sapia | South African Petroleum Industry Association

2018 Annual Report

Contents

Foreword by the Minister of Energy **Jeff Radebe, MP**

Honourable Minister of the Department of Energy

The year 2018 marks 100 years since the birth of two of the heroes of our revolution who dedicated their lives in the struggle for freedom and contributed immensely to the birth of a new South African nation. We celebrate the births of Nelson Rolihlahla Mandela and Mama Albertina Nontsikelelo Sisulu who dedicated their lives to the service of their people.

Their legacy lives on in our commitment to ensure a fair society for everyone and is a reminder of the need to eradicate energy poverty by supporting and assisting government so that we can find ways to overcome the triple threat of poverty, inequality and unemployment.

President Ramaphosa has set us all a target to attract $100 billion of investment into our economy. We would like the energy sector to contribute as a minimum to a quarter of this target. This ambitious goal could be reached in the energy sector with several initiatives such as:

- Securing strategic stock through investment in new fuel tanks and in infrastructure required for South Africa to become a major shale gas producer.
- Promoting natural gas (NG) by designing and building infrastructure required to transport natural gas and liquefied natural gas (LNG).
- Driving towards cleaner fuels by improving our refinery assets to meet world class emission standards.

Global growth of gas

Globally, gas is the fastest growing fossil fuel and it is expected to catch up with coal over the next 20 years. It is emerging as the main hydrocarbon component of a more sustainable mix to power the world's economy. Being increasingly accessible due to technological advancements and enhanced market liquidity, gas will see its demand steadily growing across the world.

In South Africa gas is becoming an important part of the energy mix. Southern Africa has huge natural gas reserves in Tanzania, Mozambique and within South Africa, Zimbabwe and Botswana have gas in the form of coalbed methane. Furthermore, South Africa has potential shale gas.

Natural gas, whether imported via regional pipelines or LNG terminals at strategic port locations should be prioritised as it could play an important role in transitioning to a low-carbon economy. This direction will establish a game-changing demand platform for the future exploration and utilisation of South Africa's latent shale-gas resources to the benefit of security of supply for future generations.

Modernising refineries

Refineries are a significant contributor to the economy and the issue of the sustainability of the current refineries is of utmost concern. The refining sector is facing major challenges which include the provision of cleaner fuels, adhering to minimum emission standards and meeting the bunker fuel oil sulphur cap of 2020. Our refineries are not equipped to produce the latest Clean Fuels II specifications required by modern vehicle engines to reduce vehicle emissions and improve efficiency.

The most practical solutions proposed by the NDP to increase supply include a new crude oil to liquid refinery or upgrading of existing refineries. A new crude oil refinery and the upgrade of the current refineries are the more feasible options available as they both create an opportunity for the beneficiation of crude oil produced in the continent amongst others. Whatever option is considered, it must address the two most important issues, namely, energy security and the associated security of supply.

Refinery investment requires long lead times within the context being set by the regulatory regime. To this end, we intend to finalise the regulatory framework to provide policy certainty. In so doing, we will engage with SAPIA and the industry in a constructive and comprehensive way in order to develop a plan that delivers on these objectives in the best interests of South Africa.

Petroleum sector transformation

To effect radical economic transformation which is about taking decisive steps to place the economy on a path that eliminates poverty, creates jobs and substantially reduces inequality in the economy, the Department of Energy (DOE) together with relevant stakeholders in the liquid fuels industry is aligning the petroleum and liquid fuels charter with the Department of Trade and Industry's (DTI) Broad-Based Black Economic Empowerment (B-BBEE) Act and policy frameworks. The objective is to resolve the identified impediments stated in the Public Proclamation gazetted on 13 September 2017.

The draft reviewed scorecards adopt value chain transformation opportunities with quick wins and high impact which lead to a framework of having seven sub-sector scorecards, namely: Retail; Wholesale; Manufacturing; Biofuels; Gas; Access to infrastructure; Public Sector. The draft sector code is currently being discussed robustly by all stakeholders.

Together with industry and respective associations, we are extensively engaged on unlocking impediments and finding solutions to effect radical socio-economic transformation in the petroleum and liquid fuels sector.

Appreciation

The DOE remains committed to a solid public-private partnership as we pursue our energy transition objectives of the future as well as a better life for all. We would like to thank SAPIA for supporting South Africa with its economic transformation agenda. Together, we will optimise our endowment of energy resources as a key catalyst to economic growth.

If energy is seen as central to economic growth it can be the catalyst to build investor confidence and attract investment in the country and on the continent. This however, needs the private sector for creative partnerships where trust forms the core of such a relationship. Together we can build a prosperous country with an economy growing at its full potential.

The DOE will, in the next financial year, prioritise the finalisation of all pending legislative issues to create much needed policy certainty, transformation and promotion of sustained economic development.

In view of the complexity of some of our policy changes and energy sector challenges, I am confident that the Team Energy, together with SAPIA, will be able to rise above these challenges and move our economy towards the achievement of socio-economic development of all our people, as well as the targets set out in the NDP.

In the words of our former president Nelson Mandela, "It always seems impossible until it's done."

Introduction by SAPIA Chairperson **Priscillah Mabelane**

Welcome to the 2018 SAPIA Annual Report. The liquid fuels industry plays a critical role in the economic success of South Africa and as the statistics show in this annual report, oil and gas will remain a major contributor well into the future.

The South African petroleum industry accounts for:

- R405 billion in turnover
- R145 billion in duties and levies
- R4 628 billion in capital expenditure
- R6 billion in annual payroll
- R1 billion in income tax
- 8.5% of national GDP
- 750 000 direct and indirect jobs (4.9% of formal employment)

The industry is a key enabler to the economic growth of the country. As such, it is imperative that appropriate regulatory framework and policies are in place to preserve competitiveness and sustainability. There are a number of issues driven by the market and regulatory action that have the potential to affect the industry. These issues include: the demand for cleaner fuels and the requirements to manufacture these fuels; the impact of the sulphur cap on bunker fuels from 2020; greenhouse gas regulatory management; environmental regulatory control and electricity supply among others. Progress during the year on these issues is outlined in this annual report.

Clean Fuels II

Regarding Clean Fuels II, SAPIA's perspective is that the investment in cleaner fuels at refinery level is crucial to maintain this strategic sector and is aligned to the objectives of the NDP. It serves to contribute to employment creation and job sustainability; to the general fiscus; to maintaining and enhancing the necessary intellectual skills required to run and maintain these facilities which results in a sustainable environment. The investment fits in directly with the objectives of the NDP.

Unfortunately, the regulatory framework required to provide policy certainty on cleaner fuels has still not materialised. However, SAPIA and its members are continuing to explore ways to reduce the approximately R40-billion investment required to meet the clean fuels range of specifications.

Transformation

The process of aligning the Petroleum and Liquid Fuels Charter to the B-BBEE Act is continuing. The Charter Council has been formed and comprises the DOE, industry associations and trade unions. To date, the process of negotiating the sector codes has been completed and the Charter Council is working towards the gazetting of draft codes in 2019. In the absence of Petroleum and Liquid Fuels Sector Codes, entities are continuing to be measured on the generic scorecard of the Broad-Based Black Economic Empowerment Codes of Good Practice which does not fully address the unique characteristics of the industry so we look forward to the gazetting of the revised sector codes.

SAPIA has continued to support industry skills development initiatives and both its programmes had a 60% pass rate in 2018. The SAPIA Advanced Certificate in Management for Oil and Gas (NQF Level 8) is aimed at middle managers making a transition to senior managers who require specialist knowledge in the oil and gas industry while the Women in Leadership Programme develops women in leadership

positions to face complex challenges through the perspective of the petroleum industry. These courses are held at a high standard and benefit the candidates by exposing them to real business challenges that senior managers face within the petroleum industry. The instructors use a blended approach combining classroom based learning, feedback, inter-session work and assignments to create a diverse experience for candidates. In 2019, SAPIA will reconfirm training programmes with identified institutions and finalise training portal requirements with companies.

Health, safety, security and environment

Integrated health, safety, security and environment (HSSE) management across the supply chain is essential towards ensuring that employees go home safely to their families and that any impact to the environment and industry assets is eliminated or minimised.

On the regulatory front, SAPIA has been instrumental in negotiations with key internal and external stakeholders on HSSE legislation for South Africa. These include among others: waste, climate change, carbon tax, air quality, critical infrastructure, ergonomics regulations, National Railway Safety Regulator requirements, road transport and SANS codes.

SAPIA sponsored an IPIECA-led biodiversity capacity building session for the African oil and gas sector. The Association has also re-launched the advanced petrochemical course for firefighting. Efforts are being made to ensure that the course will be SAQA accredited in the future.

Other HSSE areas that were addressed by SAPIA during the year include Operation Phakisa, the development of SAPIA minimum guideline and best practice documents, water sustainability, contaminated land management, security risks and road transport safety.

Climate change

SAPIA, through the SAPIA Advisory Committee on Climate Change and Business Unity South Africa (BUSA), has engaged throughout the year with both the Department of Environment Affairs (DEA) and National Treasury (NT) on the development of legislation and associated regulations to manage GHG emissions emanating from oil industry activities.

Legislation and regulation that has been addressed includes Greenhouse Gas Reporting Regulations and pollution prevention plans, Sectoral Emission Targets, Development of GHG Emission Benchmarks, Climate Change Bill, Development of Low Emissions Development Strategy (LEDS) and Carbon Tax.

Security of supply

One of SAPIA's key objectives is to facilitate the security of supply of petroleum products. Issues relating to security of supply covered in this report include Transnet's multi-product pipeline commissioning and the Durban Johannesburg pipeline (DJP) decommissioning; identifying emerging risks to security of supply of petroleum products; the Competition Commission exemption and the Port Elizabeth jetty maintenance.

Regarding governance matters pertaining to security of supply, the Minister of Economic Development designated the petroleum industry for a six-month period with the latest period granted from 1 September 2018 until 31 March 2019. The Competition Commission granted the petroleum industry an exemption for the same period. SAPIA will apply for a new exemption closer to the time of expiry because it is critical for the functioning of the petroleum industry.

Looking ahead

The industry is confronted with many challenges that need to be addressed by both SAPIA members and government to ensure the sustainability of an industry contributing significantly to the national GDP and employment in the country. This annual report provides more information regarding the challenges, solutions and developments in these key areas.

Thank you to the Board of Governors for their recommendations and commitment over the past year. On behalf of the Board, I would like to welcome our new board members Mr Molapo, Mr Sanchez, Mr Nothnagel and Mr Booley. We bid farewell to outgoing board members Mr Rabbipal, Mr Radebe and Mr Royer and thank them for their contribution to SAPIA. During the year, SAPIA welcomed one new member, increasing our membership to 24 members.

I remain confident that SAPIA will continue delivering value to all its stakeholders by facilitating the introduction of clean fuels and contributing to the broader vision of working together within the petroleum industry to promote inclusive social and economic growth.

Introduction by SAPIA Executive Director **Avhapfani Tshifularo**

It gives me great pleasure to present the SAPIA 2018 Annual Report. This publication aims to provide a comprehensive set of statistics about the liquid fuels industry that can be used by member companies, government, members of the media and the public.

Accurate information is essential to sound decision-making and for economic analysis. We hope that this will be a useful reference point for anybody wanting to know more about our industry.

The 2018 Annual Report provides an overview of SAPIA where we introduce our Board of Governors, staff members, members and member company committees. Our strategy and financials are always communicated to ensure complete transparency. The report focuses on our main focus areas which are transformation, HSSE, climate change, refinery sustainability, security of supply and regulated price elements. The progress made by the industry, the challenges we face and the way forward in each of these areas is detailed in the report.

Lastly, we include detailed statistics on aggregate financial results of member companies; product margins and pricing; crude oil prices and movements; consumption of petroleum products in SA; product imports and exports; refinery capacity; fuel taxation history; health, safety and security indicators; consumption and emissions; and a workforce profile among others.

I would like to thank the Minister of Energy Jeff Radebe, the DOE, our partners in government, our 24 member companies, the Board of Governors and the SAPIA team for their contributions during the year. Together, we will continue to work towards making sure the industry stays competitive, relevant and sustainable as we take cognisance of the world we live in today and the world we want to leave behind for future generations.

SAPIA **overview**

About **SAPIA**

SAPIA represents the collective interests of the South African petroleum industry. The association plays a strategic role in addressing a range of common issues relating to the refining, distribution and marketing of petroleum products, as well as promoting the industry's environmental and socio-economic progress. SAPIA fulfils this role by proactively engaging with key stakeholders, providing research information, expert advice and communicating the industry's views to government, members of the public and media.

Vision

SAPIA aspires to be a respected, reputable and value adding industry association.

Mission

Working together within the petroleum industry to promote inclusive social and economic growth.

Strategic agenda

There are three strategic focus areas, which will enable SAPIA to achieve its vision:

Planning for tomorrow means focusing on industry transformation, working towards a fair regulatory framework for all citizens, facilitating security of supply and promoting environmental leadership within the industry.

Enhancing strategic partnerships involves educating stakeholders about the industry's aims and activities, improving communication, ensuring there is transparency within the industry and that SAPIA is open and honest in all of its dealings.

Providing service excellence entails improving efficiency and effectiveness, implementing the balanced scorecard, proactively identifying opportunities and improving decision-making processes.

There are a number of committees comprising of technical and operational experts from the member companies who are responsible for executing the strategy. SAPIA endeavours to appraise the Minister of Energy and the Director General with status updates on the execution of initiatives on a quarterly basis and the closing phase of each initiative includes meeting the milestones and performing post project activities.

Vision	To be a respected, reputable and value adding industry association
Mission	Working together within the petroleum industry to promote inclusive social and economic growth

Goals		
Understand our stakeholders' needs	Provide expert information and assistance to our stakeholders	Contribute to policy formulation and implementation
Promote transformation, climate change response, refining sustainability and a fair regulatory framework	Facilitate security of supply and environmental leadership	Enhance the reputation of the industry by communicating its contribution to economic and social progress

Perspectives of success

	Government	Petroleum industry		Citizens
Stakeholder	Become a trusted partner			
	Understand our stakeholders' needs	Provide expert information and assistance	Contribute to policy formulation and implementation	Promote effective marketing

Internal process	Facilitate industry transformation	Promote the security of supply of liquid fuels	Develop focused advocacy programs in line with goals
	Promote a fair regulatory framework for all	Health, safety, security and environmental leadership	Improve efficiency and effectiveness
	Promote a sustainable climate change response	Educate and communicate to stakeholders about the industry	Collaborative decision making
	Promote refining sustainability		Identify opportunities
	Plan for tomorrow	**Enhance strategic partnerships**	**Service excellence**

Learning & growth	Live our core values	Build research capabilities	Train and develop our stakeholders	Understand industry activities and drivers
Financial	Resource SAPIA's operational strategies		Manage our budget effectively	

Values	Partnership	Integrity	Transparency	Sustainability	Transformation

Figure 1 *SAPIA's strategy*

Priorities for the year

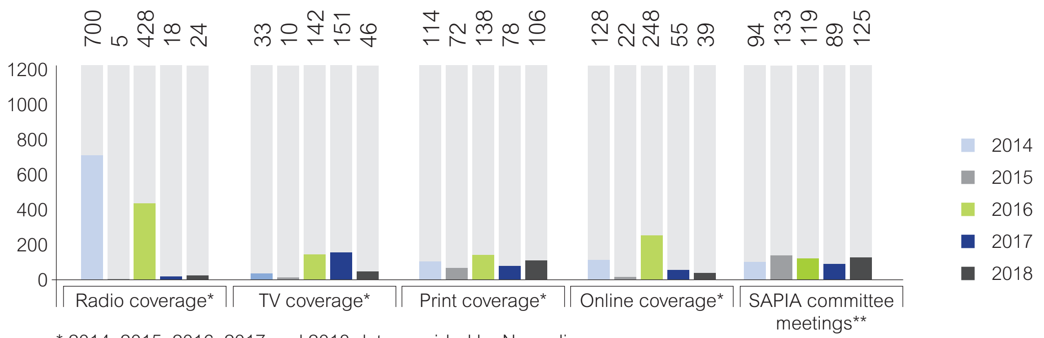
The Board of Governors identified the following focus areas for 2018:

Transformation	Facilitate industry transformation and skills development
Health, safety, security and environment	Promote health, safety, security and environmental leadership within the industry
Climate change	Provide input into the development of climate change policy and regulations including the monitoring, measuring and reporting of GHG emissions
Refinery sustainability	Promote sustainability of the current refining fleet
Security of supply	Promote the security of supply of liquid fuels
Regulated price elements	Contribute to policy formulation, implementation and a fair regulatory framework for all

SAPIA **overview**

Communication activities

One of the most effective ways in which we communicate with a large number of stakeholders about our core priorities is through our media relations. Figure 2 shows the number of communication activities and media coverage received in 2018 in comparison with previous years.



* 2014, 2015, 2016, 2017 and 2018 data provided by Newsclip

** Data provided by SAPIA

***Figure 2** SAPIA's communication activities and media coverage*

Membership

Integrated members	**Non-integrated members**	
	Fuel wholesalers	LPG wholesalers
Astron Energy (Pty) Ltd BP Southern Africa (Pty) Ltd Engen Petroleum Ltd PetroSA Ltd Sasol Oil (Pty) Ltd Shell Downstream South Africa (Pty) Ltd Total South Africa (Pty) Ltd	Afric Oil (Pty) Ltd Elegant Fuel (Pty) Ltd Gulfstream Energy (Pty) Ltd Imbizo Petroleum Traders (Pty) Ltd FFS Refiners (Pty) Ltd Makwande Energy Trading (Pty) Ltd MBT Petroleum (Pty) Ltd Puma Energy (Pty) Ltd Royale Energy Ltd SA Bunkering and Trading (Pty) Ltd	Afrox Ltd Avedia Energy (Pty) Ltd Camel Fuels (Pty) Ltd Easigas (Pty) Ltd Indigas (Pty) Ltd Totalgaz Southern Africa (Pty) Ltd Wasaa Gasses (Pty) Ltd

***Table 1** Total of 24 members on 31 December 2018*

Organisation structure

SAPIA operates under a Board of Governors comprising members from member companies. A new chairperson and vice-chairperson is elected annually. The association has a small and highly skilled staff complement, led by an executive director. SAPIA staff are independent from the member companies.

The 2018 Board of Governors

Priscillah Mabelane, CEO of BP Southern Africa is the Chairperson of SAPIA for the year 2018 - 2019. She is the first woman and 23rd industry leader to chair the association since its establishment in July 1994. She is also the first woman in the history of the country's oil industry to head a multinational company, marking a momentous milestone in the industry's transformation journey.

The Board of Governors consists of eight representatives from member companies. The chairperson and vice-chairperson rotate annually. The Board of Governors convenes at least four times per year and more often should circumstances require it. The primary function of the Board is to identify key issues facing the industry, agree on solutions in respect of each issue and ensure that resources are available to address the matters at hand.

The 2018 Board of Governors

SAPIA Chairperson
Ms Priscillah Mabelane
BP Southern Africa

SAPIA Vice-Chairperson
Mr Shashi Rabbipal
Astron Energy

Mr Kholekile Zono
PetroSA

Mr Walter Sanchez
Easigas

Mr Stephan Nothnagel
Royale Energy

Mr Yusa Hassan
Engen Petroleum

Mr Maurice Radebe
Sasol Oil

Mr Hloniphizwe Mtolo
Shell Downstream South Africa

Mr Pierre-Yves Sachet
Total South Africa

Attendance at board meetings

Attendance at meetings:	16/03/2018	12/06/2018	11/09/2018	07/12/2018
Ms P Mabelane	Y	Y	Y	Y
Mr S Rabbipal	Y	Y	Y	Y
Mr J Molapo	-	-	-	Y
Mr Y Hassan	Y	A	Y	Y
Mr K Zono	N	A	A	A
Mr M Radebe	Y	Y	Y	A
Mr T Booley	-	-	-	Y
Mr H Mtolo	A	Y	A	A
Mr P-Y Sachet	Y	Y	N	Y
Mr F Royer	N	Y	R	R
Mr W Sanchez	-	-	Y	Y
Mr S Nothnagel	-	Y	Y	A

Y Attended meeting
N Apology received
- Not yet appointed
R Resigned from the board
A Alternative attended meeting

***Table 2** Board meeting attendance*

SAPIA staff members

***Figure 3** SAPIA organisational chart*

Board of Governors committees

There are 21 committees which comprise of individuals from member companies and SAPIA staff members. These committees engage on non-competitive issues and are fully aware of competition laws and the risks of anti-competitive behaviour.

The following SAPIA committees exist to address strategic issues facing the industry:

SAPIA committees	Champion	Company
Advisory Committee on Climate Change	Shashi Rabbipal - BOG champion	Astron Energy
Cleaner Fuels Task Team	Maurice Radebe - BOG Champion	Sasol Oil
Communication Committee	Avhapfani Tshifularo	SAPIA
Economic Regulation Committee	Pierre-Yves Sachet - BOG champion	Total SA
Fuels Technical Committee	Kevin Baart	SAPIA
Health, Safety, Security and Environment Committee	Shahkira Khan	Shell
HSSE sub-committees:		
Health, Safety Environment and Engineering Committee	Sinethemba Bolo	Shell
Oil Spill Working Group	Dian Naicker	PetroSA
Road Transport Safety Committee	Amanda Lopez	Shell
Security Committee	Riyaad Adams	Astron Energy
Refinery Managers' Environmental Forum	Adele Borman	Astron Energy
Refinery Managers' Safety Forum	Linda Nene	PetroSA
Refinery Process Safety Meetings	Lucas Schabalala	Astron Energy
South African Petrochemical Fire Chiefs Committee	Michael Clarke	Astron Energy
Human Resource Development Committee	Avhapfani Tshifularo	SAPIA
Legal Committee	Avaphani Tshifularo	SAPIA
Liquefied Petroleum Gas Forum	Walter Sanchez	Easigas
Non-Integrated Members Forum	Stephan Nothnagel	Royale Energy
Refinery Managers' Forum	Victor Bester	Astron Energy
Security of Supply Committee	Yusa' Hassan	Engen Petroleum
Transformation Committee	Kholekile Zono - BOG champion	PetroSA

***Table 3** SAPIA committees*

Financial statement

SAPIA's expenditures are essentially funded by the annual contributions of its members. Personnel costs represent the biggest share of SAPIA's expenditure. Other expenditures cover office accommodation, representation and travel, consultants, lawyers and auditors.

Income (thousand rands)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Membership subscriptions	6 206	6 366	6 366	6 415	7 748	9 754	12 136	11 798	13 345	13 795
Other income (including interest)	1505	138	1426	180	173	508	3 606	424	27	1 688
Total income	**7 711**	**6 504**	**7 792**	**6 595**	**7 921**	**10 262**	**15 742**	**12 222**	**13 372**	**15 483**

Expenditure (thousand rands)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Personnel/payroll	3 113	3 663	4 009	4 259	4 326	5 404	8 262	8 220	8 827	9 193
Other expenditure (including interest)	3 231	2 782	3 321	2 931	2 919	2 919	2 752	5 520	4 064	4 419
Total expenditure	**6 344**	**6 445**	**7 330**	**7 190**	**7 245**	**8 156**	**13 782**	**12 284**	**13 417**	**13 612**

The year **at a glance**

World energy consumption[1]

Primary energy consumption growth averaged 2.2% in 2017, up from 1.2% in 2016 and the fastest since 2013

By fuel, natural gas accounted for the largest increment in energy consumption, followed by renewables and then oil

Energy consumption rose by 3.1% in China

China was the largest growth market for energy for the 17th consecutive year

[1] *BP Statistical Review of World Energy 2018 (June 2018). 67th Edition.*

BP Statistical Review of World Energy 2018 (June 2018). 67th Edition.

Pricing and energy consumption in SA

Price of petrol reached a record-high on 1 October 2018, with 95 grade in Gauteng breaking the R17/l mark

95 ULP petrol prices reached a high of R17.08 and a low of R13.76 in Gauteng

0.05% diesel wholesale prices reached a high of R16.20 and a low of R12.10 in Gauteng

Climate change

GHG reporting regulations and pollution prevention plans require resolution of issues before implementation

Development of sectoral emission targets and carbon budget allocation is underway

Publication of the Draft 2015 GHG Inventory for public comment

GHG emission benchmarks study under review

Climate Change Bill published for public comment in May 2018

Low Emissions Development Strategy has been developed by the Department of Environmental Affairs

Revised draft Carbon Tax Bill published by National Treasury

Refinery sustainability

No progress on regulatory framework to provide policy certainty on cleaner fuels

Industry has been exploring ways to reduce overall investment required to meet new fuel specifications

Sulphur cap on bunker fuels is set to proceed from 1 January 2020

Plans have been put in place to meet the Minimum Emissions Standards

Waste management procedures are changing as a result of new regulations

Electricity interruptions at refineries are causing environmental damage, loss of production and profitability

Integrated Energy Plan released in 2018 shows an increased reliance on renewable energy and gas

Health, safety, security and environment

HSSE legislation and regulatory input provided to stakeholders

Sponsorship of IPIECA-led biodiversity capacity building session

Relaunch of the Advanced Petrochemical Course for Firefighting

National oil spill capability plans underway

Development of SAPIA minimum guideline and best practice documents

Refineries have set internal targets to reduce water consumption

Contaminated land management strategies have been implemented

Development of a long-term road transport safety programme for children

Security of supply

Exemption granted by the Competition Commission expires on 31 March 2019

Transnet Pipeline's multi-product pipeline project (Terminal 2) was commissioned and completed

Durban-Johannesburg pipeline was decommissioned

SAPIA developed multi-pronged strategy to address lease issues at Island View Terminal

Port Elizabeth jetty maintenance was completed successfully

Transformation

Advanced Certificate in Management for Oil and Gas course had a 60% pass rate

Women in Leadership programme had a 60% pass rate

Process of negotiating sector codes has been completed

Charter Council is working towards the gazetting of draft codes

Strategic **focus areas**

Transformation

Strategic priority: Transformation

Our focus: Promote industry transformation and skills development

Focus areas	Key developments during the year
New liquid fuels empowerment framework	The process of negotiating the sector codes has been completed and the Charter Council is working towards the gazetting of draft codes.
Advanced Certificate in Management for Oil and Gas	The SAPIA Advanced Certificate in Management for Oil and Gas Programme had a 60% pass rate[1].
Women in Leadership Programme	The SAPIA Women in Leadership Programme had a 60% pass rate.

[1] It should be noted that the 'pass rate' refers to the percentage of participants who completed and passed all three assignments. Some participants did not submit assignments or opted for repeating a not-yet-competent assignment, bringing down the overall pass rate.

Progress in 2018

New Liquid Fuels Empowerment Framework

The process of aligning the Petroleum and Liquid Fuels Charter to the B-BBEE Act is continuing. The Charter Council has been formed and comprises the DOE, industry associations and trade unions.

To date, the process of negotiating the sector codes has been completed and the Charter Council is working towards the gazetting of draft codes for section 9(5) in 2019. The process will entail a 60-day period for public comments. At the end of that period, comments will be consolidated and the final sector codes will be gazetted. The implementation will be with immediate effect as the DTI does not allow for a transition period. In the absence of Petroleum and Liquid Fuels Sector Codes, entities are continuing to be measured on the generic scorecard of the B-BBEE Codes of Good Practice which does not fully address the unique characteristics of the industry.

Advanced Certificate in Management for Oil and Gas

The SAPIA Advanced Certificate in Management for Oil and Gas (NQF Level 8) is aimed at middle managers making a transition to senior managers who require specialist knowledge in the oil and gas industry. The programme, launched in 2013, is accredited by the Rhodes Business School. There were no male delegates and 30 female delegates in the 2018 programme (although some dropped out after the first or second module). The programme had a 60% pass rate with 18 out of 30 delegates passing the course.

Women in Leadership Programme

The SAPIA Women in Leadership Programme develops women in leadership positions to face complex challenges through the perspective of the petroleum industry. The programme is designed for women in leadership and management positions, enabling them to develop, translate and execute effectively within their environments. The course work focuses on real business challenges that senior managers face within the petroleum industry and uses a blended approach combining classroom based learning, feedback, inter-session work and assignments to create a diverse experience for candidates. The Women in Leadership Programme was approved by the Centre for Higher Education Research, Teaching and Learning of Rhodes University. There were 30 delegates in the 2018 programme with a 60% pass rate.

Future priorities

SAPIA will be focusing on the following areas in 2019:

- Continuing to participate in the process of developing and gazetting sector codes.
- Reconfirming training programmes with identified institutions and finalising training portal requirements with companies.

Health, safety, security and environment

Strategic priority: Health, safety, security and environment
Our focus: Promote health, safety, security and environmental leadership within the industry

Integrated health, safety, security and environment (HSSE) management across the supply chain is essential towards ensuring that employees go home safely to their families and that any impact to the environment and industry assets is eliminated or minimised. HSSE remains the oil and gas sector's number one priority. Industry efforts extend beyond the fence-line. Learning from local and international best practice, learning from incidents, focusing on long-term behavioural change, complying with legislation, empowering employees and contractors in the sector and establishing a sustainable HSSE culture are key priorities for SAPIA members.

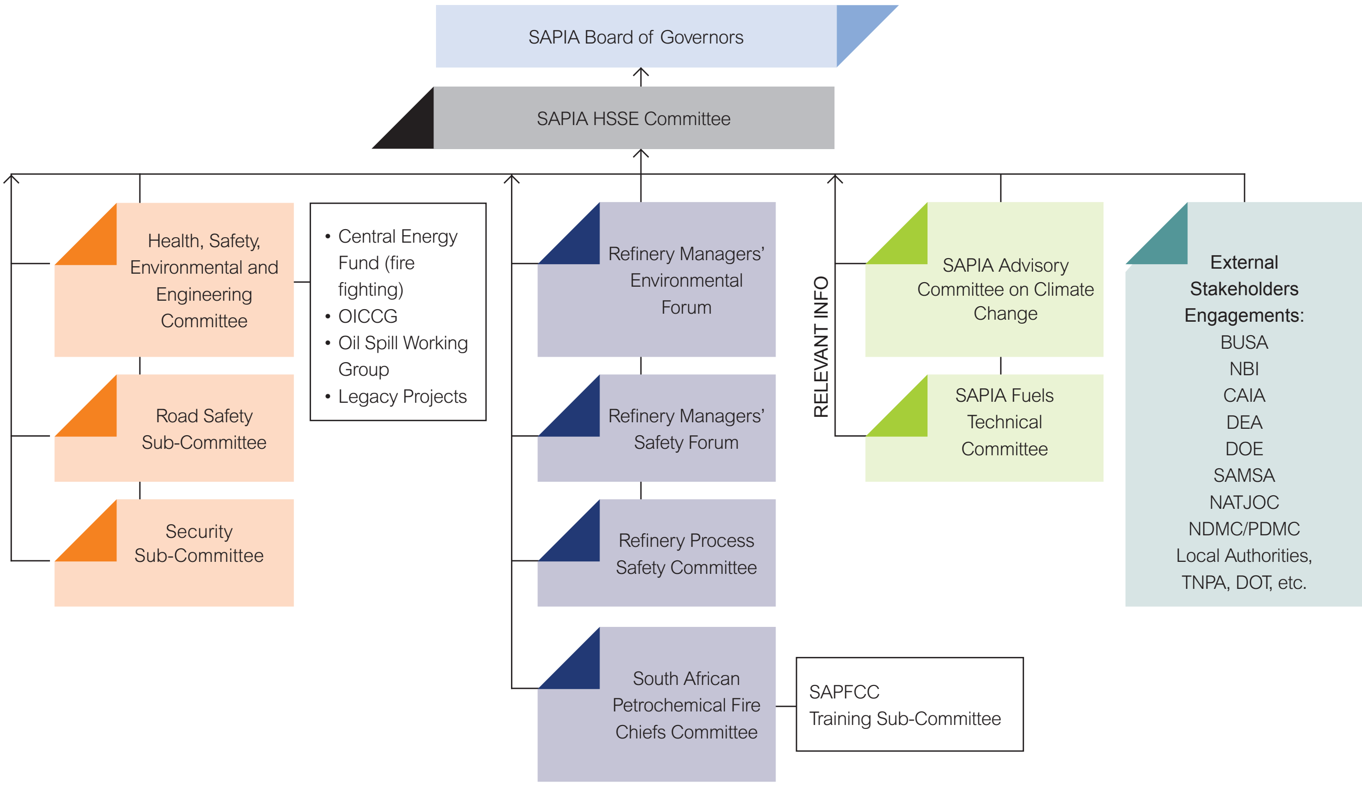


***Figure 4** Risk-based integrated HSSE management across the value chain*

Focus areas	Ongoing challenges
Regulatory input	Significant increase in regulatory burden placed on business and developing non-integrated members. Additional costs associated with compliance including permits, fees, levies and additional staff, among others. Contractor compliance.
Operation Phakisa: Oil spill	The draft OPRC Bill has not been gazetted for public comment. Roles and responsibilities in terms of the new framework require legislative changes which could result in further delays. The NOSCP has been developed and is considered a guideline until the OPRC bill is adopted. This does result in conflicting requirements as the approved national oil spill plan is very old. Training of government officials in all tiers of government remains a challenge. Engagements are also in progress with regard to the customs clearance process during a major incident.
Development of SAPIA minimum guideline and best practice documents	Inexperienced new entrants who require support and guidance based on best practice. Simplification of contractor requirements where possible as HSSE compliance and the coal-face remains a challenge.
Water sustainability	SAPIA members are required to have water sustainability strategies in place to deal with water scarcity in the country across the supply chain. Increased temperatures, reduced rainfall and climate change impacts remain a potential threat.
Contaminated land management	Public disclosure of the contaminated land register in 2018 poses potential reputational risks to the sector. There is an increasing trend of new entrants (non-SAPIA) having to work with SAPIA members on contamination matters. Many of these operators have to be referred to the authorities due to a lack of co-operation.
Security risks	Increased efforts to mitigate risks across the supply chain.
Road transport safety	Third party high-risk behaviour and non-compliance pose a major risk to safe operations on South African roads. This now contributes to the main cause of incidents and fatalities in the sector.

Progress in 2018

Regulatory input

SAPIA has been instrumental in negotiations with key internal and external stakeholders on HSSE legislation for South Africa. These include among others: waste, climate change, carbon tax, air quality, critical infrastructure, ergonomics regulations, National Railway Safety Regulator requirements, road transport and SANS codes.

SAPIA sponsored an IPIECA-led biodiversity capacity building session for the African oil and gas sector. The Association has also relaunched the Advanced Petrochemical Course for Firefighting. Efforts are being made to ensure that the course will be SAQA accredited in the future.

Operation Phakisa: Oil spill

Industry continues to work with the Department of Environment (DEA) and Department of Transport on the development and integration of the recommendations from the Global Initiative for West and Central Africa (GI WACAF) to operationalise the requirements of the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) for upstream and downstream. Operation Phakisa meetings have now transitioned to the interim Incident Management Organisation. The Incident Management Organisation has still not yet been formally launched.

These recommendations have a two to four-year timeline as it requires new legislation to be established. Documentation under review or development includes among others: OPRC Bill, Dispersant Policy, National Oil Spill Contingency Plan (NOSCP), oil spill operator guidelines, incident management systems and training. The legislative expectation will be that facilities have a tier two oil response capability.

Development of SAPIA minimum guideline and best practice documents

The development of minimum guidelines is key to reducing complexity for contractors or suppliers who service multiple members. The best practice documents consolidate key learnings and best practices for specific subjects. A number of these guidelines have been developed such as the joint venture HSSE guidelines, flash fire guidelines and bulk vehicle driver requirement guidelines, among others.

In 2018 additional guidelines included:

- SAPIA supporting training template for confined space entry and working at heights
- SAPIA training provider requirements for confined space entry and working at heights
- SAPIA guideline on inert entry requirements
- SAPIA procedure for contractor medical - streamlined
- SAPIA occupational health clinic basic assessment tool
- SAPIA certificate of fitness template
- SAPIA template - letter for the Occupational Health Clinic

Water sustainability

The water challenges in the Vaal, Western Cape, Eastern Cape and other parts of the country is a key concern for the sector. Water is an integral element for production, fire safety and food safety. The sector must have sustainable water management strategies to address long-term risk. Refineries have set internal targets to reduce water consumption and find alternate methodologies/technologies to minimise water consumption.

Contaminated land management

Industry is working closely with the SAPIA members, DEA and other authorities on historical contaminated land. Part 8 of the Waste Management Act under NEMA provides the framework for how these sites are managed. Port facilities are managed through the Transnet National Port Authorities and the DEA. The decommissioning of the Port Elizabeth Dom Pedro Terminal will be a significant project that could potentially set a precedent for other areas.

Security risks

The industry faces increased security threats due to a number of factors such as fuel price increases, socio-economic conditions, service delivery protests, civil unrest and land grabs, all of which threatens people and assets.

Road transport safety

The second phase of the short-term decal project was implemented in early 2018. SAPIA has embarked on the development of a long-term sustainable road transport safety programme for children. Fruitful engagements have been held with the Department of Basic Education on curriculum design within the life orientation programme. The programme focuses not only on road safety but includes topics such as risk assessment, first aid, fire safety and electrical safety. SAPIA is engaging with the Department of Basic Education and the Department of Transport to formalise its involvement and how it intends to support the departments moving forward.

Future priorities

SAPIA's primary HSSE focus areas remain unchanged as these are broad and all-encompassing across the supply chain. The risk-based decisions are taken at the committee level and endorsed by the strategic HSSE committee and the Board to address various challenges within these focus areas. These focus areas include:

- Reducing HSSE risks in industry operations impacting people, environment, assets and reputation.
- Reducing road transport risks and engaging stakeholders on third party risk management.
- Developing security related industry best practice to proactively assess threats and reduce security risks.
- Making recommendations for improvement in the national oil spill response capability.
- Increasing contractor capability through collaborative industry efforts.

Climate change

Strategic priority: Climate change

Our focus: Provide input into the development of climate change policy and regulations including that pertaining to the monitoring, measuring and reporting of Greenhouse gas (GHG) emissions

Focus areas	Key developments during the year
Greenhouse gas reporting / pollution prevention plans	Number of implementation issues which include electronic registration, interpretation of regulations and submission of plans Publication of the Draft 2015 GHG Inventory for public comment
Climate Change Bill	Publication of Bill for comment – seeks to remove GHG provisions from the NEMA:AQA
Carbon policy and taxation	Publication of revised Carbon Tax Bill for comment in late 2018

Progress in 2018

SAPIA, through the SAPIA Advisory Committee on Climate Change and BUSA, has engaged throughout the year with both the Department of Environment Affairs (DEA) and National Treasury (NT) on the development of legislation and associated regulations to manage GHG emissions emanating from oil industry activities.

Greenhouse Gas Reporting Regulations and pollution prevention plans

The GHG Reporting Regulations were gazetted during April 2017 and the stated purpose is to introduce a single national reporting system for the reporting of GHGs to inform policy formulation, implementation and legislation, to establish and maintain a national GHG inventory and for South Africa to meet its reporting requirements under the United Nations Framework Convention on Climate Change (UNFCCC). The GHG Reporting would also underpin the implementation of carbon tax when it is promulgated as law.

Integral to the regulations are the technical guidelines that guide a reporting entity in determination of emissions from the facilities under their control. The DEA published these guidelines on their website, but numerous issues related to the finalisation of these guidelines remain. Furthermore, reporting of GHG emissions can still only be done manually since the National Atmospheric Emissions Inventory System (NAIES) has not been configured to allow reporting. Both issues can have an impact on the implementation of carbon tax.

BUSA has consistently maintained that there are ongoing issues that need to be addressed before proper implementation of the regulations can take place.

These issues include the configuration of NAIES to facilitate GHG reporting, the position of standby generators and the finalisation of the technical guidelines, among others, which still have not been resolved despite ongoing interactions with the DEA.

The issue of criminal liability for the failure to register, report or submit a pollution plan in terms of the present NEMA:AQA under which these regulations fall has still not been resolved.

Sectoral Emission Targets and budget allocation process

The DEA commissioned a number of studies on the Sectoral Emission Targets (SETs) and carbon budgets during 2017 and several engagements with the selected consultants occurred in 2017 and 2018. The finalisation of regulations and/or working rules related to SETs and carbon budget allocation is now awaited.

Development of GHG Emission Benchmarks

The DEA commissioned a study of the development of GHG Emission benchmarks for the economy. This study was purportedly to establish benchmarks for new entrants in relevant sectors. SAPIA submitted that the establishment of a benchmark based on existing operations would not be wholly appropriate, given the availability of new technology for prospective new entrants. It would be best to assess the anticipated performance of new entrants against best available technology.

Climate Change Bill

The Climate Change Bill was published for comment during May 2018. The Bill seeks to remove the GHG reporting and associated provisions from NEMA:AQA and place them under new legislation. It furthermore seeks to create an integrated climate response programme across all three levels of government – executive, provincial and municipal.

Development of Low Emissions Development Strategy (LEDS)

The DEA is proceeding with the developments of a LEDS which is anticipated to project a path to place the country on a low-carbon trajectory, while at the same time ensuring broader socio-economic development. This strategy essentially builds on other work and policies that the DEA has formulated or commissioned in order to frame its climate change response. These pieces of work include inter alia, the National Climate Change Response Policy, the Nationally Determined Commitments, low emission pathways and so forth.

Carbon Tax

National Treasury (NT) published a revised draft Carbon Tax Bill towards the end of 2018 set to enter into force from 1 June 2019. This Bill seems to have taken into account some concerns raised by industry. The major concern is the increased cost of doing business despite tax being an income tax deductible given that it is an expense in the production of income. A residual issue is the administration of the tax which is envisaged to be via an amended Customs and Excise Act. It is not clear how this will be achieved.

The Carbon Tax Bill provides for certain allowances over and above the basic tax-free allowance which include trade exposure, operational performance, provision of offsets and participation in the budget process of the DEA. While the draft regulations on offsets have been published, regulations related to the other areas in which allowances are provided have not yet been published. It is anticipated that this will be a major focus of NT during 2019.

SAPIA's view remains that in order to properly effect the carbon policy the correct price signals need to be directed at consumers so that they will change behaviour and reduce carbon emissions. To this end, applying a tax to refinery emissions will not change consumer behaviour unless the tax can also be passed through to the end consumer. The current regulated price regime does not allow for this pass through but NT has recognised this and allowed the principle of pass through for price regulated fuels. SAPIA is continuing to engage with NT to formulate a plan for how this will be achieved.

Future priorities

SAPIA will be focusing on the following areas during 2019:

- Development of carbon tax regulations and pass-through tax with NT and the DOE.
- Continued engagement with the DEA on GHG regulations / budgets and with NT on the post 2021/ 2022 regulatory environment.
- Development of Low Emissions Development Strategy with the DEA.
- Development of the Climate Change Bill.
- Assessment of appropriate emission factors for oil refining in South Africa.

Refinery sustainability

Strategic priority: Promote sustainability of the current refining fleet

Our focus: There are a number of issues driven by the market and regulatory action that have the potential to affect the long-term sustainability of the local refining industry. These issues include: the demand for cleaner fuels and the requirements to manufacture these fuels; the impact of the sulphur cap on bunker fuels from 2020; greenhouse gas regulatory management (carbon taxes, carbon budgets); environmental regulatory control (such as minimum emission standards, waste management and water use licences) and electricity supply among others.

Focus area	Key developments during the year
Cleaner Fuels II	There is continued regulatory uncertainty regarding the investment required to meet the new fuel range of specifications.
MARPOL Annex VI	The sulphur cap on bunker fuels is set to proceed from 1 January 2020.
Greenhouse gas regulatory development	Publication of the Carbon Tax Bill and carbon tax pass-through for regulated sectors.
Environment regulatory control	SAPIA members are working towards meeting the minimum emission standards at great expense which would ideally rather be invested for cleaner fuels. Plans are being formulated to reduce water consumption and lighten refineries' water footprint. New regulations forbid disposal of high calorific waste in landfills.
Electricity supply	Unplanned power interruptions at refineries result in unsafe conditions, unavoidable flaring of hydrocarbons, damage to the environment, reduced profitability and loss of production. This has been escalated to the appropriate level to ensure the issue is addressed.
Integrated Energy Plan / Integrated Resource Plan	An updated IRP was published towards the end of 2018. No updated IEP has been released.

Developments in 2018

Cleaner Fuels II

Stabilisation within the DOE with the appointment of a new political head at the beginning of the year provided the anticipation that some progress on cleaner fuels could be made. This anticipation was supported by the Minister's statement, during his May 2018 budget vote speech, that the regulatory framework to provide policy certainty on cleaner fuels will be provided to the petroleum and liquid fuels industry by the end of 2018. However, this did not arise and the industry is facing continued regulatory uncertainty on clean fuels. SAPIA and its members are continuing to explore ways to reduce the overall investment required to meet the fuel range of specifications.

MARPOL Annex VI

The sulphur cap on bunker fuels is set to proceed from 1 January 2020. As the implementation date draws closer, commentators still see the likelihood of the distressed production of high sulphur fuel oil and bunker fuel demand being met from distillate material. It is predicted that this will have ramifications for road transport fuel production with consequent rises in the price of both petrol and diesel. South African refiners are expected to respond through changes in crude slate to produce residual fuels meeting the cap and / or supplying distillate fuels of the requisite quality.

A number of fuel associations worldwide have formed the Marine Fuels Platform with the intent to provide advice for stakeholders, including governments and regulators, to promote a fair and level global playing field for all affected industries.

Greenhouse gas regulatory development

The major developments during the year have been the publication of the Carbon Tax Bill and the acknowledgement of carbon tax pass-through for price regulated sectors.

Environment regulatory control

- **Minimum emission standards**
  The revised National Air Quality framework published in 2017 only allows for one further postponement from 2020 to meet minimum emission standards. If a facility does not elect to do this then provision for the termination of operations needs to be made. SAPIA members are working tirelessly to meet the minimum emission standards (MES) but this involves significant costs which would best be invested at the same time as investment for cleaner fuels. The delay in cleaner fuels implementation means sub-optimal investment plans to meet the MES are being made that is not conducive to maintaining competitive manufacturing facilities in the country.
- **Water use management**
  The Cape Town water crisis has focused refinery efforts on individual requirements to reduce their respective water footprint. Plans are being formulated to reduce consumption in line with overall directives from the Refinery Managers' Environmental Forum.
- **Waste management**
  New regulations now forbid the disposal of high calorific waste in landfills which presents numerous challenges for refiners such as the disposal of waste at considerable expense through other means.

Electricity supply

Refineries are reliant on the sustained supply of electricity to ensure continued operations in a safe and environmentally acceptable way. Both the lack of investment by local authorities in electricity infrastructure and the Eskom crisis has resulted in unplanned power interruptions at one time or another across almost all the refining facilities in the country. These interruptions result in the unavoidable flaring of hydrocarbons to avoid unsafe conditions which is environmentally unacceptable. Significant monetary losses occur as a consequence of this flaring and loss of production. These losses impact the profitability of an installation and affect its long-term sustainability.

The refineries have engaged with local authorities and Eskom on sustained supply but are not wholly assured that their concerns are being properly addressed. Technical expertise has been offered to local authorities to support electricity infrastructure upgrades but there is an apparent reluctance to take advantage of this. The sustained supply of electricity to the refineries is now being elevated to the appropriate level to ensure the issue is addressed.

Integrated Energy Plan / Integrated Resource Plan

An updated IRP was published late in 2018 showing an increased reliance on renewable energy and gas as opposed to nuclear and coal. While the Minister also provided in his budget speech that an updated IEP would be released, this has still not occurred and leads to further uncertainty regarding the government's intent to meet future liquid fuels demand.

Future priorities

SAPIA will be focusing on the following areas in 2019:

- Continued engagement towards obtaining financial compensation for cleaner fuels production.
- Continued interaction with the DoT and the DOE on the implementation of Marpol Annex VI.
- Engagement with the DOE on the IEP when released.
- Collaboration with the DEA and the DOE regarding environmental legislation / regulation through the appropriate SAPIA forum.

Security of supply

Strategic priority: Security of supply

Our focus: Facilitate the security of supply of petroleum products

Focus areas	Key developments during the year
Transnet multi-product pipeline commissioning and Durban Johannesburg pipeline (DJP) decommissioning	Commissioning of the multi-product pipeline i.e. tightlining and operating as a multi-product line. Decommissioning of the DJP in the 1st quarter of 2018.
Identifying emerging risks to security of supply of petroleum products	TNPA reluctance to renew the expired leases at Island View posed a risk to security of supply. SAPIA has developed a multi-pronged strategy to engage TNPA to get the lease issues finalised. This process is ongoing.
Competition Commission exemption	The Competition Commission has granted the industry a six-month exemption which expires on 31 March 2019.
Port Elizabeth jetty maintenance	The jetty maintenance was completed successfully without any environmental or safety incidents.

Progress in 2018

Transnet leases at Island View and other ports

The industry leases property from the Transnet Ports Authority at various locations around the country. Many of these leases have expired and are now being administered on a short-term basis. The TNPA is now placing onerous conditions for their long-term renewal, over and above the requirements found in sector codes, which in many cases cannot be fulfilled.

The hold-up in concluding long-term leases will delay necessary investments in these assets with the potential to compromise both operational and environmental integrity. A resolution to the lease agreements is urgently required for long-term certainty of their use and investment protection. The SAPIA Board of Governors is working with the TNPA in order to resolve this issue.

Multi-product pipeline project

Transnet Pipelines (TPL) multi-product pipeline (MPP) project has been completed, commissioned and is in multi-product service. TPL has differed the construction of Terminal 1 in Durban to a date that will be communicated later on. Transnet has resolved issues by tightlining. This entails bypassing the accumulator tanks of the coastal terminal (TM1) with product injected into the pipeline directly via the TM1 mainline pumps from the feeder lines, giving the project management team more time to fully resolve the tank deformation issues while still allowing the main trunk line to operate at 1080m^3/h as a multi-product line.

The discussions between TPL and SAPIA about the conveyancing agreement are ongoing. The industry has raised issues with aspects of the agreement as published on the TPL website.

Designation of the petroleum industry

The Minister of Economic Development designated the petroleum industry for the purposes of section 10(3) (b) (iv) of the Competition Act,1998, for a six-month period with the latest period granted from 1 September 2018 until 31 March 2019. Consequently, the Competition Commission granted the petroleum industry an exemption for the same period. SAPIA will apply for a new exemption closer to the time of expiry because it is critical for the functioning of the petroleum industry.

Future priorities

SAPIA will be focusing on the following areas in 2019:

- Conduct a risk refresh to identify new emerging risks impacting security of supply and the exemption of the industry by the Competition Commission.
- Assist Transnet National Ports Authority to ensure a smooth relocation of the oil industry from the Port of PE to the Port of Ngqura (Coega).
- Engage Transnet National Ports Authority to finalise the port leases regime and the Island View strategy.
- Work with the DOE on the finalisation and implementation of the strategic stock policy.

Regulated price elements

Strategic priority: Regulated price elements
Our focus: Contribute to policy formulation, implementation and a fair regulatory framework for all

Progress in 2018

Petroleum products price developments

The price of petrol, diesel and illuminating paraffin comprises the basic fuel price (BFP), magisterial district zones (MDZ), regulatory accounting system margins (RAS) for petrol only, government taxes and levies.

The following section will provide more detail on the elements of petroleum prices in which adjustments have been made during 2018.

Regulatory accounting system (RAS)

The DOE conducted and finalised the review elements of RAS in the 2015/2016 period. Following concerns from stakeholders about the outcomes of some of the studies, the Department took a decision not to implement some of these studies.

In addition to components of RAS being reviewed, the Department undertook to finalise the RAS manual which serves as working rules for the computation of the RAS margins calculations. The manual is yet to be implemented. The Department has informed SAPIA that the manual implementation will be put on hold until the finalisation of the Fuel Retailers Association's court case.

The 2018 RAS margins adjustments became effective on Wednesday 5 December 2018 and the secondary storage, secondary distribution, studies and margin adjustments are detailed below.

Secondary storage element

The secondary storage study review was finalised in 2015 and the DOE implemented the outcomes of the study with the December 2018 margins. The total increase of the secondary storage margin was 2.3 c/l from 18.6 c/l to 20.9. The margin adjustment was applied on petrol and diesel.

Secondary distribution element

The secondary distribution element has not been reviewed since RAS was established. The secondary distribution margin was decreased by 1.3 c/l from 15.9 c/l to 14.6 c/l. The margin adjustment was applied on petrol and diesel.

Wholesale margin on petrol

The wholesale margin element has not been reviewed since RAS was established. During December 2018, the margin was increased by 0.8 c/l from 34 c/l to 34.8 c/l.

Retail margin on petrol

The DOE conducted a review of the benchmark service station operating expenditure and capital expenditure. Following concerns from the stakeholders regarding the outcomes of these reviews, the Department took a decision not to implement these studies.

The retail margin of petrol was increased by 10.8 c/l, inclusive of the Motor Industry Bargaining Council (MIBCO) wage agreement, from 187.2 c/l to 198 c/l. Effective from September 2018, the Minister of Energy approved an increase of 4.9 c/l ring fenced for wages of forecourt staff included in the retail margin on all grades of petrol.

Wholesale margin of diesel and illuminating paraffin

The wholesale margin of diesel and illuminating paraffin (IP) was adjusted with CPI in December 2018 and is now at 71.25 c/l.

Government taxes and levies

The Minister of Finance announced in his February 2018 budget speech that the fuel and road accident fund levies on petrol and diesel will be adjusted effective from 1 April 2018.

The fuel levy was increased by 22 c/l for both petrol and diesel and now stands at 337 c/l and 322 c/l respectively. The road accident fund levy was increase by 30 c/l.

The customs and excise levy remained unchanged at 4 c/l and the IP tracer levy remains unchanged at 0.010 c/l.

Magisterial district pricing zones (MDZ)

The magisterial district price zones, also referred to as primary transport costs, are based on the cost of moving fuels from a supply point generally based on the coast to the inland distribution centres by pipeline and road. The tariffs are adjusted annually subject to approval by the Minister of Energy.

The magisterial district zone system is based on standard costs for road transport as supplied by the Road Freight Association (RFA) and actual pipeline rates as set by the National Energy Regulator (NERSA) for Transnet Pipelines.

In 2018, NERSA announced an average increase of 22 percent to Transnet pipeline tariffs compared to the 2018/2019 tariff period, resulting in allowable revenue for Transnet Pipelines of 26 percent.

In 2018 the Durban Johannesburg Pipeline (DJP) was also decommissioned and the multi-product pipeline carried all the fuels except for jet fuel. The decommissioning of DJP led to the adjustment of the supply points and this resulted in changes in the mode of transport for areas in zones 6C, 7C and 8C.

The revised road and pipeline transport tariffs become applicable to petrol, diesel and illuminating paraffin price structures with effect from 1 April each year. On average the MDZ tariff for the 2018/2019 period increased by 14.6 percent.

The review of MDZ has been in progress since 2015. SAPIA still awaits the DOE to form a working group that will assist with the finalisation of the MDZ system.

Basic Fuel Price

The Basic Fuel Price (BFP) underlying concept is that of import parity and the mechanisms employed are chosen to provide realistic, market-related costs of importing a substantial quantity of South Africa's fuels requirements. It is therefore deemed that such supplies are sourced from overseas refining centres capable of meeting South Africa's requirements in terms of both product quality and sustained supply considerations.

These working rules make provision for the prices of all grades of petrol, diesel and illuminating paraffin to be adjusted on the first Wednesday of each month. The amounts of the monthly price adjustments determined by these working rules.

The Minister of Energy, after consultation with SAPIA's Board of Governors, made a decision in September 2018 to deviate from the provisions of the BFP working rules and not adjust the fuel prices. SAPIA disagreed with this decision because it is interfering with regulatory certainty. The price freeze was applied to all products including liquid petroleum gas (LPG). It should be noted that BFP does not apply to LPG. In order to mitigate the losses by refining wholesalers the existing funds in the slate trust fund was used for reimbursement. However, this reimbursement did not apply to other fuel wholesalers (such as Puma Energy) and LPG wholesalers. We continue to engage the DOE with regard to the reimbursement of other wholesalers.

Liquefied petroleum gas (LPG)

SAPIA views LPG as an essential product in the South African market and its safe use should be promoted as a matter of priority in the domestic household sector. A crucial element in this promotion is to ensure the viability of the supply sector which can be under severe strain.

Following the Competition Commission Market Enquiry Report into LPG and the findings/recommendations regarding regulatory and commercial elements of the LPG industry, no progress has been made on the regulatory status of LPG and attempts to engage the DOE were unsuccessful.

SAPIA realised an opportunity to bring the spotlight onto LPG through the President's Jobs and Investment Summit 2018. At the summit, LPG was highlighted as an opportunity relating to diversification of energy mix, creation of employment through sales and distribution, and the development of small industries such as equipment and appliances manufacturers. The challenge remains in dealing with illegal refilling activities which threaten the safety of the product.

SAPIA recognises that the success of LPG will require the support of the DOE.

Maximum refinery gate price (MRGP)

No progress has been made regarding the review of MRGP. SAPIA will continue to raise its concerns with the DOE on the issues surrounding the security of supply of LPG if the challenges surrounding the MRGP are not addressed soon.

Maximum retail price

Maximum retail price (MRP) of LPG supplied to residential customers was implemented in July 2010. In December 2018, the Minister of Energy approved an increase of 64.63 c/kg in the pricing structure of the MRP, effective from 5 December 2018.

In terms of applicable rules and regulations, annual reviews and adjustments should be based on the movement in the drivers of the various elements of the price determination formula. SAPIA is grateful that the Minister has adjusted the elements of MRP applying CPI and PPI. The Association will continue to engage with the DOE towards finding a permanent solution to an annual MRP adjustment.

Legislation

National Ports Authority tariffs

The National Ports Authority (NPA) applied to the National Ports Regulator (NPR) for an average tariff increase of 8.45% for the period from 1 April 2018 to 31 March 2019. The NPR declined the proposed tariff increase and other individual tariff increases after considering the application, only granting an overall increase in average tariffs of 2.5 percent. Cargo dues were increased by 5.4% for the 2018/2019 period.

Levy on the petroleum pipeline industry for 2018/19

In terms of Government Notice No. 919, the Minister of Energy in concurrence with the Minister of Finance has approved a levy of 0.38689 c/l applicable from 1 April 2018 to 31 March 2019. This levy is in respect of the amount of petroleum, measured in litres, delivered by importers, refiners and producers to the inlet flanges of petroleum pipelines and will be paid by the person holding the title to the petroleum immediately after it has entered the inlet flange.

The levy was determined based on the estimated volumes of 17.7 billion litres per annum, the 2018/19 annual performance plan and budget requirements of R68 321 736.

Statistics

Aggregate financial results of SAPIA members

Year ended 31 December	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*	2018*
Operating profit (R/m)	5 193	7 991	11 285	15 053	8 628	10 191	1 448	18 814	19 017	15 003	7 699
Interest paid (R/m)	(2 312)	(973)	(1 868)	(1 175)	(1 295)	(1 386)	(1 393)	(1 336)	(880)	(1 227)	(1 279)
Income tax (R/m)	(1 377)	(190)	(1 609)	(2 745)	(2 240)	(2 970)	15	(3 712)	(3 577)	(3 870)	(1 122)
Net income (R/m)	**1 503**	**6 828**	**7 808**	**11 134**	**5 092**	**5 834**	**69**	**13 766**	**14 560**	**9 906**	**5 298**
Total assets (R/m)	116 460	101 051	100 851	108 988	117 240	96 695	114 458	115 110	125 088	171 123	143 654
Capital expenditure (R/m)	6 070	5 573	5 091	5 855	6 844	4 950	9 659	6 031	6 502	7 666	4 628
Refinery shutdown		939	574	273	380	638	646	666	342	780	891
Other		4 634	4 518	5 582	6 465	4 312	9 014	5 365	6 160	6 886	3 737
After tax return on assets (%)	1	7	8	10	4	6	0	12	12	6	4
Sales volumes (bn litres)	35	29	22	20	29	29	31	34	33	31	31
Net income after tax (c/l)	4	24	36	55	18	20	0	40	44	32	17

Individual company financial data aggregated by Mr C McClelland (independent industry consultant)

*2012 data reported by 17 SAPIA members

*2013 data reported by 18 SAPIA members

*2014 data reported by 15 SAPIA members

*2015 data reported by 12 SAPIA members

*2016 data reported by 9 SAPIA members. PetroSA data is estimated.

*2017 data reported by 12 SAPIA members

*2018 data reported by 9 SAPIA members

Value added statements

	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*	2017*	2018*
Turnover (R/bn)	353	195	217	267	285	329	365	300	321	310	405
Net cost of products and services (R/bn)	279	144	164	187	206	236	280	202	198	186	254
Total value added (R/bn)	**73**	**51**	**53**	**79**	**79**	**92**	**85**	**98**	**123**	**124**	**151**
To pay employees gross salaries, wages and benefits (R/bn)	12	5	5	4	6	6	6	6	6	7	6
To pay the State tax in the form of											
Income tax (R/bn)	1	0.2	1	3	2	3	0.02	4.00	4.00	4.00	1.00
Duties and levies (R/bn)	48	40	43	54	63	66	72	83	94	114	145
To pay providers of capital											
Net finance expense (R/bn)	2	1	2	1	1	1	1	1	1	1	1
Dividends (R/bn)	4	2	(0.1)	4	2	2	1	3	4	0	0
Retained for future growth											
Depreciation (R/bn)	2	4	3	3	3	3	3	5	6	5	4
Retained income / other for the year (R/bn)	4	0.4	(1)	10	2	12	2	(4)	8	(7)	(7)
Total value added (R/bn)	**73**	**51**	**53**	**79**	**79**	**92**	**85**	**98**	**123**	**124**	**150**

Individual company financial data aggregated by Mr C McClelland (independent industry consultant)

*2012 data reported by 17 SAPIA members

*2013 data reported by 18 SAPIA members

*2014 data reported by 15 SAPIA members

*2015 data reported by 12 SAPIA members

*2016 data reported by 9 SAPIA members. PetroSA data is estimated.

*2017 data reported by 12 SAPIA members

*2018 data reported by 9 SAPIA members

Regulatory Accounting System margins (petrol grades)

	*2011	*2012	**2013	2014	2015	2016	2017	2018
Wholesale margin at year end (c/l)	52.50	58.00	31.00	33.50	33.20	35.60	34.00	34.80
Retail margins	91.80	99.20	139.10	151.10	161.66	176.40	187.20	198.00
Secondary distribution margin at year end (c/l)	8.40	10.50	11.70	12.60	13.71	17.30	15.90	14.60
Secondary storage margin at year end (c/l)	12.60	15.00	17.10	17.40	18.52	17.90	18.60	20.90

Notes:

* 2011 & 2012 were transition periods for the Regulatory Accounting System.

** Regulatory Accounting System was fully implemented on 4 December 2013.

Sources of crude oil for SAPIA members: 2008 to 2018

Country of origin											
	2008*	2009*	2010*	2011*	2012*	2013*	2014*	2015*	2016*	2017*	2018*
Angola	3 598	3 817	3 409	1 948	3 356	2 444	2 614	3 348	4 000	3 420	2 352
Côte d'Ivoire	0	0	88	0	0	0	0	0	0	0	90
Ghana	0	0	0	0	259	746	756	0	0	125	1 149
Nigeria	2 517	3 963	3 594	3 755	4 310	4 336	6 658	7 291	6 131	4 083	6 745
Qatar	0	0	0	266	242	0	202	832	682	0	133
Saudi Arabia	6 265	6 968	4 584	4 793	8 437	9 723	8 120	4 895	7 939	8 170	8 780
Togo	0	0	0	0	0	0	0	0	0	297	157
United Arab Emirates	855	553	1 018	598	538	307	924	1 337	673	107	794
Total	**22 090**	**21 067**	**25 040**	**19 254**	**17 834**	**18 940**	**18 658**	**21 279**	**19 233**	**20 666**	**16 770**

*South African Revenue Service

Crude oil price movements: January 2012 to December 2018

Average monthly prices (US$/bbl)

	2012		2013		2014		2015		2016		2017		2018	
	Brent	Dubai	Brent	Dubai	Brent	Dubai	Brent	Dubai	Brent	Dubai	Brent	Dubai	Brent	Dubai
January	110	110	113	108	108	104	48	46	31	27	55	54	69	66
February	120	116	116	111	109	105	58	56	32	29	55	54	65	63
March	125	122	108	106	108	104	56	55	38	35	52	51	66	63
April	120	117	102	102	108	105	59	58	41	39	53	52	72	68
May	110	108	103	100	110	106	64	64	47	44	50	50	77	74
June	95	94	103	100	112	108	62	62	48	46	47	46	74	74
July	103	99	108	104	107	106	57	56	45	43	49	48	74	73
August	113	109	111	107	102	102	47	48	46	44	52	50	73	72
September	113	111	112	108	97	96	48	45	47	43	56	53	79	77
October	112	109	109	107	87	87	49	46	50	49	57	56	81	79
November	109	107	108	106	79	76	44	42	45	44	63	61	65	66
December	109	106	111	108	62	60	38	35	54	52	64	62	56	57
12-month average	**112**	**109**	**109**	**106**	**99**	**97**	**52**	**51**	**44**	**41**	**54**	**53**	**71**	**69**

***Figure 5** Dated Brent and Dubai differential*

Brent crude prices

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Average US$ price	97.0	61.5	97.5	111.3	111.6	108.7	99.0	52.0	43.7	54.3	70.9
*Average rand price/barrel	548.5	520.8	715.6	810.2	918.4	1 050.7	1 074.0	661.9	643.2	723.1	938.9
Average exchange rate	5.66	8.47	7.34	7.28	8.23	9.67	10.85	12.73	14.71	13.32	13.24

* Based on exchange rate as per CEF BFP rates

Consumption of petroleum products in South Africa

	Millions of litres					
Year	**Petrol**	**Diesel**	**Paraffin**	**Jet fuel**	**Fuel oil**	**LPG**
2008	11 069	9 762	532	2 376	555	613
2009*	11 321	9 437	551	2 349	724	554
2010*	11 455	10 170	545	2 308	468	612
2011*	11 963	11 225	581	2 434	477	717
2012*	11 714	11 262	470	2 367	568	656
2013*	11 153	11 890	530	2 223	523	485
2014*	11 344	13 169	558	2 197	487	398
2015*	12 072	14 178	573	2 441	591	588
2016*	10 160	10 846	558	2 121	562	557
2017**	11 174	12 147	648	2 713	523	551
2018**	11 142	12 539	702	2 346	552	504

* Source: Department of Energy website
* Paraffin includes power paraffin and illuminating paraffin
**2018 data sourced on 26 April 2019

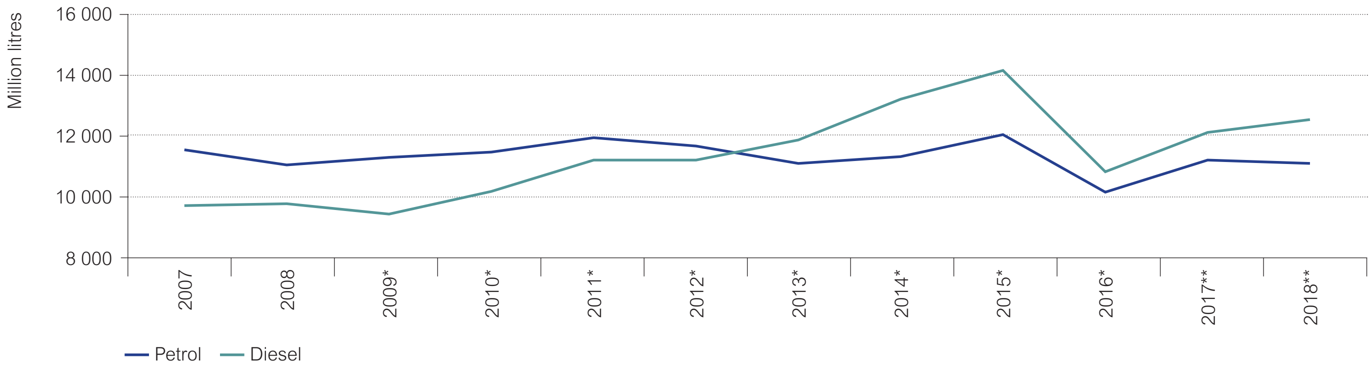


***Figure 6** Petrol and diesel consumption*

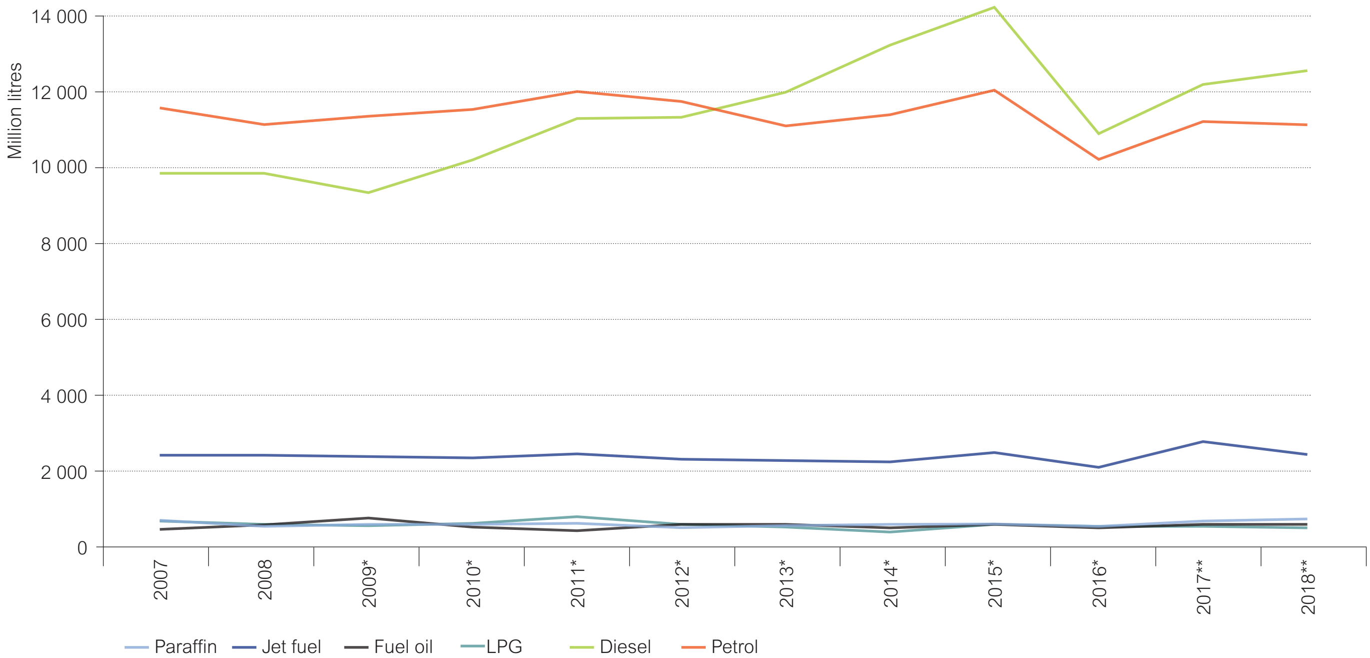


***Figure 7** Petroleum products consumption*

Petroleum products imports and exports

Thousand tonnes

	Imports				Exports			
Year	**Petrol**	**Diesel**	**Jet fuel**	**LPG**	**Petrol**	**Diesel**	**Jet fuel**	**LPG**
2018	1 830	5 286	342	40	1137	1 587	328	57
2017	1 586	5 070	333	70	811	1 498	277	39
2016	1 047	3 716	83	62	868	1 585	266	25
2015	1 402	5 451	217	30	816	1 368	667	18
2014	863	4 197	229	43	750	1 261	92	53
2013	1 113	4 158	183	65	122	399	14	25
2012	1 370	3 247	231	27	202	504	62	37
2011	1 815	3 153	199	47	176	452	126	28
2010	1 571	2 163	213	7.7	329	618	53	36
2009	1 484	1 943	85	13	333	717	40	31
2008	956	2 108	60	4	363	744	83	30

*Source: South African Revenue Service

Capacity of South African refineries

Capacity (bbl/day)

Refineries	2007	2010	2013	2014	2015	2016	2017	2018
Sapref	180 000	180 000	180 000	180 000	180 000	180 000	180 000	180 000
Enref	125 000	120 000	120 000	120 000	120 000	135 000	135 000	135 000
Chevref	100 000	100 000	100 000	100 000	100 000	100 000	100 000	100 000
Natref	108 000	108 000	108 000	108 000	108 000	108 000	108 000	108 000
Sasol*	150 000	150 000	150 000	150 000	150 000	150 000	150 000	150 000
PetroSA*	45 000	45 000	45 000	45 000	45 000	45 000	45 000	45 000
Total	**708 000**	**703 000**	**703 000**	**703 000**	**703 000**	**718 000**	**718 000**	**718 000**

*Crude equivalent

Petrol/diesel consumption ratio

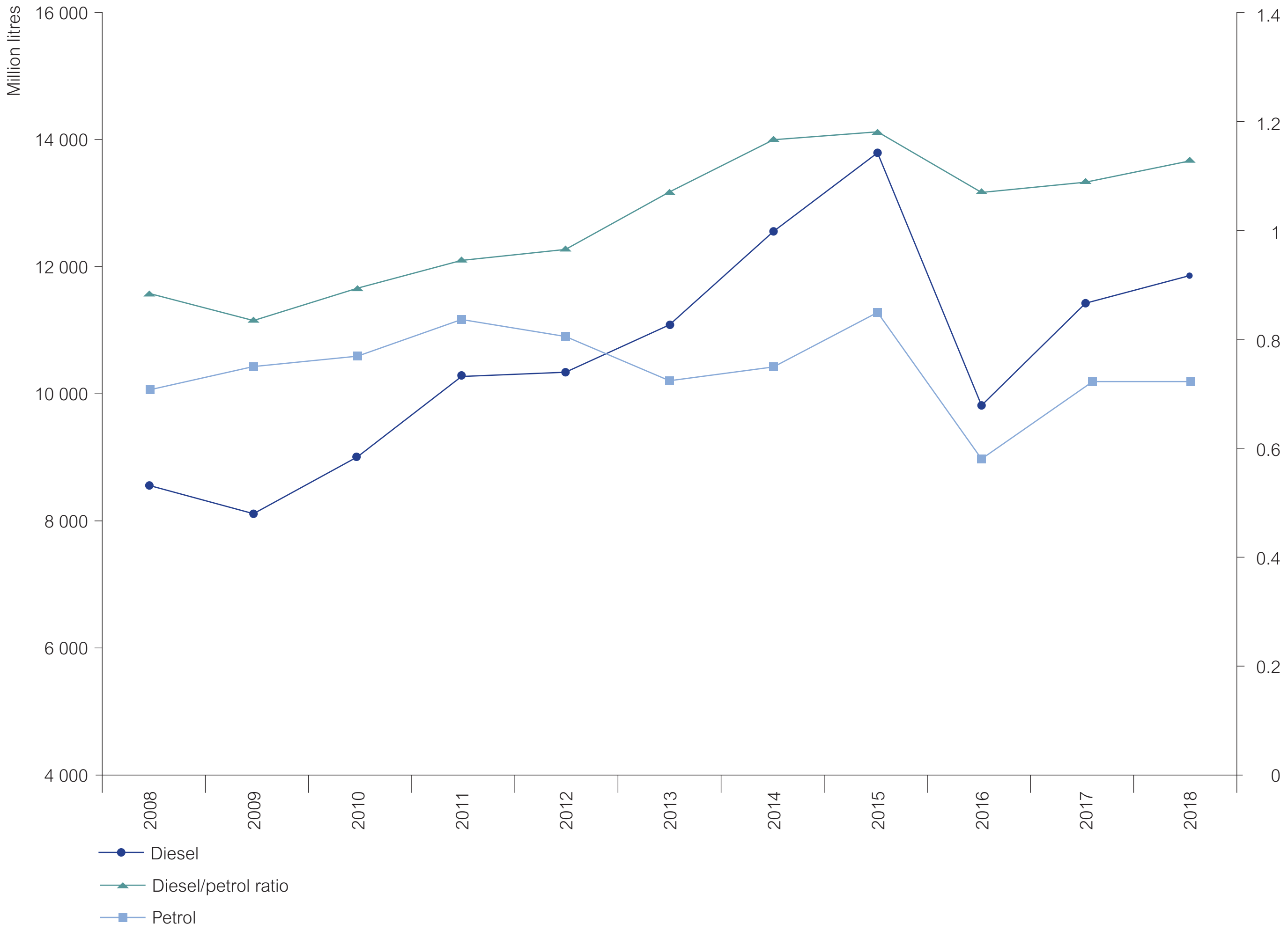


***Figure 8** Petrol and diesel consumption*

The ratio of demand between diesel and petrol in 2018 was 1.13, in comparison to 1.07 in 2017. There was a slight increase in consumption of diesel and petrol consumption remained constant. The diesel demand is mainly driven by the economic growth and is in line with the overall GDP rate of 1.3%.

Prices in Gauteng: 30 June each year

Year	95 octane leaded petrol retail price (c/l)	0.005% sulphur diesel wholesale price (c/l)	Illuminating paraffin single maximum national retail price (c/l)*	Liquefied petroleum gas maximum retail price (c/kg)**
2008	996	1 086	1 186	
2009	780	650	586	
2010	845	784	723	
2011	1 023	933	918	2 068
2012	1 167	1 078	1 048	2 207
2013	1 239	1 141	1 106	2 289
2014	1 402	1 280	1 271	2 501
2015	1 336	1 173	1 006	2 217
2016	1 326	1 111	718	2 185
2017	1 354	1 162	714	2 144
2018	1 579	1 425	927	2 522

* The single maximum national retail price for IP was introduced in 2003

**Maximum retail price of LPG was introduced in July 2010

Source: Department of Energy June price schedule

Petroleum product prices

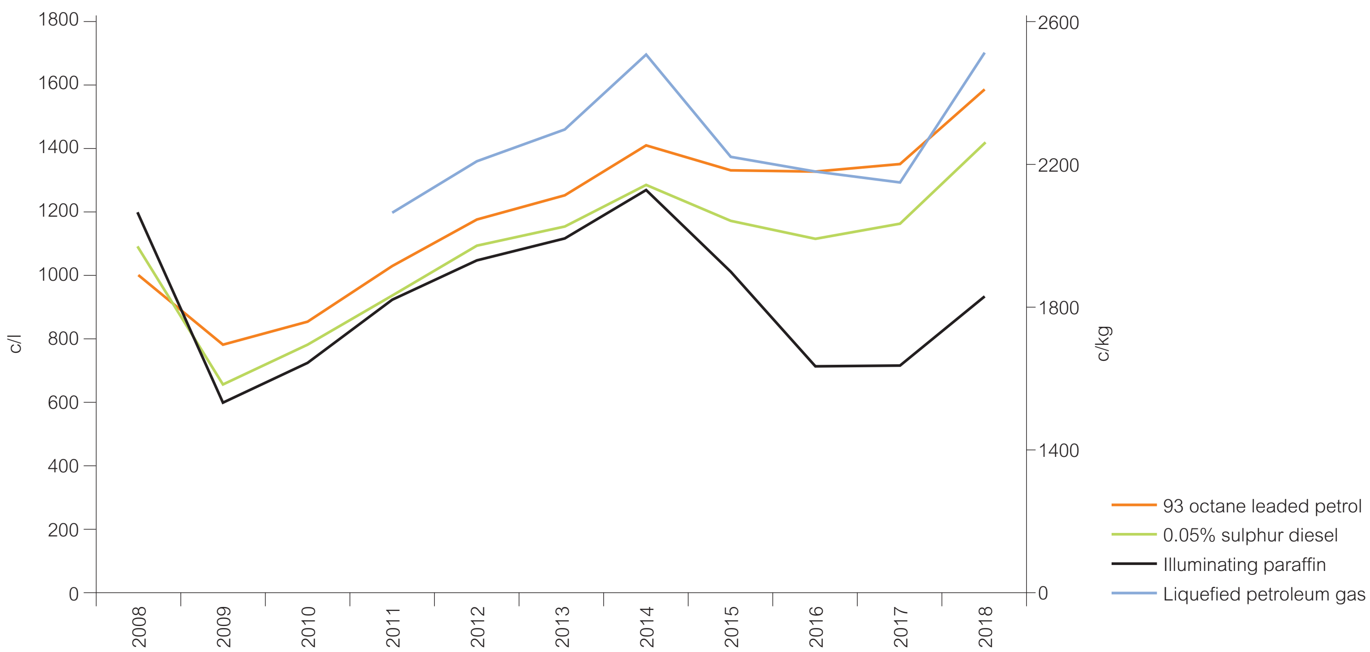
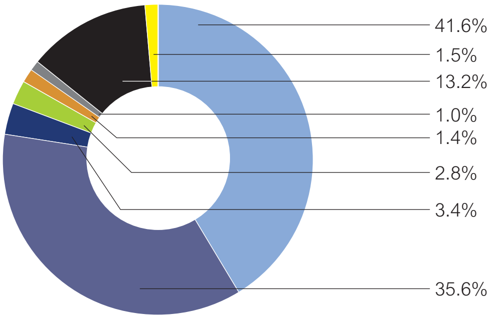


***Figure 9** Prices in Gauteng: 30 June each year*

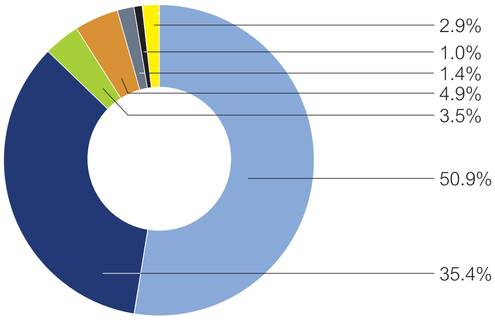
Petrol, diesel & LPG price breakdown



Contribution to the basic fuel price	624.550 c/l
Government duties and levies	534.330 c/l
Zone differential	51.700 c/l
Wholesale margin	34.800 c/l
Secondary storage	20.900 c/l
Secondary distribution	14.600 c/l
Retail margin	198.000 c/l
Pump rounding	0.200 c/l
Slate levy	21.920 c/l

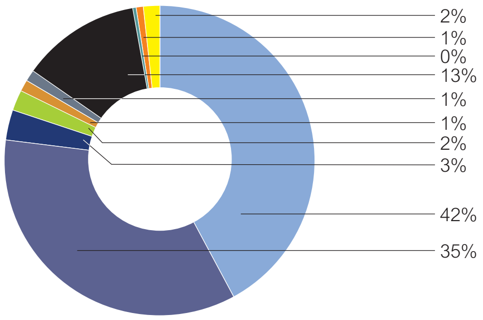
Source: Media release by Department of Energy

***Figure 10** 93 octane petrol: Gauteng retail price 1 501 c/l in December 2018*



Contribution to the basic fuel price	767.630 c/l
Government duties and levies	519.340 c/l
Zone differential	51.700 c/l
Industry margin	71.250 c/l
Secondary storage	20.900 c/l
Secondary distribution	14.600 c/l
Slate levy	21.920 c/l

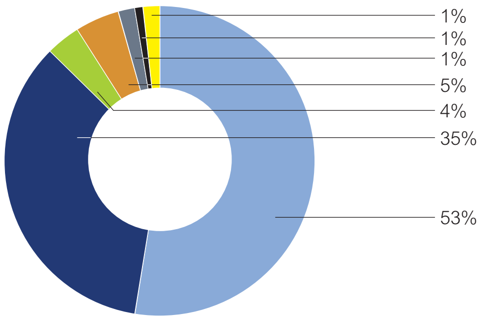
***Figure 11** Diesel (0.05% S): Gauteng wholesale price 1 467,34 c/l in December 2018*



Contribution to the basic fuel price	637.550 c/l
Government duties and levies	534.330 c/l
Zone differential	51.700 c/l
Wholesale margin	34.800 c/l
Secondary storage	20.900 c/l
Secondary distribution	14.600 c/l
Retail margin	198.000 c/l
Pump rounding	0.200 c/l
DSML	10.000 c/l
Slate levy	21.920 c/l

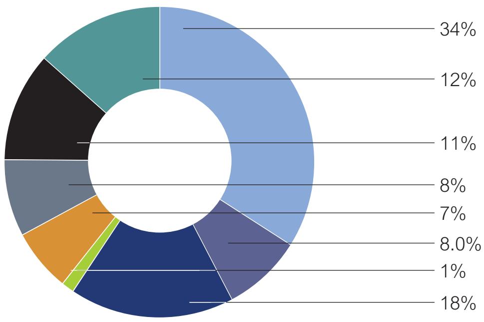
Source: Media release by Department of Energy

***Figure 12** 95 octane petrol: Gauteng retail price 1 524.0 c/l in December 2018*



Contribution to the basic fuel price	773.030 c/l
Government duties and levies	519.340 c/l
Zone differential	51.700 c/l
Industry margin	71.250 c/l
Service differential	20.900 c/l
Service differential	14.600 c/l
Slate levy	21.920 c/l

***Figure 13** Diesel (0.005% S): Gauteng wholesale price 1472,74 c/l in December 2018*



Maximum refinery gate price	831.77 c/kg
Primary transport costs	204.419 c/kg
Operating expenses	426.411 c/kg
Working capital	32.322 c/kg
Depreciation	157.356 c/kg
Gross margin: cylinder-filling plant	201.066 c/kg
Retail margin (15%)	278.002 c/kg
Value Added Tax (14%)	319.702 c/kg

Source: Media release by Department of Energy

***Figure 14** LPG: Gauteng max retail price 2 451 c/kg in December 2018*

Fuels taxation history - South Africa (rates at 31 December each year)

Petrol

Year	Customs & Excise Duty	Fuel Levy	Road Accident Fund Levy	Petroleum Products Levy	Demand Side Management Levy*	Total Imposts	Incremental Inland Transport Recovery Levy	Total Imposts
2008	4.0	127.0	46.5	0.15	10.0	189.2	0	166.5
2009	4.0	150.0	64.0	0.15	10.0	231.15	0	176.7
2010	4.0	167.5	72.0	0.15	10.0	256.65	1.5	189.2
2011	4.0	177.5	80.0	0.15	10.0	274.65	3.0	231.15
2012	4.0	197.5	88.0	0.15	10.0	302.65	3.0	256.65
2013	4.0	212.5	96.0	0.15	10.0	325.65	3.0	274.65
2014	4.0	224.5	104.0	0.15	10.0	342.65	3.0	302.65
2015	4.0	255.0	154.0	0.15	10.0	423.15	3.0	325.65
2016	4.0	285.0	154.0	0.33	10.0	453.33	0	342.65
2017	4.0	315.0	163.0	0.33	10.0	492.33	0	423.15
2018	4.0	337.0	193.0	0.33	10.0	544,33	0	453.33

* DSML only on 95 ULP in zones 07A, 07C, 08A, 08C, 09A, 10A, 09C, 10C, 11A, 11C, 12C, 13A, 13C, 14C, 15C, 15A, 16C, 17A, 17C and 19A
Gauteng retail price (95 octane) c/l in December 2018: 1 524
Taxes and levies as a % of this retail price: 35.72%

Diesel									Illuminating paraffin	
Year	Customs & Excise Duty	Fuel Levy	Road Accident Fund Levy	Equalisation Fund Levy	Petroleum Products Levy	IP Tracer Dye Levy	Incremental Inland Transport Recovery Levy	Total Imposts	Equalisation Fund Levy	GST VAT%
2008	4.0	127.0	46.5	0.15	0	179.2	0	150.7	0	0%
2009	4.0	135.0	64.0	0.15	0	206.2	1.5	179.2	0	0%
2010	4.0	152.5	72.0	0.15	0	231.7	3.0	206.2	0	0%
2011	4.0	162.5	80.0	0.15	0	249.7	3.0	231.7	0	0%
2012	4.0	182.5	88.0	0.15	0	277.7	3.0	249.7	0	0%
2013	4.0	197.5	96.0	0.15	0	300.7	3.0	277.7	0	0%
2014	4.0	209.5	104.0	0.15	0	317.7	3.0	300.7	0	0%
2015	4.0	240.0	154.0	0.15	0	398.2	0	317.7	0	0%
2016	4.0	270.0	154.0	0.33	0	428.3	0	398.2	0	0%
2017	4.0	300.0	163.0	0.33	0	467.3	0	428.3	0	0%
2018	4.0	322.0	193.0	0.33	0	519.3	0	467.3	0	0%

Gauteng wholesale price (0.005% S) c/l in December 2018: 1467.34
Taxes and levies as a % of the wholesale price: 27.13%

The total annual amounts of fuel taxes collected on petrol, diesel and paraffin (calculated on 2018 volumes at June 2018 rates)

	Petrol	Diesel
Sales volumes (million litres)	11 142	12 539
95 unleaded petrol in the DSML area (million litres)*	3 737	
Customs and excise duty (c/l)	4.00	4.00
Fuel levy (c/l)	337.00	322.00
Road accident fund levy (c/l)	193.00	193.00
Equalisation fund levy (c/l)	0.00	0.00
Value Added Tax (VAT)	0.00	0.00
Demand side management levy (DSML) (c/l)	10.00	0.00
IP marker levy (c/l)	0.00	0.01
Petroleum products levy (c/l)	0.33	0.33

	Million rands		Total
Customs/excise duty	446	502	947
Fuel levy	37 547	40 375	77 922
Road accident fund levy	21 503	24 200	45 703
Equalisation fund levy	0	0	0
Value Added Tax (VAT)	0	0	0
Demand side management levy (DSML)**	374	0	374
IP marker levy	0	1	1
Petroleum products levy***	37	41	78
Total	**59 907**	**65 119**	**125 025**

* Based on SAPIA estimate

**Only applicable to 95 octane unleaded petrol sold in the inland zones

***The levy is used to cover the cost of the National Energy Regulator for regulating the petroleum pipelines industry

Workforce profile

The table below reflects the combined workforce profile for direct employees of SAPIA member companies and its refineries as reported to the Department of Labour in October 2018. It should be noted that the petroleum industry supports direct and indirect employment for over 100 000 people.

Occupational levels	Male				Female				Foreign nationals		Total
	A	C	I	W	A	C	I	W	Male	Female	
Top management	13	9	8	20	14	4	6	5	13	0	92
Senior management	123	53	60	96	77	25	27	40	20	4	525
Professionally qualified and experienced specialists and mid-management	573	308	261	335	491	196	137	155	35	12	2 503
Skilled technical and academically qualified workers, junior management, supervisors, foreman and superintendents	904	532	178	307	678	269	90	166	4	4	3 132
Semi-skilled and discretionary decision making	1 275	242	74	50	403	80	26	30	2	3	2 185
Unskilled and defined decision making	168	3	2	1	153	5	0	0	3	1	336
TOTAL PERMANENT	**3 044**	**1 147**	**583**	**801**	**1 807**	**578**	**286**	**396**	**76**	**24**	**8 742**
Temporary employees	140	85	22	56	154	49	18	9	3	0	536
***GRAND TOTAL**	**3 184**	**1 232**	**605**	**857**	**1 961**	**627**	**304**	**405**	**79**	**24**	**9 278**

* The grand total includes people with disability

Note: A = Africans, C = Coloureds, I = Indians and W = Whites

Health, safety and environment performance indicators covering distribution activities outside the refinery gate

Performance indicators	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
(Not including refineries)										
Safety: staff and contractors										
Fatalities	7	27	8	10	9	14	10	3	5	0
Lost time injuries	64	51	44	43	26	25	16	23	27	33
Hours worked (million)	28.7	24.6	26.6	30.0	28.9	31	34.9	65.4	71.5	70.1
Total recordable rate (TRR), fatalities, lost time injuries and medical treatment cases per 200 000 hours worked.	**0.8**	**0.4**	**0.5**	**0.4**	**0.4**	**0.6**	**0.2**	**0.3**	**0.4**	**0.3**
Environment:										
Fires	16	33	16	13	29	21	32	31	31	18
Health:										
Occupational illnesses	1	2	1	2	1	1	1	1	1	3
Security:										
Hijackings	26	17	5	6	9	9	9	0	6	2
Cash-in-transit robberies	67	31	18	27	11	17	24	26	54	26
Retail robberies	611	430	156	222	214	274	410	381	787	431

Crude refineries resource consumption and waste/emissions

		2011	2012	2013	2014	2015	2016	2017	2018
Water usage: litres	**Total**	**11 757 598**	**11 234 343**	**11 181 656**	**10 644 383**	**8 588 691**	**7 774 810**	**6 490 410**	**7 467 484**
	Municipal	6 702 822	6 507 540	6 651 098	6 284 621	5 944 116	6 544 507	6 490 410	6 895 681
Electricity consumption: Gwh		1 207	850	863	932	895	950	1 176	967
SO_2 emissions: tons		19 440	21 210	21 677	22 054	21 206	20 166	17 308	16 385
PM emissions: tons		728	891	983	962	1 517	866	945	1 108
CO_2 emissions: tons		2 734 124	3 164 964	3 144 239	3 447 894	2 653 748	3 643 580	3 445 407	3 509 640
Waste: tons	**Total:**	**16 619**	**16 952**	**39 177**	**24 190**	**37 130**	**40 345**	**42 785**	**49 017**
	Hazardous:	12 692	11 487	26 170	18 606	27 317	32 239	36 105	41 492
	Non-hazardous:	3 927	5 465	13 007	5 583	9 813	8 106	6 680	7 525

Crude and coal/gas to liquids refineries health & safety indicators

Indicator	2012	2013	2014	2015	2016	2017	2018
Fatalities	0	1	0	3	1	2	0
Lost time injuries (LTI)	38	15	28	29	47	44	55
Exposure hours	19 241 699	23 530 093	61 993 158	54 175 090	53 412 875	49 819 482	52 602 045
Occupational illnesses	1	16	23	45	25	6	36
Total recordable rate (fatalities, LTI and medical treatment cases per 200k hours worked)	**0.8**	**1.87**	**0.27**	**1.52**	**0.99**	**1.5**	**1.29**

Member contact information

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Astron Energy
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Avedia Energy
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BP Southern Africa
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Easigas
Telephone: 011 389 7700
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Elegant Fuel
Telephone: 015 516 1834
Address: 60A Corner Rissik and Kleinhans Street, Louis Trichardt, Makhado
www.elegant-group.co.za

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Telephone: 021 403 4911
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FFS Refiners
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Gulfstream Energy
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Imbizo Petroleum Traders
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MBT Petroleum
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Petregaz
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PetroSA
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www.petrosa.co.za

Puma Energy
Telephone: 011 343 6970
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Royale Energy
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SA Bunkering and Trading
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Sasol Oil
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Totalgaz Southern Africa
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www.totalgaz.co.za

Wasaa Gasses
Telephone: 011 708 0538
Address: 417-418 Hilston Street, Kya Sands, Johannesburg
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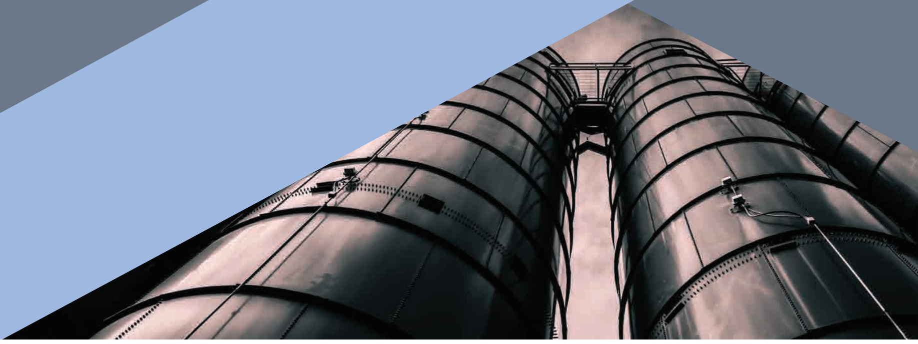
Abbreviations



ACSA	Airports Company of South Africa
B-BBEE	Broad-based black economic empowerment
Bbl/day	Barrels per day
BEE	Black economic empowerment
BUSA	Business Unity South Africa
CHIETA	Chemical Industry Education and Training Authority
CO2e	Carbon dioxide equivalent
CSI	Corporate social investment
DOE	Department of Energy
HDSAs	Historically disadvantaged South Africans
HRD	Human resource development
IEA	International Energy Agency
IeC	Integrated Energy Centre
IK	Illuminating kerosene
INDC	Intended nationally determined contribution
IP	Illuminating paraffin
Kb/day	Thousand barrels per day
LFC	Liquid Fuels Charter
LOE	Leadership in Oil and Energy Certificate Programme
LPG	Liquefied petroleum gas
MMT	Methylcyclopentadienyl manganese tricarbonyl
MIBCO	Motor Industry Bargaining Council
MDZ	Magisterial district zones
MPP	Multi-product pipeline
MTT	Ministerial task team
NEMA	National Environmental Management Act
NEMA: AQA	National Environmental Management: Air Quality Act
NERSA	National Energy Regulator of South Africa
NICOLA	Network for Industrially Contaminated Land in Africa
NOSCP	National Oil Spill Contingency Plan
NPA	National Ports Authority
NPR	National Ports Regulator
NPEA	National Petroleum Employers Association
NSDS	National Skills Development Strategy
NSDS III	National Skills Development Strategy III
OPEC	Organisation of the Petroleum Exporting Countries
OPRC	Oil Pollution Preparedness, Response and Co-operation
PPA	Petroleum Products Amendment Act
PPC	Parliamentary Portfolio Committee
PPP	Public-private partnership
RAF	Road Accident Fund
RAS	Regulatory accounting system
RON	Research octane number
SAMSA	South African Maritime Safety Authority
SAPIA	South African Petroleum Industry Association
SBM	Single buoy mooring
SETA	Sector Education and Training Authority
SETs	Sectoral emission targets
SSP	Sector Skills Plan
TFR	Transnet Freight Rail
TOR	Terms of reference
TPL	Transnet Pipelines
WACC	Weighted average cost of capital

Production

NOVA COMMUNICATIONS

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