, established oil companies could be persuaded to reserve a portion of their logistics capacity for new entrants.

Finally, to achieve the dtic's policy objective of supporting new entrants, TNPA's proposal to separate the leases for berthing facilities from leases for storage terminal at the Island View Precinct should be actively supported.

It is recommended that a condition of designation be that an independent operator of berthing facilities be appointed within a reasonable agreed timeframe. To address competition-related concerns about sharing of information, SAPIA have suggested that this system, or part of it, be transferred to an independent entity and that such a process would require a period of two years to implement. The DMRE, dtic and the Competition Commission should engage with TNPA and SAPIA to accelerate this process.

# 18. LIQUID FUEL EMERGENCY RESPONSE PLAN

SAPIA's application draws attention to two documents which define emergency situations, contrasting them with normal operating conditions, and outline structured procedures for addressing such emergencies (SAPIA, 2021b, para 62). The state of emergency is governed by the Petroleum Product Act 2003.

In the DMRE's 2014 Protocol for the Management of Liquid Fuels Supply Disruptions and Threats, the lines of communication between the DMRE and the oil companies during disruptions are delineated.

DMRE's 2018 Draft Liquid Fuel Emergency Response Plan outlines the processes to be followed if the liquid fuel industry is severely disrupted.

The DMRE's document considers the supply disruptions in two specific geographic market areas, namely the Durban-Inland market envelope and the Western Cape area.

Such disruptions are defined in terms of the number of days required to overcome the disruption/stock shortage:

- Level 1 – refers to various minor general fuel disruptions that can be managed within a short period (less than five days), but have to be communicated to the office of the DDG: Petroleum and Petroleum Products Regulation.
- Level 2 – encompasses fuel disruptions which are less severe and are controlled within 10 days, and the office of DG and Minister have to be notified,
- Level 3 – covers unplanned fuel disruptions which can be managed within 20 days, and need to be communicated to the office of the Minister, Cabinet and Public; and
- Level 4 – includes all significantly severe fuel supply disruptions which can take more than 30 days to control. Such incidents require the office of Minister, the Cabinet, and the public to be informed.

Specific emergency thresholds are defined for individual oil industry infrastructure as follows:

**Refineries**

- An incident which results is a 50% shortage of supply or a complete unscheduled shutdown of Natref crude oil refinery for a period of more than one month. Natref produces approximately 5.6 billion litres of fuel a year and around 488 million litres a month.
- An incident which resulted in a reduction of less than 50% of production or a complete shutdown of Secunda synthetic refinery in the inland for a period of 22 days.
- When Chevron refinery in Western Cape produces less than 75% of its name plate or is on a complete unplanned shutdown for a period of 24 days. Chevron produces approximately 5.6 billion litres a year and around 488 million litres a month).
- When PetroSA refinery in Mossel Bay (Western Cape) is cannot produce 50% of its production or on has a complete, unplanned shutdown for 51 days.
- When SAPREF refinery in Durban cannot produce 75% of its production or has a complete, unplanned shutdown for 18 days.
- If Enref refinery in Durban cannot produce 50% of its production or has a complete, unplanned shutdown for 30 days.

**SBM and SPM**

- When Single Buoy Mooring (SBM) is on a complete unplanned shutdown for a period of 8 days or more.
- if Single Point Mooring (SPM) is on a complete unplanned shutdown for a period of 23 days or more.

**Berths**

- When two or more berths are not functional at the same time (i.e. berth 6, 7, 8, and 9) for four days.

**Pipelines**

- Fuel disruption can occur if one major pipeline (DJP and NMPP) is completely shut down for two weeks.
- Fuel disruption can occur when AVTUR pipeline is completely unable to transport jet fuel for two weeks.
- COP is a dedicated line to transport crude oil from Durban to Natref and or diesel during supply disruption.

**Rail**

- Fuel disruption can occur when NATCOR is on unplanned shutdown for two weeks.

**Depots**

- Waltloo, Alrode, Tarlton and Langlagte – When two of these major depots in the inland are unable to receive products or are on unplanned shutdown.

We understand that these plans and protocols have not as yet been adopted.

## 19. DMRE POLICY AND REGULATORY PROCESSES

**Biofuels implementation and distribution**

- This is coordinated by the DMRE-convened Biofuels Implementation Committee (BIC).
- Inputs required by the DMRE include:
    - Individual oil company transfer pricing models between production, wholesale, and retail divisions.
    - Correlation of biofuel transfer prices with other fuel product prices and geographic price zone location.
    - Biofuel price options and relationship with import parity pricing.
    - How to compensate oil companies for biofuel blending costs.
    - Individual oil company envisaged capital expenditure and plans/locations for depot blending infrastructure.
    - Biofuel specifications.
    - How the biofuel manufacturer's biofuels are allocated to oil companies given that price will be regulated and uptake by the oil companies will be compulsory.

**Cleaner Fuels**

- The policy being developed is based on the DMRE's Discussion Document on the Review of Fuel Specifications and Standards for South Africa.
- The implementation of revised product specifications requires a co-ordinated effort between industry participants and the government to ensure a smooth transition and avoid market disruptions.
- For the cleaner fuels programme to take effect, the SA refinery sector will need to be upgraded through significant investment on a co-ordinated basis. It will not be practical for refineries to be

upgraded in an uncoordinated manner as this will place significant risk on supply security and could materially affect the cost of these upgrades.

- Interactions are required between industry participants and government to reach agreement on a coherent and consistent plan to introduce transition and cleaner fuels. These include:
    - Industry participants discussing the capacity of infrastructure owned by particular companies, and shared infrastructure, as well as joint use of infrastructure owned by third parties (in particular, the MPP and port infrastructure owned by Transnet).
    - Industry participants developing a cost recovery mechanism to propose to government.
- SAPIA proposes that a joint task team be appointed to progress the cleaner fuels policy using a proposed Terms of Reference (attached as Item 8 of the Designation Application).

In discussion, the DMRE advised that its planned policy development timelines were as follows:

- Strategic Stock policy – The DMRE included this in the 2023 Annual Performance Plan and intended to finalise and implement the policy by December 2023.
- Energy security master plan/20-year liquid fuels roadmap – DMRE also planned to finalise these policy documents by December 2023.
- DMRE plan to hold a workshop with the fuel industry in January 2023 to map out the timelines and processes for the following policy issues:
    - Biofuels policy implementation and distribution.
    - Cleaner fuels policy.
    - Commercial stockholding obligations in terms of the BFP compensation formula.

We further recommend that, if designation and exemption is granted to SAPIA, that it be conditional on the institution of a statutory annual fuel industry Security of Supply Report. This could be linked to a recommendation (see Roadmap below) to institute a dedicated fuel sector supply security monitoring capacity by the DMRE, modelled on the USA's Energy Information Agency.

## 20. PETROLEUM INDUSTRY DESIGNATION AND EXEMPTION DURATION – A ROADMAP TO ACHIEVE FUEL PRODUCT SUPPLY SECURITY

Fuel product supply insecurity will not abate unless the root cause impediments detailed in this paper are addressed.

The current petroleum products supply logistics system between Durban and the Inland market area is operated by the oil companies on a minimum working capital basis with minimal buffer commercial stock and no strategic stock holdings.[17] In addition, there are specific physical infrastructure constraints relating to the pipeline network infrastructure; the harbour berthing facilities in Durban; and tankage availability in Island View. Collectively these contribute to operational inefficiency of the petroleum products supply logistics system. Consequently, the slightest disruption at any point in the supply chain results in cascading insecurity across the entire supply chain. In the context of a rational minimum working capital ethos by the oil industry, these constraints are currently "structural" in nature and, unless addressed, will necessitate the oil

[17] It should be noted that the oil companies operate throughout South Africa on a minimum working capital basis with minimal buffer commercial stock and no strategic stock holdings.

industry participants perpetually requesting designation so as to collaborate/collude to patch up "structural" insecurity and enable a semblance of secure supply of petroleum products.

Considering this, the dtic has little option but to continue to extend the designation of the petroleum industry for now.

The Competition Commission and the dtic will be forced to extend the exemption in perpetuity until the constraints/ root causes of supply insecurity identified in our analysis are addressed.

To this end, a roadmap listing projects and programs that need to be completed has been proposed.

It is recommended that the dtic and the Competition Commission attach the roadmap to any decision to designate the industry and to any exemption of activities.

Of all the road map projects, TPL's accumulation tank project at Island View will physically impact on supply insecurity in the short term. The project has commenced and is targeted from commissioning within 24 months. It is proposed that designation be granted for a similar period of time, following which the state of insecurity be reviewed.

In addition, it is recommended that Designation and Exemption be conditional on an agreement between the dtic, the Competition Commission, the DMRE, Transnet Pipelines (TPL), TNPA and the petroleum industry (as represented by SAPIA) to support the following road map work programme of projects and actions aimed at addressing each of the identified constraints/ root causes of petroleum product supply insecurity:

- TPL accumulation tank project at Island View, Durban.
- The construction of facilities to handle the reprocessing/blending away the petrol/diesel and jet fuel interphases from the MPP at Jameson Park.
- Resolving SARS dutiable issues relating to reprocessing/blending away the petrol/diesel and jet fuel interphases at Jameson Park.
- Basic Fuel Price review of industry's commercial stock obligations.
- Creation of a national fuel product logistics monitoring system.
- Strategic stock policy finalisation and implementation.
- Biofuels policy finalisation and implementation.
- Island View berthing and fuel storage leasing issues.
- Resolution of process and timeline of construction of fuel terminal infrastructure at Ngqura to replace the Dom Pedro terminal in Port Elizabeth.
- Achieving an end-state whereby the industry practices are not Designated or Exempted but where exemption is granted for pre-defined emergency conditions as foreseen in the DMRE's Draft Liquid Fuel Emergency Response Plan.

Since the evidence shows that supply insecurity is concentrated in the Durban to Inland Market areas, it is also recommended that the Competition Commission when considering future requests for exemption consider applying such exemptions on a geographical market basis to only those market areas that exhibit insecurity issues.

Table 17: Reducing Fuel Product Supply Insecurity Roadmap – 5 February 2024

| PROJECT/ INITIATIVE | TARGET COMPLETION DATE | IMPACT ON SUPPLY SECURITY | RESPONSIBLE ENTITY |
|---|---|---|---|
| **dtic/ Competition Commission Designation and Exemption** | | | |
| • Designation and exemption to run for 2.5 years, aligned with Transnet Pipelines' TM1 accumulation tank farm construction at Island View, Durban.<br>• Designation to be reviewed after that, taking into account progress made in the other projects/ initiatives listed below. | June 2026 | • Designation will allow industry to collude to try to avert supply insecurity. | dtic/ Competition Commission |
| **National fuel product storage capacity construction** | | | |
| Transnet Pipelines Island view TM1 accumulation tank project (including dedicated jet fuel tank). | December 2025 | • Reduced pipeline scheduling risks.<br>• Increased pipeline operation flexibility<br>• Reduced ORTIA jet fuel insecurity (150ml Jameson Park dedicated jet fuel tank can be used for strategic stock). | TPL |
| Engen/Sapref use of redundant intermediate tankage for fuel product storage/ strategic stock storage | DMRE to advise Competition Commission on target completion date | • Reduced supply insecurity. | DMRE (Strategic Stock Policy) |
| Resolving SARS dutiable issues relating to reprocessing/blending away the petrol/diesel and jet fuel interphases at Jameson Park. | December 2025 | • Reduced supply insecurity arising from optimal operation of the MPP pipeline. | TPL/ SAPIA/ SARS |
| **Commercial stock – BFP obligation** | | | |
| • DMRE to revive and complete the 2018 BFP review. Review suspended in 2023 pending the outcome of a Vulnerability Assessment in March 2024.<br>• Contested issue - SAPIA maintain there is no legal obligation to maintain 25 days of commercial stock but licensed wholesalers are | March 2024 | • Reduced supply insecurity if 25 days of commercial stock is held.<br>• If no commercial stocks are held, then removing this component of the BFP could result in a R1.6 billion benefit to the fiscus or a reduced | DMRE/ National Treasury |

| | | | | |
|---|---|---|---|---|
| | compensated (+-R1.6 billion a year) under the BFP for holding such stocks.<br>• National Treasury to include this in its current review of the BFP. | | fuel price to consumers. | |
| **National fuel product monitoring system** | | | | |
| | • DMRE is in the process of establishing a real-time national fuel product monitoring system, managed by the DMRE – including fuel that is on the water.<br>• DMRE plan to keep existing colour coded system for joint HOS/LPT meetings but have the actual live position at all times visible only to DMRE.<br>• Apart from the NERSA obligation to supply NERSA with excess storage capacity data, DMRE could also request Individual company monthly reports on actual volumes of storage tank available capacity. | DMRE to advise Competition Commission on target completion date | • Provide early warning of impending shortages in the fuel market areas of a) Durban - Inland market, b) Eastern, Western and Northern Cape market. | DMRE (possibly outsourced to CEF) |
| | • SAPIA to compile and publish a six-monthly "State of Fuel Product Security of Supply Report" as a condition of designation and exemption. | Every six months | • Facilitates tracking of progress of projects aimed at reducing supply insecurity. | SAPIA |
| | • NERSA/SAPIA members to change publishing excess storage tank available capacity from the current six months to a monthly schedule, which is linked to TPL's monthly pipeline schedule. | | • Facilitates new entrant access to the industry | NERSA/SAPIA |
| **Policy processes** | | | | |
| | **Strategic Stock policy finalisation**<br>• DMRE is reviving the draft 2012 Strategic Stock Policy and will develop an updated draft policy for consultation.<br>• Such policy will take account of and incorporate the recent actions of the Strategic Fuel Fund in acquiring and constructing coastal tank | DMRE to advise Competition Commission on target completion date | • Strategic fuel product stockholding will substantially increase supply security. | DMRE |

| | | | | |
|---|---|---|---|---|
| | farms and in addressing the substantial crude oil stock holdings in the context of RSA refinery closures. | | | |
| | **Biofuels policy finalisation** | DMRE to advise Competition Commission on target completion date | | DMRE |
| | **Cleaner Fuels policy and regulations finalisation** | July 2027 | | DMRE |
| | **Energy Security Master Plan**<br>• Was the adopted by the Commission and dtic in 2011 as the guiding framework against which designation and exemption needed to be measured and reported.<br>• DMRE propose to complete the ESMP/20-year Roadmap during 2024. | DMRE to advise Competition Commission on target completion date | • It is envisaged that the DMRE ESMP/ 20-year Roadmap will incorporate all of the roadmap projects/initiatives listed here. | DMRE |
| **Relocation of the Dom Pedro fuel product terminal to Nqura Port** | | | | |
| | Resolution of process and timeline of construction of fuel terminal infrastructure at Ngqura to replace the Dom Pedro terminal in Port Elizabeth | | • Reduced supply insecurity in the Eastern Cape geographic market area. | TNPA/SAPIA |
| **Island View berthing and fuel storage leasing** | | | | |
| | TNPA plan to tender long-term leases for Durban Island View berthing and fuel storage terminals | August 2025 | • Long-term leases will facilitate investment in storage capacity which should reduce supply insecurity. | TNPA |
| | **Berthing lease practices**<br>• SAPIA to provide the commission with the detail of its practice of swopping berth access through "shareholder entitlements" over the past two years.<br>• SAPIA to clearly articulate why and how this practice does not foreclose third party access to vessel berths, and therefore lead to third parties being unable to import fuel products into South Africa via | Timeline to be determined following Competition Commission – SAPIA interaction | • Indirect impact – opening up to third parties will increase market participation and competition and increased fuel supply in the market. | SAPIA |

| | | | | |
|---|---|---|---|---|
| | the port of Durban.<br>• Depending on the above, exemption to be conditional on SAPIA committing to opening up the practice of "shareholder entitlements" within say six months to include third parties who might wish to use the berths. | | | |
| **Interim stage – Only designate Durban to Inland market geographic region** | | | | |
| | • Commission to consider geographic segmentation of the fuel product markets and only designate the Durban to Inland market region. | Timeline to depend on DMRE progress in segmenting market insecurity emergency management (HOS/LPT) processes. | • No impact on supply security. Significant impact on integrity of the Competition Act and Competition Policy. | DMRE/ Competition Commission |
| **End-state – Exemption only for pre-defined emergencies** | | | | |
| | DMRE to update and implement the Liquid Fuel Emergency Response Plan (LFERP), which will be the basis for rescinding blanket designation and exemption of the petroleum industry and the basis for the industry to invoke future exemptions (as is done in many other countries). This will resurrect the integrity of the Competition Act. | DMRE to advise Competition Commission on target completion date | • LFERP is intended to be applied once supply security has increased to a level where blanket designation and exemption are not required. Exemption is only invoked when pre-defined emergencies outlined in the LFERP occurs. | DMRE |

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