sapia | South African Petroleum Industry Association

2016 Annual Report

Contents

Foreword by the Minister of Energy Mmamoloko Kubayi

South Africa is a country with abundant and diverse energy resources. Liquid fuels and gas play a central role in the socio-economic development of our country. Economic growth through re-industrialisation, skills development and the creation of employment opportunities for our communities can all be better enabled by the energy sector. Pursuing our chosen path towards a diversified energy mix in our country is vital for sustainable economic growth and development.

In 2016, our focus remained on pursuing our chosen path towards a diversified energy mix in our country. This is vital for sustainable economic growth and development as outlined in the 9 Point Plan and more importantly the National Development Plan. Our energy policy also balances the use of natural energy resources with environmental considerations. The Paris Agreement reached at the COP 21 Climate Change Conference in December 2015 signifies a critical milestone for the world in charting a pathway to a low carbon energy system to mitigate against the impacts of climate change. While we are focusing on a diversified energy mix, the demand for petroleum products will remain strong and we need to be ready to meet increasing demand in the long term by retaining and growing our refining capacity rather than relying on imports.

We welcome SAPIA's study titled *'The Petroleum Industry's Contribution to South Africa'* compiled by KPMG. The study, released in 2016 (conducted in 2015 and based on figures from the previous year), shows that refining activities contributed R213 billion to the economy while refining activities also sustained jobs at more than 450 000. As a whole, the petroleum industry's operations sustained more than 700 000 jobs in South Africa during the year, representing close to 5% of the total formal employment in South Africa. The total additional GDP that was potentially created due to the revenue generated by the petroleum industry was in the order of R300 billion. The total GDP impact represented 8.1% of South African GDP. This shows the significance of the petroleum industry's contribution to our socio-economic development as well as the importance of sustaining and growing employment in the sector.

As Minister of Energy it is my responsibility to ensure that South Africa has sufficient, diverse and secure energy available to its citizens and the economy of the country – not only now, but also in the future. Our road map for the future, the Integrated Energy Plan (IEP), is the national umbrella plan which will guide policy development in South Africa, set the framework for regulations, and inform the selection of technologies to meet future energy demand up to 2050.

On 2 November 2016, Cabinet approved the publication of the IEP and the IRP for public comment and engagement. The public consultation process provided a platform for stakeholders to raise their view on the contents of the documents and the country's energy mix up to 2050. Public consultation sessions took place during December 2016 and the public have until the end of March 2017 to submit their comments. Final decisions will only be made by the government once the consultation process has been concluded.

We continue to monitor compliance to the Liquid Fuels Charter (LFC) commitment which requires that historically disadvantaged South Africans own, in total, 25% of the aggregate value of the economic interest of the entity that holds the operating assets in the South African oil industry. In the past year, the Department has conducted energy awareness campaigns, Business Opportunities in the Energy Sector Workshops for Women and the development of Integrated Energy Centres (IeC) together with various partners.

The process to develop and align the LFC to Broad-Based Black Economic Empowerment (B-BBEE) Generic Codes of Good Practice started towards the end of 2016 and the Petroleum and Liquid Fuels Sector Code Alignment Steering Committee has been established to provide strategic direction in the alignment process.

In November 2016, we launched the Ngwaabe IeC in partnership with an oil company at Feta-Kgomo Greater Tubatse Municipality. The Centre is a community project aimed at enhancing access to energy in rural areas and is a one-stop energy shop owned and operated by a community co-operative project. It provides energy solutions to communities, access to affordable, safe and sustainable energy services. The Department's partnership with the oil companies in respect of the programme has delivered a total of nine Integrated Energy Centres over the years.

The Department is aware that the pricing structure of the maximum retail Liquefied Petroleum Gas (LPG) price remains a challenge as the highest cost fuel alternative to the consumer. We are working on rectifying this aspect of the LPG market in consultation with relevant stakeholders. NERSA granted licences for the construction of four major terminal facilities, which will relieve constraints on supply infrastructure in South Africa. Two of these projects are to be commissioned in 2017. Upon completion, these projects will improve the security of the supply of LPG.

I wish to congratulate SAPIA on the publication of their 2016 Annual Report and their achievements over the past year. While it has been a demanding year globally and locally with low oil prices and fluctuating currencies, we need to be innovative in our solutions and steadfast in our resolve to work with the private sector and all stakeholders to address the key dimensions of energy – security, equity and environmental sustainability. Together, we will ensure that the people of our country reap the benefits of our economic growth and long-term energy security.

Report by SAPIA Chairperson Maurice Radebe

Welcome to the SAPIA Annual Report. During the year under review SAPIA focused on cleaner fuels, climate change, health, safety, security, environment, fuel price regulation, security of supply and transformation, among other areas that are detailed in the report.

In 2016, SAPIA released a comprehensive study compiled by KPMG titled *'The Petroleum Industry's Contribution to South Africa'*. The study showed that the petroleum industry's operational activities and investments have a substantial impact on the South African economy in terms of its contribution to employment creation, to economic growth as well as government tax revenue. SAPIA members also contribute to society as operators and investors that support economic development, as contributors to tax revenue, and as corporate citizens.

The energy industry is a vital engine of growth for the economy. The South African petroleum industry accounts for R330 billion in turnover; R83 billion in duties and levies; R6 031 billion in capital expenditure; R6 billion in annual payroll; R4 billion in income tax and 8.5% of national GDP. Its products contribute towards nearly every commodity and service available.

The industry also plays a part in economic growth and employment by providing:

- 750 000 direct and indirect jobs (4.9% of formal employment)
- 4 jobs per R1 million of investment
- an additional R1.57 to the economy for every R1 spent
- an additional 38c to government revenue for every R1 spent
- R70 million in CSI contributions - R27.4 million in education, R26.6 in community related projects[1]

High capital investments, required for upgrading technologies such as refineries, are hindered by the uncertainty in South Africa's regulatory environment. SAPIA regularly engages with government and regulatory bodies to create clarity and finalisation of regulation for industry players. This will encourage investment, which can potentially increase the R15.6 billion GDP contribution by current SAPIA members' capital investment.

Cleaner fuels

There is currently no government decision regarding how the cost of upgrading South Africa's existing refineries to produce new cleaner fuel specifications will be recovered. Without significant investment, South African refineries will come under pressure from global export refineries. Investment will not happen without regulatory certainty.

SAPIA welcomes the potential rescinding of the implementation date of July 2017 since this can allow for more discussions related to financial support for refiners to effect the upgrades. We anticipate the imminent gazetting of the regulations by the DOE.

2020 global sulphur cap

1 January 2020 has been set as the implementation date for a significant reduction in the sulphur content of the fuel oil used by ships. The decision to implement a global sulphur limit of 0.50% m/m (mass/mass) in 2020 was taken by the International Maritime Organisation (IMO), the regulatory authority for international shipping, during its Marine Environment Protection Committee (MEPC) meeting for its 70th session during October 2016 in London.

It represents a significant cut from the 3.5% m/m global limit currently in place and demonstrates a clear commitment by IMO to ensuring shipping meets its environmental obligations. The IMO decision represents additional burden to the cost of upgrading South Africa's existing refineries to produce new cleaner fuel specifications.

Transformation

While the industry has made good progress in certain areas of transformation such as ownership, the absence of a balanced scorecard has been a problem for the industry. It has meant that all the good results achieved by the industry are often overlooked and attention only focused on areas where performance has been perceived to be relatively weaker. The industry has always been open about pointing out the weaker areas in its performance. Some of these weaknesses are the advancement of women in the industry and the procurement of crude and products from empowered suppliers. It is for this reason that we welcome the commencement of the alignment process of the Petroleum and Liquid Fuels Charter to the Broad-Based Black Economic Act. This process should eventually lead to the gazetting of the Petroleum and Liquid Fuels Sector Codes.

Looking ahead

I would like to welcome Shashi Rabbipal, Chairperson of Chevron South Africa, who will be the incoming SAPIA Chairperson in 2017. We bid farewell to governors Siphamandla Mthetwa and Stephan Nothangel and thank them for their contributions. During the year, SAPIA welcomed two new members, Avedia Energy and Puma Energy, increasing membership to 22 members in 2016.

Looking ahead, we support government's aim to make South Africa a success and our priorities remain aligned with South Africa's National Development Plan objectives. The liquid fuels industry is critical to the nation's economic growth and security. With the right regulatory framework, we can ensure industry remains competitive to help bring about a brighter future for all South Africans.

Introduction by SAPIA Executive Director Avhapfani Tshifularo

There were some major global developments during 2016. The US elected Donald Trump as president, Europe suffered from terrorist attacks, the migrant crisis intensified and the UK voted to leave the European Union in a surprising referendum.

On the local front, South Africa's economy faced another challenging year. Slow domestic demand, low business confidence, potential ratings agencies downgrades and an uncertain political outlook combined to limit economic growth.

On the global oil front, after a turbulent 2014 and a precarious 2015, this past year showed some stability in both natural gas and oil prices. In November, OPEC reached a deal to cut production for the first time in eight years and that impacts prices. There was some relief for the industry after over two years of low oil prices. Oil prices hit a 13-year low of $26 a barrel in February 2016 and ended the year over $50 a barrel. The 12-month average during 2016 was $44/bbl (Brent).

In South Africa, in Gauteng 95 ULP petrol prices reached a high of R13.34 and a low of R11.74. Gauteng 0.05% diesel wholesale prices reached a high of R11.70 and a low of R9.43. Consumption of petrol, diesel, paraffin, jet fuel, fuel oil and LPG all decreased in 2016 in comparison with 2015. Exports of petrol, diesel and LPG increased in 2016 in comparison with 2015, while jet fuel showed a decrease. For the same comparison period, petrol, diesel and jet fuel imports all decreased while LPG imports showed an increase. More statistics can be found in the statistical review section of this annual report which presents a comprehensive history of the liquid fuels and gas industry.

In this report, we identify the major developments that took place in the industry during the year. We highlight our main achievements in the core areas relating to our strategy, identify challenges and explain the main issues that will shape the South African liquid fuel and gas industry going forward.

While things may be looking up, the road to recovery for the industry will likely be slow. While OPEC's decision to cut production should help supply and demand rebalance and prices to continue recovering, the path to recovery will take time. Global storage inventories must be reduced before higher oil prices can be sustained. There are reasons to expect improvement in the oil and gas market in 2017, so we are cautiously optimistic for the year ahead.

I would like to thank the DOE, SAPIA Board of Governors and staff members for their support during the past year. Together, we remain steadfast in our resolve to harness the energy sector's full potential so it can be an engine of growth well into the future.

SAPIA overview

SAPIA overview

About SAPIA

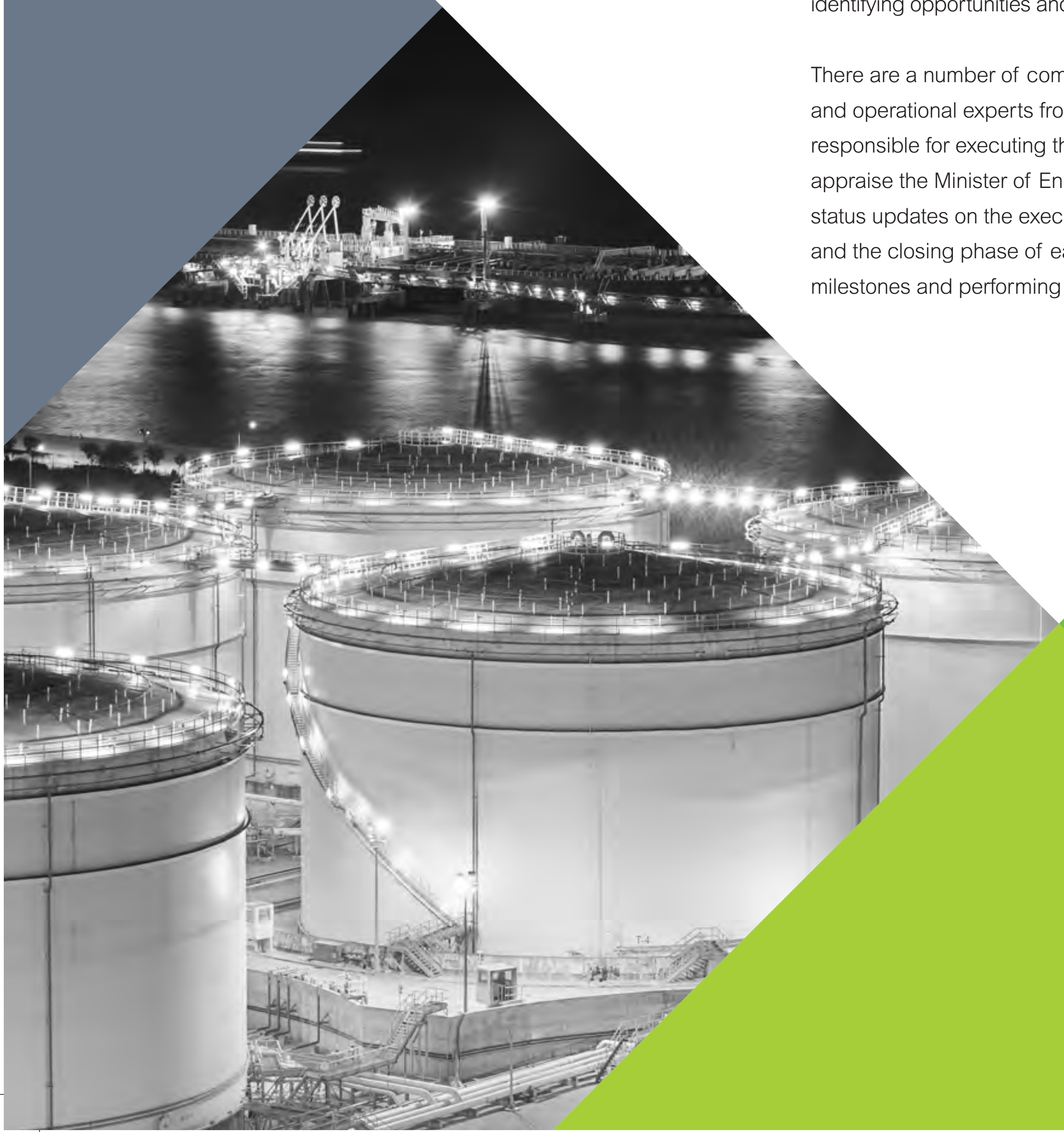
SAPIA represents the collective interests of the South African petroleum industry. The association plays a strategic role in addressing a range of common issues relating to the refining, distribution and marketing of petroleum products, as well as promoting the industry's environmental and socio-economic 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, depicted in the strategy diagram below, 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 Promote industry transformation, environmental leadership and a fair regulatory framework for all	Provide expert information and assistance to our stakeholders Facilitate security of supply	Contribute to policy formulation and implementation 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			
	Promote industry transformation	Be open and honest in our interactions	Improve efficiency and effectiveness
	Promote a fair regulatory framework for all	Improve communication	Improve decision making
	Promote environmental leadership	Educate stakeholders about the industry	Implement the balanced scorecard
	Facilitate security of supply		Identify opportunities
	Plan for tomorrow	**Enhance strategic partnerships**	**Provide service excellence**

Learning and 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 revised strategy*

Priorities for the year

In the 2015 performance plan the Board of Governors identified six strategic areas of focus that would enable SAPIA to deliver on its mandate in the most effective way.

Transformation	Promote 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 that pertaining to the monitoring, measuring and reporting of GHG emissions
Security of supply	Facilitate the security of supply of petroleum products
Cleaner fuels	Make the transition to cleaner fuels in a manner that avoids any supply disruptions in the most cost-effective way possible
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 is through our media relations. The graph below shows the number of communication activities and media coverage received in 2016 in comparison with previous years.

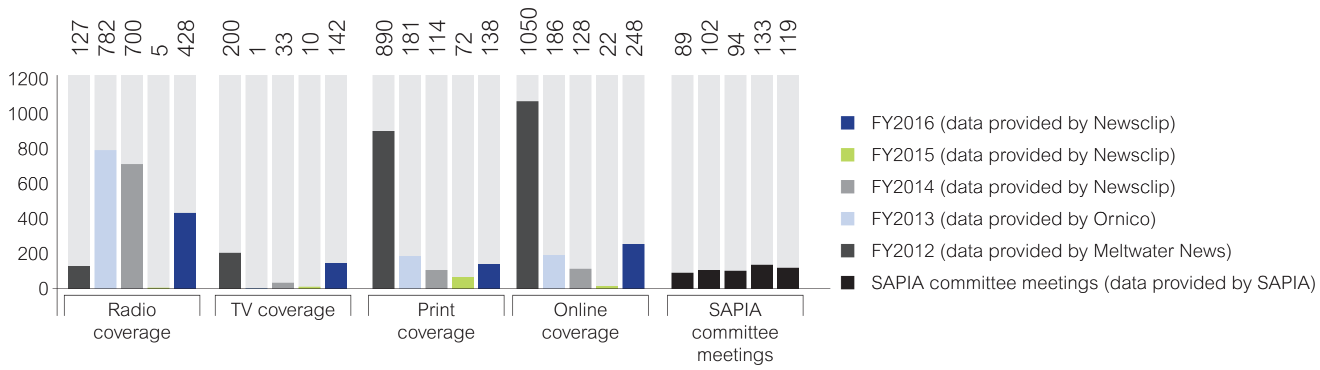


***Figure 2** SAPIA's communication activities and media coverage*

Membership

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

***Table 1** Total of 22 members on 31 December 2016*

Organisation structure

SAPIA operates under a Board of Governors comprising ten 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 of the member companies.

The 2016 Board of Governors

Mr Maurice Radebe, Chairman of Sasol Oil and Executive Vice President of Energy Business for Sasol Limited, succeeded Ms Nobuzwe Mbuyisa as Chairperson of SAPIA in June 2015 following Ms Mbuyisa's resignation from Chevron.

Mr Radebe is the first Chairperson to be elected to this portfolio twice. He first served as SAPIA Chairperson in 2010 and has been part of the SAPIA Board of Governors since 2004. Mr Radebe's tenure ended in December 2016.

The Board of Governors consists of nine 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 2016 Board of Governors comprises of the following individuals:

SAPIA Chairperson
Maurice Radebe
Sasol Oil (Pty) Ltd

SAPIA Vice Chairperson
Shashi Rabbipal
Chevron South Africa (Pty) Ltd

Daniel Odogwu
BP Southern Africa (Pty) Ltd

Farid Adnan
Engen Petroleum Ltd

Kholly Zono
PetroSA Ltd

Bonang Mohale
Shell Downstream
South Africa (Pty) Ltd

Pierre-Yves Sachet
Total South Africa (Pty) Ltd

Benoit Araman
Oryx Oil South Africa (Pty) Ltd

Stephan Nothnagel
Royale Energy Ltd

Attendance at board meetings

Attendance at meetings:	2016/03/08	2016/06/15	2016/09/14	2016/12/02
Mr D Odogwu	A	Y	Y	Y
Mr S Rabbipal	Y	Y	Y	Y
Mr F Adnan	A	A	A	A
Ms M Modipa	Y	Y	Y	A
Mr M Radebe	Y	Y	Y	Y
Mr B Mohale	A	A	A	A
Mr C de Closieres	A	Y	R	R
Mr P-Y Sachet	-	-	A	Y
Mr B Araman	Y	Y	Y	Y
Mr S Nothnagel	Y	Y	Y	Y

***Table 2** Board meeting attendance*

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

SAPIA overview

SAPIA staff members

***Figure 3** SAPIA organisational chart*

Board of Governors committees

There are twelve committees and six sub-communities 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 committee	Chairperson	Company
Advisory Committee on Climate Change	Shashi Rabbipal (BOG Champion)	Chevron
Cleaner Fuels Task Team	Avhapfani Tshifularo	SAPIA
Communications Committee	Avhapfani Tshifularo	SAPIA
Economic Regulation Committee	Pierre-Yves Sachet (BOG Champion)	Total South Africa
Fuels Technical Committee	Kevin Baart	SAPIA
Health, Safety, Security and Environment (HSSE) Committee	Daniel Odogwu (BOG Champion) Bernhard Eigenhuis	BP BP
HSSE sub-committees:		
Petroleum Industry Engineering and Environment Committee Oil Spill Working Group	Mani Govindasami Nicholas Howard	Oryx Energies Chevron
Road Transport Safety Committee	Maduray Narayansamy	Engen
Security Committee	Riaan Meyer	BP
Refinery Managers' Forum	Ton Wielers	SAPREF
RMF sub-committees:		
Refinery Managers' Environmental Forum	Mbulelo Yokwe	SAPREF
Refinery Managers' Safety Forum	Lynne Hanekom	ENREF
Legal Committee	Avhapfani Tshifularo	SAPIA
Liquefied Petroleum Gas Forum	Benoit Araman (BOG Champion)	Oryx Oil
Non-Integrated Members Forum	Stephan Nothnagel (BOG Champion)	Royale Energy
Security of Supply Committee	Themba Joseph	PetroSA
Transformation Committee	Bonang Mohale (BOG Champion)	Shell SA
Transformation sub-committee: Human Resource Development Committee	Avhapfani Tshifularo	SAPIA

***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)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Membership subscriptions	5 790	5 413	6 206	6366	6366	6 415	7 748	9 754	12 136	11 798
Other income (including interest)	235	459	1505	138	1426	180	173	508	3 606	424
Total income	**6 025**	**5 872**	**7 711**	**6 504**	**7 792**	**6 595**	**7 921**	**10 262**	**15 742**	**12 222**

Expenditure (thousand rands)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Personnel/payroll	3 352	3 382	3 113	3 663	4 009	4 259	4 326	5 404	8 262	8 220
Other expenditure (including interest)	2 673	3 059	3 231	2 782	3 321	2 931	2 919	2 752	5 520	4 064
Total expenditure	**6 025**	**6 441**	**6 344**	**6 445**	**7330**	**7 190**	**7 245**	**8 156**	**13 782**	**12 284**

Strategic focus areas

Transformation

Strategic priority: Transformation
Our focus: Promote industry transformation and skills development

Focal points in 2016	Ongoing challenges
New liquid fuels empowerment framework	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.
Implementation of skills development framework	
Access and licences to logistical infrastructure	
Retail transformation	
Refinery initiatives	

Progress in 2016

New liquid fuels empowerment framework

The process of aligning the Petroleum and Liquid Fuels Charter to the Broad-Based Black Economic Empowerment Act has commenced, with the interim steering committee comprising of the Department of Energy, industry associations and trade unions all taking part in the process.

Advanced Certificate in Management for Oil and Gas

The SAPIA Corporate Education 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 seven male delegates and nine female delegates in the 2016 programme. The programme had a 93.75% pass rate with 15 out of 16 delegates passing the course.

Women in Leadership Programme

The Duke Corporate Education 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 16 delegates in the 2016 programme with an 81% pass rate.

Future priorities

SAPIA will be focusing on the following areas in 2017:

- 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.
- Continuing to support the Department of Energy with information requirements regarding the retail audit process.

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 safe 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, empowering employees in the sector and establishing a sustainable HSSE culture are key priorities for SAPIA members. Considerable effort is being made to transfer HSSE skills and knowledge to contractors, being major third party service providers to the industry.

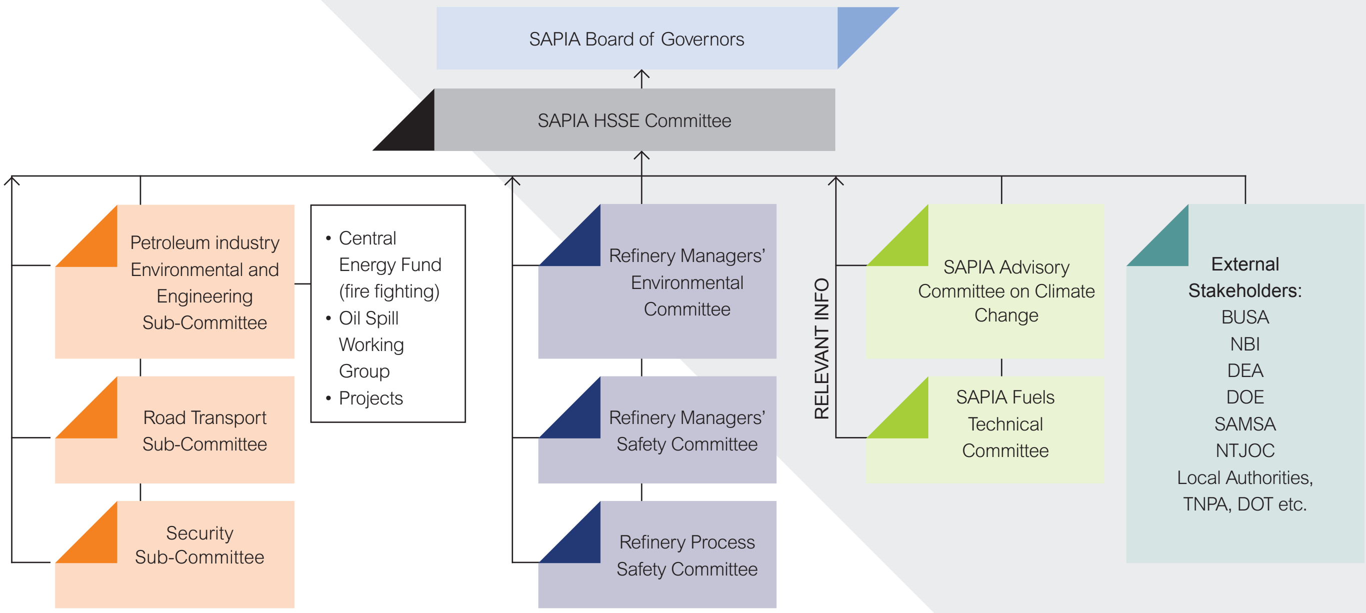


***Figure 4** Integrated HSSE management across the value chain*

Key developments in 2016	Ongoing challenges
Regulatory input	
SAPIA has been instrumental in negotiations with key internal and external stakeholders on HSSE legislation for South Africa. These include among others: climate change, SANS codes, critical infrastructure, Occupational Health & Safety Bill, waste, dangerous goods regulations, etc.	Increased regulatory burden placed on business and developing non-integrated members.
Operation Phakisa	
Industry continues to work with the Department of Environmental Affairs (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).	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: Dispersant Policy, National Oil Spill Contingency Plan, oil spill operator guidelines, OPRC Bill, incident management systems and training. The legislated expectation will be that facilities have a Tier 2 oil response capability.

Key developments in 2016	Ongoing challenges
Development of SAPIA minimum guideline and best practice documents	
The development of minimum guidelines is key to reducing complexity for contractors or suppliers that service multiple members. The best practice documents consolidate key learnings and best practices for specific subjects. These include refinery process safety key performance indicators, behavioural-based safety tools at refineries, driver training requirements, to name a few.	Onerous requirements on new entrants.
Refinery HSSE Forum	
The Refinery Managers' Safety Forum and the Refinery Managers' Environmental Forum are fully aligned to SAPIA's requirements. Process safety will be addressed as a specific focus area in 2017. The refinery fire chief's meetings will also be reviewed by the refinery managers for alignment under SAPIA.	
Contaminated land management	
Industry is working closely with the 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. The V&A Waterfront historic contamination clean-up is now completed with no anticipated further liability to the sector.	Public disclosure of the contaminated land register.
National strikes	
The Chemical, Energy, Paper, Printing, Wood and Allied Workers Union participated in a national strike. Supply disruptions were minimal with the exception of Pretoria where some industrial action took place. SAPIA had daily engagements with the media and relevant Ministries including escalation to the Presidency when needed.	Intimidation of non-striking workers. NATJOC is not operational.
Road transport safety	
The short-term decal project will continue into early 2017. SAPIA has embarked on the development of a long-term sustainable road transport safety programme for children between the ages of 5 to 12. SAPIA's first road transport safety conference was held in September 2016 with over 50 participating partners and members.	Third party high risk and non-compliance pose a major risk to safe operations.

Progress in 2016

National Oil Spill Response Strategy

The Operation Phakisa meetings are working towards delivering a framework for the management of onshore and offshore spills in the oil and gas industry in SA. The framework is a high-level document, requiring emergency response mechanisms to be detailed by the enterprise. Departmental roles and responsibilities are still unclear and while legislation may dictate accountability, capacity is constrained. The national oil spill contingency plan and other related documents, such as the regional oil spill plans, need to be updated.

The DEA, DoT, DOE, SAMSA and other related authorities have adopted the Incident Command System (ICS) also referred to as the Incident Management System (IMS) as the uniform incident command structure for managing all incidents. This is aligned to industry's strategy and allows for unified command during major oil spill incidents. Disaster management fire-fighting units have historically used ICS and will likely be involved in the training of Government departments. The official adoption will be proposed to the Minister via the steering committee. This has not been approved. SAPIA has not signed the multi-party agreement.

The potential challenges for industry will be public sector staff turnover, limited training service providers, a small pool of trained staff and depth of experience. This has been evident in recent oil spill drills.

The International Petroleum Industry Environmental Conservation Association (IPIECA) led a four-day Global Initiative for West, Central and Southern Africa (GI WACAF) workshop in June 2016. SAPIA members were well represented.

Health, safety, security and environment

The key outcomes from the workshop were:

- Potential legislative changes over the next two to four years.
- Oil spill planning, response and capability (OPRC) will be embedded in legislation via the OPRC bill. This will allow for regional agreements and bi-lateral agreements.
- Members will be required to have Tier 2 oil spill response capability.
- Section 52 of the SAMSA Act will be amended and the Department of Transport will be responsible for combating pollution and not the DEA. This is significant. DEA's role will need to be defined. SAMSA will be responsible for all shipping and offshore incidents and will lead the incident command during an incident.
- Preparation of draft wording for the National Oil Spill Contingency Plan. The current plan was updated in 2007. Reporting processes were also a key focus area.
- Drafting an operator oil spill guideline framework.

These recommendations will be implemented by the Operation Phakisa working groups. The first drafts are being circulated to members of the working groups for comment.

South Africa's oil spill capability

South Africa does not have Tier 3 capability and will depend on international support. There are contracts already in place with service providers to provide such a response if required. As part of the OPRC bill, it is expected that members must have adequate Tier 2 spill responses in place, until Tier 3 capability arrives. A detailed assessment of the industry's capability is planned, so that adequate contingencies can be implemented if gaps exist. The figure below describes the anticipated expectation in this regard.

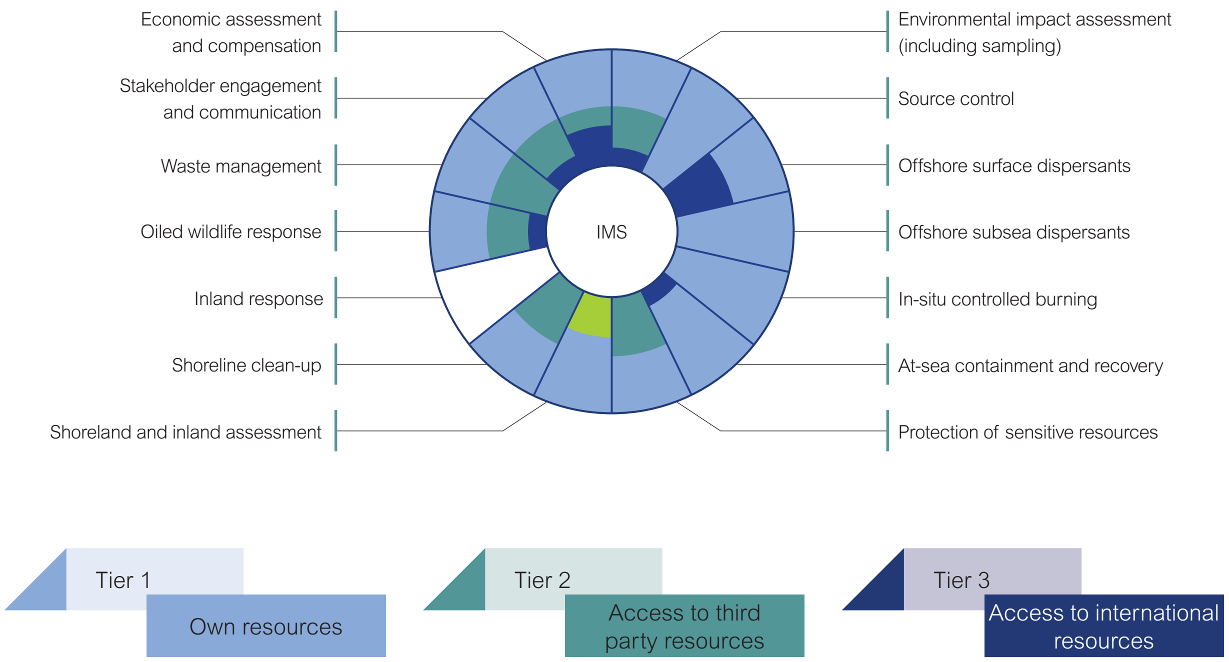


***Figure 5** The draft South African evolved tiered model based on currently available capabilities*

Road transport safety in South Africa

Road transportation is one of the highest risks faced by members and their contracted partners in South Africa with over 13 000 fatalities occurring annually. Over the years, fleet sizes have increased with some members choosing to outsource operations. South Africa's fleet infrastructure is among the best in the world with drivers having stringent training and selection requirements.

One of the main causes of road fatalities is third-party high risk behaviour. The general non-compliance nature of the South African road user (both driver and pedestrian) is of key concern. One of the primary challenges that the industry faces is the number of initiatives driven by many entities on road safety without major risk reduction.

SAPIA, government, affiliated associations and other parties need to align on the South African road safety strategy as well as SAPIA's role and contribution in order to drive one common message on road safety.

Internal and external stakeholders attended two workshops in January 2016. The deliberations were fruitful and set the foundation for further work. The need for alignment and rationalisation of initiatives was also expressed by attendees. Further to the January meetings, several planning and follow-up meetings have been held with internal and external stakeholders.

Road transport safety conference

The conference took place on 20 and 21 September 2016 in Johannesburg and was attended by over 50 partners and over 70 attendees. The conference theme was 'Safer Journeys: 4me, 4 you, 4 all'. Although the conference was a success, the contribution from haulier partners was lacking.

Young learner road safety education

This is a long-term road safety programme that SAPIA is looking to develop and implement with the Department of Basic Education. The programme is aimed at children from ages 5 to 12. The committee will arrange a meeting with the Department of Basic Education, after which a more detailed strategy and proposal will be developed. As a short-term intervention, the road transport safety decal programme will continue.

***Figure 6** Road safety awareness decal project by SAPIA*

Future priorities

SAPIA will be focusing on the following areas in 2016:

- 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.
- Seeking improvement in 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 GHG emissions

Key developments in 2016	Ongoing challenges
Gazetting of draft GHG regulations and draft declaration of GHGs as priority pollutants.	Ensuring the envisaged reporting system is suitable for company reporting at a national level and ensuring the confidentiality of data provided.
Further engagement with National Treasury on the carbon tax.	Motivation for obtaining pass through for regulated products and developing a suitable mechanism for this pass through. Development of offset regulations pursuant to the Carbon Tax Bill.
Developing the integration of carbon budgets and carbon taxes for the post 2021 period.	Alignment between the DEA and NT on the post 2021 regulatory environment with respect to carbon taxes and carbon budgets.

Progress in 2016

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

Regulations for pollution prevention plans

Draft national greenhouse gas (GHG) reporting regulations were published for public comment in June 2016 by the DEA. The purpose of the draft regulations is to introduce a single national reporting system for the reporting of GHGs so as 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 application of the draft regulations apply to certain categories of emission sources (which includes the oil industry) and the corresponding data provider. Integral to the draft regulations are the Technical Guidelines which describe the reporting methodology for each of the categories of emission sources.

In terms of the regulations, reporting is meant to be via the National Atmospheric Emissions Inventory System (NAIES) which is a system really designed to record atmospheric emissions at a local facility level. Since the scope and aim of reporting of GHGs is different to that for atmospheric emission licence reporting, numerous challenges are anticipated if reporting is enforced through the NAIES.

After extensive interactions with the DEA, the industry expects these regulations to be gazetted as final during the course of 2017 since the entire GHG regulatory dispensation, which includes the implementation of carbon taxes, rests on these regulations.

Carbon policy and taxation

National Treasury (NT) published the draft Carbon Tax Bill towards the end of 2015 and in June 2016 published draft carbon offset regulations. Substantial engagement with NT has occurred since these were published, both on the content and effect of the bill and issues pertaining to the carbon offset regulations.

SAPIA's view remains that to properly effect carbon policy the correct price signals also need to be directed at consumers in order for them to 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 and SAPIA is continuing to engage with NT in order to obtain a fair regulatory dispensation with respect to carbon taxation.

The Carbon Tax Bill provides for certain allowances over and above the basic tax free allowance which include; trade exposure, operational performance, participation in the carbon budget process of the Department of Environmental Affairs and for the provision of offsets. The determination of allowances for operational performance is a sector issue and SAPIA engaged Solomon Associates, the refinery benchmarking firm, to adapt to the local refining sector their established methodology used in assessing the relative carbon performance of competitor refineries operating in certain jurisdictions. Their methodology has received widespread acceptance in areas which levy carbon taxes or provide for emission trading schemes.

In order to implement that carbon tax regime there are still a number of outstanding issues that need to be resolved which include the finalisation of associated regulations which include that pertaining to offsets and allowances and the GHG reporting regime under the control of the DEA.

GHG reporting and carbon budgets

The initial period for carbon reporting and budgeting is up until the end of 2020 (calendar year). However, from 2021 there is no clarity on what will be the inter-relationship between carbon budgets and carbon taxes. This is creating significant regulatory uncertainty regarding the future framework covering GHG emissions.

DEA has contracted an external economic consultancy to investigate the potential interaction between these two pieces of regulation. Various models under consideration include layering (the use of both budgets and taxes on all emissions), the use of a punitive tax on emissions exceeding a budget and hybrids between the two which included an emissions trading scheme. At this stage there is no definitive indication as to what will be eventually implemented. The lack of clarity on the future carbon budget / carbon tax regime remains of great concern to industry since it will affect investment plans especially that related to energy efficiency and carbon footprint reduction projects.

Draft energy efficiency strategy

In late 2016 the DOE gazetted a draft energy efficiency strategy for South Africa. This follows the first National Energy Efficiency Strategy (NEES) released in 2005 which sought energy reduction targets of 12% by 2015 which the DOE found had been achieved. The post-2015 NEES aims to build on these achievements, stimulating further energy efficiency improvements through a combination of fiscal and financial incentives.

The target for the industrial sector is a 16% reduction in weighted mean specific energy consumption by 2030. Efforts will be made to promote the use of energy management systems and the mandatory submission of energy management plans is mooted for those enterprises whose consumption is above a certain threshold.

For the transport sector, a significant improvement in the average fuel efficiency of the fleet of road transport vehicles in South Africa is sought which is envisaged to be obtained through incentive schemes such as the introduction of a scrappage scheme. No mention is made of cleaner fuels in the strategy which would be a prerequisite to improving fuel efficiencies.

Future priorities

SAPIA will be focusing on the following areas in 2016:

- Development of carbon tax legislation and regulations which include those for offsets.
- Continued engagement with the DEA on GHG regulations and with NT on the post 2021 regulatory environment.
- Engagement with the DOE on the National Energy Efficiency Strategy.

Security of supply

Strategic priority: Security of supply
Our focus: Facilitate the security of supply of petroleum products

Key developments in 2016	Ongoing challenges
Delay in the commissioning of the remaining aspects of the Transnet multi-product pipeline to November 2017.	There is no definite commissioning date provided by Transnet. This creates a challenge to adequately plan the logistics of the product required.
Designation and exemption of the petroleum industry by the Competition Commission.	The challenge is that it is only for one year and SAPIA will have to reapply.
LPG supply constraints continued to linger in 2016, but not as severe as in 2015.	The shortage of import infrastructure continues to be a challenge. New terminals are being built in Saldanha and Port Elizabeth, however these will come on stream between 2018 and 2020.
Department of Transport published a draft maritime policy for comment.	Issues still remain around the development and implementation of a cabotage policy that will address industry concerns.

Progress in 2016

Feedstock and products import facilities risk mitigation plan

The debottlenecking of the Cape Town pipeline has been completed with the construction of a new pipeline that connects the Chevron refinery, BP and Engen terminals. This enables product transfers from the refinery to terminals without impacting shipping to the refinery.

The identified risks in the current risk register have been largely resolved or mitigated. Any new risk mitigation plans will be developed and managed by the individual companies. Any risk that requires industry involvement will be escalated to SAPIA for further co-ordination.

Transnet Pipelines multi-product pipeline (MPP) project

Transnet informed the petroleum industry that the project has been delayed by a year from November 2016 to November 2017. This delay has had an impact on the decommissioning of the Durban Johannesburg pipeline (DJP) which has been delayed by a year as well. Transnet and SAPIA are in constant engagement to ensure that further delays are minimised.

20-year liquid fuels infrastructure roadmap project

We are awaiting direction from the Department of Energy. There is currently no indication when this project will be completed.

National strategic fuel stocks policy

This policy has not been finalised by the Department of Energy.

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 period of one year from 1 January 2017 to 30 December 2017. Consequently the Competition Commission granted the petroleum industry an exemption for the same period of one year. SAPIA will apply for a new exemption closer to the time of the exemption expiry because it is critical to the functioning of the petroleum industry.

Future priorities

SAPIA will focus on the following areas in 2017:

- Conduct a risk refresh to identify new emerging risks impacting security of supply and the exemption of the industry by the Competition Commission.
- Work with Transnet Pipelines to ensure the completion of the MPP project through all its phases.
- Assist Transnet Pipelines to ensure the successful decommissioning of the DJP.
- Work together with the DOE to finalise the strategic stock policy and its implementation.
- Co-operate with the DOE to ensure the completion of the Liquid Fuel Emergency Response Plan.

Cleaner fuels

Strategic priority: Cleaner fuels
Our focus: Make the transition to cleaner fuels in a manner that avoids any supply disruptions in the most cost-effective way possible

Key developments in 2016	Ongoing challenges
Finalisation of petrol and pipeline specifications.	New draft regulations may require review of these specifications.
Engagement with the DOE on financial compensation.	Commencement with the cost benefit analysis for cleaner fuels.
Mandating a sulphur cap of 0.5% on bunker oil by 2020.	Meeting the sulphur cap for bunker fuels.

Progress in 2016

Cleaner fuels regulations

The DOE gazetted draft regulations for cleaner fuels in June. These were similar to the previous regulations gazetted in 2011 to be implemented by July 2017. The regulations seek to adopt a fuel regulatory regime similar to that presently in Europe. Some notable aspects of these regulations include:

- The implementation date of July 2017 would be rescinded and replaced with a date by notice in the Government Gazette.
- The addition of an olefin specification to petrol that is more onerous than that agreed to during the SABS specification process between key market participants, the SABS and SAPIA following the publishing of the 2012 regulations.
- The permissible addition of the manganese additive MMT to unleaded petrol.
- A relaxation of the labelling requirements for fuels at the pump.

SAPIA has welcomed the potential rescinding of the implementation date of July 2017 since this can allow for more discussions related to financial compensation for refiners to effect the upgrades required to manufacture cleaner fuels. However, the addition of the olefin specification could set back the implementation period because of the necessary redesign required to accommodate this new specification. Furthermore, permitting the addition of MMT to unleaded petrol will require that the petrol specification be revisited.

The DOE has indicated that the regulations should be gazetted during the first half of 2017.

Cost benefit analysis study

The Joint Task Team report on financial assistance mechanisms related to clean fuels implementation still has not been finalised primarily due to disagreement between SAPIA and the DOE regarding the contribution to refining margins that cleaner fuels will bring. SAPIA is of the view that under the current BFP pricing formula there is insufficient margin to trigger the necessary upgrades while yielding an acceptable return.

It has been agreed with the DOE that a cost benefit analysis for cleaner fuels should be undertaken by an independent third party. This analysis would update the benefits and costs of cleaner fuels and is hoped to provide sufficient information to government to make a final decision on financial compensation allowed to the industry, if any. The cost benefit or socio-economic analysis would in any case be required since it has become a prerequisite for any new government policy initiative. The cost for the study will be funded jointly by the DOE and SAPIA.

Biofuels

There have been no further developments with respect to biofuels. The DOE has indicated that the pricing framework was sent to Cabinet in the latter half of the year but the Cabinet decision has not been communicated.

Extra refining capacity

Towards the end of the year the DOE published the Integrated Energy Plan (IEP) and the Integrated Resource Plan (IRP) for comment. The IEP seems to indicate the requirement for a new refinery by the latter half of the next decade but no known developments in terms of this putative refinery have occurred. It is worth pointing out that the National Development Plan suggests that a new decision on extra refining capacity needs to be made by 2017.

MARPOL Annex VI

During the year, the International Maritime Organisation's sub-committee on marine pollution (MARPOL) mandated a compulsory sulphur cap of 0.5% on all bunker fuels to be sold from 1 January 2020. This was consequent to a disputed study as to the availability of such fuels from this period. While it is anticipated that the local oil industry could comply with the provision of distillate bunker fuels, it is unlikely that the supply of heavy bunker fuels meeting this sulphur cap will be met. This situation is not unique to South Africa and is likely to be replicated across the world outside the OECD countries.

Future priorities

SAPIA will be focusing on the following areas in 2016:

- Awaiting the gazetting of the new regulations on fuel specifications and then reassessment of the petrol specifications, if required.
- Continued engagement on obtaining financial compensation for cleaner fuels production, but with specific focus on executing the cost benefit analysis study.
- Continued interaction with the DoT and the DOE on the implementation of Marpol Annex VI.

Regulated price elements

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

Progress in 2016

Petroleum products price developments

The retail price of petrol and diesel comprises the basic fuel price (BFP) and a number of allowable taxes, levies and margins applied to such fuels. The following section provides more detail on the elements of petroleum prices in which adjustments have been made during 2016.

Regulatory accounting system for petrol

The DOE finalised the reviews of the secondary storage asset base, the benchmark service station asset base and the retail operating expenditure in the 2015/2016 period. To date the studies have not been implemented and stakeholder consultations are expected to take place in the first quarter of 2017. The DOE has finalised the RAS manual and it is expected to be published during 2017. SAPIA will continue to engage the DOE regarding these studies and the publication of the RAS manual.

The 2016 RAS margin adjustments became effective on 7 December 2016 and the secondary storage, secondary distribution, wholesale margin and retail margin adjustments are detailed below.

Increase in secondary storage element for petrol

The secondary storage margin was decreased by 0.6 c/l from 18.5 c/l to 17.9 c/l. The margin adjustment was applied on petrol, diesel and illuminating paraffin.

Increase in secondary distribution element for petrol

The secondary storage margin was increased by 3.6 c/l from 13.7 c/l to 17.3 c/l. The margin adjustment was applied on petrol, diesel and illuminating paraffin.

Increase in wholesale margin of petrol

The wholesale margin of petrol was increased by 2.4 c/l, from 33.2 c/l to 35.6 c/l.

Increase in retail margin of petrol

The retail margin of petrol was increased by 14.7 c/l from 161.7 c/l to 176.4 c/l.

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, effective from 7 December 2016. The press release at the time indicated that the increase of 10% for attendants and 7.5% for cashiers was in line with the Bargaining Council's (MIBCO) agreement.

Increase in wholesale margin of diesel and illuminating paraffin

The wholesale margin of diesel and illuminating paraffin was increased by the 2015 consumer price index (4.58%) from 64.70 c/l to 67.66 c/l effective from 7 December 2016.

Increase in the fuel levy on petrol and diesel

The Minister of Finance announced in his budget speech on 24 February 2016 that the fuel levy on petrol and diesel will increase by 30 c/l for all grades of petrol and diesel. The adjustment increases the applicable fuel levy on all grades of petrol to 285 c/l and on all grades of diesel the levy will be 270 c/l. The increase was effective on 1 April 2016.

Increase in the Road Accident Fund levy on petrol and diesel

The Minister of Finance announced in his budget speech on 24 February 2016 that the Road Accident Fund (RAF) levy will not be adjusted. The levy remained at 154 c/l for all grades of diesel and petrol.

Magisterial district pricing zones

The magisterial district price zones are based on the cost of moving fuels from coastal refineries to the inland distribution centres by pipeline, rail and road or by private bulk petroleum product transporters. Transport tariffs are adjusted annually subject to approval by the Minister of Energy.

The magisterial district zone (MDZ) 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.

Revised road and pipeline transport tariffs became applicable in petrol, diesel and illuminating paraffin price structures with effect from 1 April 2016.

NERSA announced an increase of 18.56% to Transnet pipeline tariffs compared to the 2016/2017 tariff period, resulting in allowable revenue for Transnet Pipelines of 23.03%. The increase became effective on 1 April 2016 in the transport cost of petroleum transported by pipeline from Durban to the C-zones. On average the MDZ tariff for 2016/2017 period increase by 5.6%.

Liquefied petroleum gas pricing

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 is now under severe strain. SAPIA is hopeful that the outcomes of the Competition Commission market enquiry into LPG, commissioned in 2014, will provide guidelines that will assist in unlocking the constraints in the LPG supply sector. The market enquiry is expected to be released in April 2017.

Maximum refinery gate price

Following public consultations in 2014, the DOE has not moved closer to a solution regarding the review of the MRGP of LPG, much to the disappointment of SAPIA and the LPG industry.

In April 2016, the DOE announced plans to implement a temporary import levy for the winter period. This was aimed at assisting the industry with supply constraints during the winter periods. Much to the disappointment of SAPIA, the levy was not implemented with DOE citing internal challenges and lack of mandate to implement the import levy.

SAPIA continues to raise its concerns with the DOE on these issues surrounding the security of supply for LPG. If the challenges surrounding the MRGP are not addressed soon, the supply of LPG will be impacted.

Maximum retail price of LPG

The maximum retail price of LPG supplied to residential customers was implemented in July 2010. In December 2016, the Minister of Energy approved an increase of 46.37 c/kg in the pricing structure of the maximum refinery price, effective from 7 December 2016. The increases applicable were 16.66 c/kg for operating expenses, 1.26 c/kg for working capital, 4.87 c/kg for depreciation and an increase of 6.23 c/kg in gross margin. In addition, the retail margin increased by 5.31 c/l and the inland transport cost increased by 6.33 c/l. The VAT element on LPG amounted to 5.70 c/l.

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. The Minister adjusted the elements of MRP again applying the consumer price index (CPI), but SAPIA will continue to engage the DOE on finding a permanent solution to annual MRP adjustment.

NERSA regulation of petroleum pipelines industry

The following matters took place during the year under review:

- NERSA made its decision (with published reasons) on Transnet's pipeline tariff application for 2016/17 in March 2016. These maximum tariffs were effective from 1 April 2016 and enabled Transnet to realise an increase of 23.03% in its allowable revenue compared to the 2015/16 period, Transnet had applied for 25.8% increase in revenue from the 2016/17 allowable revenue.
- In terms of the Petroleum Pipelines Act of 2003, licences for construction, operation and conversion of petroleum pipelines, storage and loading facilities are required. This is happening on a continuous basis.

National Ports Authority tariffs

The National Ports Authority (NPA) applied to the National Ports Regulator (NPR) for an average tariff increase of 5.9% for the period 1 April 2016 to 31 March 2017. The NPR declined the proposed tariff increase and other individual tariff increases after considering the application. Overall there was no increase in the tariff and as such cargo dues remained unchanged for 2016/2017 period.

Legislation

Levy on the petroleum pipeline industry for 2016/17

In terms of Government Notice No. 39990 the Minister of Energy in concurrence with the Minister of Finance has approved a levy of 0.39 c/l applicable from 1 April 2016 to 31 March 2017. 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.'*

Draft rules in terms of the Customs Control and Duty Acts of 2014

Following the amendments and approval of the Customs Control and Duty Acts of 2014, SARS invited stakeholders to submit comments on the published draft rules in terms of the Act. SAPIA participated in the process through law firm Shepstone and Wylie. The rules were finalised in 2016 and are operational.

Q and A with Avhapfani Tshifularo

The petroleum industry's contribution to South Africa

Q: SAPIA commissioned KPMG to assess the broader economic and social impact that the petroleum industry's operations make across the petroleum value chain – including the impact on South Africa's economy, job creation, poverty alleviation and societal benefits. What was the purpose of this study?

A: SAPIA is an organisation committed to representing petroleum and liquefied petroleum gas companies in South Africa. As a result, the petroleum industry, as represented by SAPIA members, have an impact on the South African economy, specifically in terms of the forward and backward linkages with other sectors and the impact its operations have within the petroleum industry and the economy as a whole. In particular, this is the flow of funds and services between SAPIA members and its suppliers situated in different sectors of the economy.

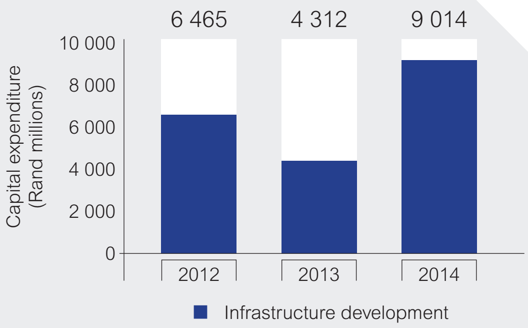
The study aims to quantify the petroleum industry's operational activities and investments by showing its substantial impact on the South African economy in terms of its contribution to employment creation, to economic growth as well as government tax revenue. The SAPIA members also contribute to society as operators and investors that support economic development, as contributors to tax revenue, and as corporate citizens.

At the start of the project, the 2015 financial information was not yet available from the SAPIA members; therefore the study was conducted using the 2014 financial information. The findings were only released in 2016 which is why we are including some of the results in our 2016 annual report.

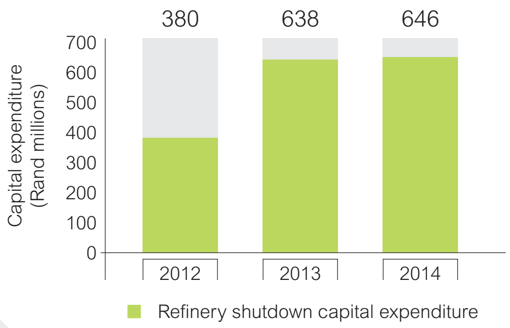
Q: How has the petroleum industry contributed towards capital investment in the economy?

A: The South African petroleum industry is Sub-Saharan Africa's largest crude refining sector with a nameplate capacity of 703 000 boe/d, which has remained constant since 2010.

Over the past three years the SAPIA member companies and its refineries have invested close to **R20 billion** into infrastructure development in the petroleum industry.



Over the same period, SAPIA member companies has invested about **R1.7 billion** in refinery maintenance.



Source: *SAPIA Annual Report for 2012, 2013 and 2014*

Through the investment spending by SAPIA member companies and its refineries it supports continued economic benefits to South Africa, such as economic growth, the creation of jobs and poverty alleviation.

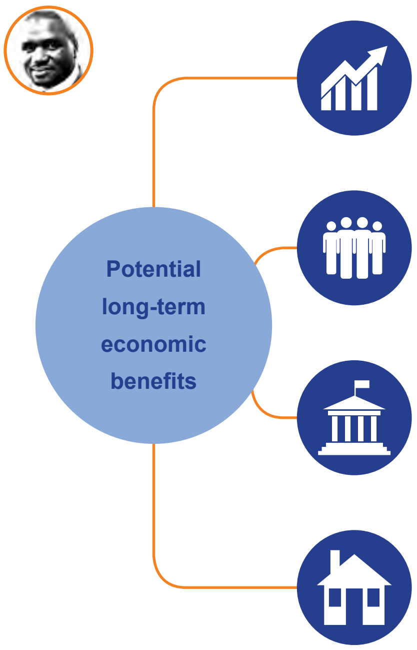
The following table shows the estimated economic activity created due to the infrastructure investment of R9 014 million and refinery maintenance of R646 million by the petroleum industry during 2014.

GDP impact (Rand millions)	Direct impact	Indirect impact	Induced impact	Total impact
Infrastructure development	R7 728 million	R2 529 million	R4 271 million	R14 538 million
Refinery maintenance	R609 million	R259 million	R300 million	R1 169 million
Total GDP impact	**R8 337 million**	**R2 799 million**	**R4 571 million**	**R15 706 million**

Source: *KPMG analysis from 2014 Social Accounting Matrix for South Africa*

The total estimated additional economic activity created due to the total investment spending in 2014 was in the order of **R15.7 billion**. Hence, the national GDP increased by this amount, due to investment by the petroleum sector. The direct impact accounts for 53%, which shows the importance of the so-called multiplier effect of capital investment in the petroleum industry on the South African economy. The investment spending on petroleum infrastructure in South Africa sustained about 39 000 jobs in 2014.

Q: What are the long-term economic benefits that could be realised because of additional investment into the petroleum industry?



Every **R1 new investment** in infrastructure development and refinery maintenance in the petroleum industry potentially adds an **additional R1.63** to the South African economy, highlighting the significant contribution infrastructure development and refinery maintenance makes to the economy, as well as efficiency and productivity thereof.

Additional investment into infrastructure development in the petroleum industry and refinery maintenance implies an additional **4 jobs per R1 million invested.**

Every **R1 new investment** into infrastructure development and refinery maintenance by the petroleum industry potentially adds **an additional 33 cents to national goverment revenue.**

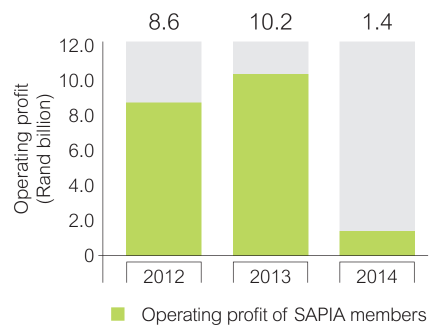
Future infrastructure investment into the petroleum industry and refinery maintenance implies **poverty alleviation impact** for the South African economy in that **2.8% of additional household income** generated will flow to low-income households.

Source: *KPMG analysis from 2014 Social Accounting Matrix for South Africa*

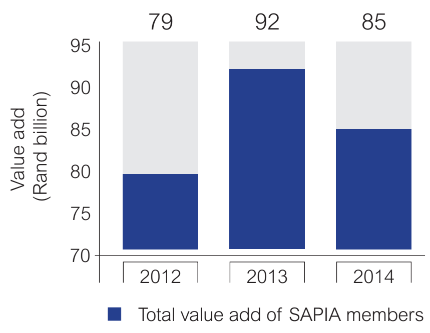
Q: How does the South African petroleum industry contribute towards the local economy?

A: In 2014, the joint turnover of the sector amounted to some **R365 billion**, paying over **R6 billion in salaries, wages and benefits** and **providing R72 billion in duties and levies** for the year. The sector **employs about 9 000 individuals** and provides **further employment to over 600 000** people economy-wide. The fuel sector contributes about **6.5% to the country's GDP** while supplying some 18% of South Africa's primary energy needs through annual sales of around **27 billion litres of liquid fuels**. It also collects over **R66 billion in fuel taxes on petrol and diesel**, which is an important source of revenue for the government.

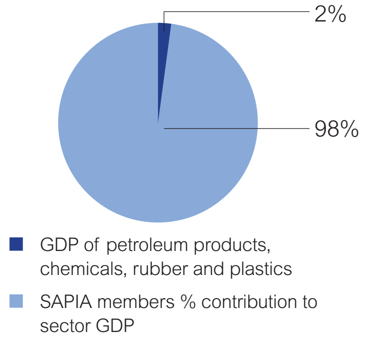
During 2014, the operating profit of the SAPIA members declined significantly, this year decreased by about 83% over the three years.



During 2014, SAPIA members generated **R85 billion** in value add. Even though there was a decrease from 2013 to 2014, the value add has grown by about **4% on average** over the three years.



SAPIA members are the **main contributers** to the petroleum products, chemicals, rubber and plastic sector, accounting for the **98%** of the sector's total GDP value in 2013.



Source: *StatsSA Statistical release P0441 Gross Domestic Product, Quarter 3, 2014; SAPIA Annual Report for 2012, 2013 and 2014*

The total additional GDP that was potentially created due to the revenue generated by the petroleum industry during 2014 was in the order of **R308 billion**. The indirect and induced GDP impact accounted for **74% of the total GDP impact**. This shows the importance of the midstream and downstream activities that take place in the industry as well as the so-called multiplier effect that the industry has on the South African economy. The total GDP impact represented **8.1% of South African GDP** in 2014.

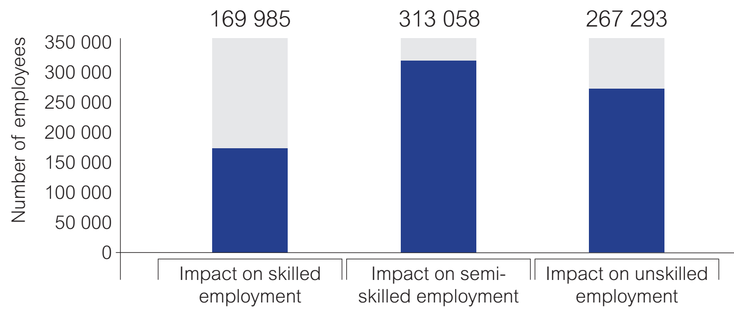
Q: How does the petroleum industry contribute towards promoting employment in the sector?

	Direct impact	Indirect impact	Induced impact	Total impact
Potential number of jobs sustained	80 455	291 417	378 463	750 335

The petroleum industry's operations sustained about **750 300 jobs** in South Africa during 2014, representing about **4.9%** of the total formal employment in South Africa.

The petroleum industry had a higher impact on the skilled and semi-skilled labour force than in the unskilled labour force.

Almost **64%** of the jobs created fall within these two categories.



Q: How does the petroleum industry contribute to public finance?

A: SAPIA members paid R20 million in income tax while about R72 billion was paid in the form of duties and levies in 2014. This amounts to approximately 8% of total annual government revenue, which shows the importance of the sector's tax contribution to government revenue. Corporate tax payments often only account for a relatively small proportion of the total tax and other contributions paid out by SAPIA members. Members however make a significant contribution through taxes paid by their employees and suppliers as well as through taxes collected on behalf of government, which include, VAT and excise duties.

The total income received by households was nearly R199.2 billion in 2014, an estimated R6.3 billion of which flowed to lower income households.

Source: *KPMG analysis from 2014 Social Accounting Matrix for South Africa*

During 2014, the operations of the petroleum industry in the economy increased total government revenue by an estimated R87.0 billion. This figure constitutes direct and indirect tax revenue, as well as the broader fiscal impacts generated through the linkages the petroleum industry has with other economic sectors.

Source: *KPMG analysis from 2014 Social Accounting Matrix for South Africa*

During 2014, the petroleum industry's operations contributed to a more efficient economy through the long-term nature of the economic benefit streams it created, especially in the downstream user sectors. The long-term economic benefits that could be realised are shown in the table below:

Potential long-term economic benefits

Every **R1 revenue generated** by the petroleum industry the economy gains an **additional R1.54.**

For every **R1 million of revenue generated** the petroleum industry sustains **4 jobs** per year.

For every **R1 revenue generated** by the petroleum industry, an additional **43 cents** will flow to national government.

Future revenue generated by the petroleum industry implies poverty alleviations for South Africa's economy. **3.2%** of additional household income generated through the industry will flow to **low-income households.**

Source: *KPMG analysis from 2014 Social Accounting Matrix for South Africa*

Q: How have SAPIA members contributed to community development?

A: Our members see themselves as good corporate citizens so the promotion of equality, prevention of unfair discrimination, corporate social responsibility, ethical behaviour and managing environmental impacts are central components of how they do business. The members are driven to leave a positive mark on the communities in which they operate. Being proactive and trustworthy corporate citizens and working for the common good are understood as much more than social investment, but is fundamental to the sustainability of the industry.

SAPIA members national CSI spend FY 2014/15

Total national CSI spend for the FY 2014/15 is in excess of R70 million

Education related projects	Welfare, safety & community projects	Environmental projects	Health projects
39%	35%	18%	8%
R27.3 million	R24.7 million	R12.4 million	R5.6 million

Statistics

Aggregate financial results of SAPIA members

Year ended 31 December	2006	2007	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*
Operating profit (R/m)	9 828	10 451	5 193	7 991	11 285	15 053	8 628	10 191	1 448	18 814	19 017
Interest paid (R/m)	(1 505)	(1 117)	(2 312)	(973)	(1 868)	(1 175)	(1 295)	(1 386)	(1 393)	(1 336)	(880)
Income tax (R/m)	(1 622)	(2 284)	(1 377)	(190)	(1 609)	(2 745)	(2 240)	(2 970)	15	(3 712)	(3 577)
Net income (R/m)	**6 701**	**7 050**	**1 503**	**6 828**	**7 808**	**11 134**	**5 092**	**5 834**	**69**	**13 766**	**14 560**
Total assets (R/m)	63 401	88 415	116 460	101 051	100 851	108 988	117 240	96 695	114 458	115 110	125 088
Capital expenditure (R/m)	4 494	4 958	6 070	5 573	5 091	5 855	6 844	4 950	9 659	6 031	6 502
Refinery shutdown	0	0	0	939	574	273	380	638	646	666	342
Other	0	0	0	4 634	4 518	5 582	6 465	4 312	9 014	5 365	6 160
After tax return on assets (%)	11	8	1	7	8	10	4	6	0	12	12
Sales volumes (bn litres)	32	32	35	29	22	20	29	29	31	34	33
Net income after tax (c/l)	21	22	4	24	36	55	18	20	0	40	44

Individual company financial data aggregated by Mr C McClelland (independent chartered accountant)

*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.

Value added statements

	2006	2007	2008	2009	2010	2011	2012*	2013*	2014*	2015*	2016*
Turnover (R/bn)	171	241	353	195	217	267	285	329	365	300	321
Net cost of products and services (R/bn)	126	179	279	144	164	187	206	236	280	202	198
Total value added (R/bn)	**45**	**62**	**73**	**51**	**53**	**79**	**79**	**92**	**85**	**98**	**123**
To pay employees gross salaries, wages and benefits (R/bn)	6	7	12	5	5	4	6	6	6	6	6
To pay the State tax in the form of											
Income tax (R/bn)	2	2	1	0.2	1	3	2	3	0.02	4.00	4.00
Duties and levies (R/bn)	30	40	48	40	43	54	63	66	72	83	94
To pay providers of capital											
Net finance expense (R/bn)	(0.2)	1	2	1	2	1	1	1	1	1	1
Dividends (R/bn)	4	4	4	2	(0.1)	4	2	2	1	3	4
Retained for future growth											
Depreciation (R/bn)	3	2	2	4	3	3	3	3	3	5	6
Retained income / other for the year (R/bn)	1	6	4	0.4	(1)	10	2	12	2	(4)	8
Total value added (R/bn)	**45**	**62**	**73**	**51**	**53**	**79**	**79**	**92**	**85**	**98**	**123**

Individual company financial data aggregated by C McClelland (independent chartered accountant)

*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.

Petrol wholesale margin (93 octane)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MPAR return (%)	0	0	0	0	0	0	0	0	0	0	0
Indicated margin increase (c/l)	0	0	0	0	0	0	0	0	0	0	0
Increase granted (in succeeding year)	0	0	5.37	6.2	3.0	-1.37	5.5	(27)	3	-0.30	2.40
Margin at year end (c/l)	39.3	39.3	44.67	50.87	53.87	52.5	58	31	33.5	33.2	35.6

*The Marketing of Petroleum Activities Return (MPAR) system was no longer in use from 2005.

A wholesale margin in line with the Regulatory Accounting System was implemented on 4 Dec 2013.

Sources of crude oil for SAPIA members: 2006 to 2016

Country of origin											
	2006	2007*	2008*	2009*	2010*	2011*	2012*	2013*	2014*	2015*	2016*
Algeria	0	0	66	0	0	0	0	0	0	0	0
Angola	1 144	3 054	3 598	3 817	3 409	1 948	3 356	2 444	2 614	3 348	4 000
Colombia	0	296	0	0	0	0	0	0	274	219	132
Equatorial Guinea	0	0	0	0	35	38	76	89	378	22	129
Kuwait	0	0	0	0	0	0	0	0	153	607	107
Liberia	0	0	0	395	0	0	0	0	0	0	420
Nigeria	2 935	3 386	2 517	3 963	3 594	3 755	4 310	4 336	6 658	7 291	6 131
North Sea / U.K.	0	0	0	0	0	0	0	0	0	0	183
Norway	0	76	35	74	37	0	0	0	0	0	270
Qatar	140	0	0	0	0	266	242	0	202	832	682
Saudi Arabia	6 486	5 876	6 265	6 968	4 584	4 793	8 437	9 723	8 120	4 895	7 939
United Arab Emirates	514	332	855	553	1 018	598	538	307	924	1 337	673
Total	**18 540**	**22 090**	**21 067**	**25 040**	**19 254**	**17 834**	**18 940**	**18 658**	**21 279**	**19 233**	**20 666**

*South African Revenue Service

Crude oil price movements: January 2010 to December 2016

Average monthly prices (US$/bbl)

	2010		2011		2012		2013		2014		2015		2016	
	Brent	Dubai	Brent	Dubai	Brent	Dubai	Brent	Dubai	Brent	Dubai	Brent	Dubai	Brent	Dubai
January	76	77	97	93	110	110	113	108	108	104	48	46	31	27
February	74	73	104	100	120	116	116	111	109	105	58	56	32	29
March	79	77	115	109	125	122	108	106	108	104	56	55	38	35
April	85	84	123	116	120	117	102	102	108	105	59	58	41	39
May	75	77	115	108	110	108	103	100	110	106	64	64	47	44
June	75	74	114	108	95	94	103	100	112	108	62	62	48	46
July	76	72	117	110	103	99	108	104	107	106	57	56	45	43
August	77	74	110	105	113	109	111	107	102	102	47	48	46	44
September	78	75	113	106	113	111	112	108	97	96	48	45	47	43
October	83	80	109	104	112	109	109	107	87	87	49	46	50	49
November	85	84	111	109	109	107	108	106	79	76	44	42	45	44
December	91	89	108	106	109	106	111	108	62	60	38	35	54	52
12-month average	**79**	**78**	**111**	**106**	**112**	**109**	**109**	**106**	**99**	**97**	**52**	**51**	**44**	**41**

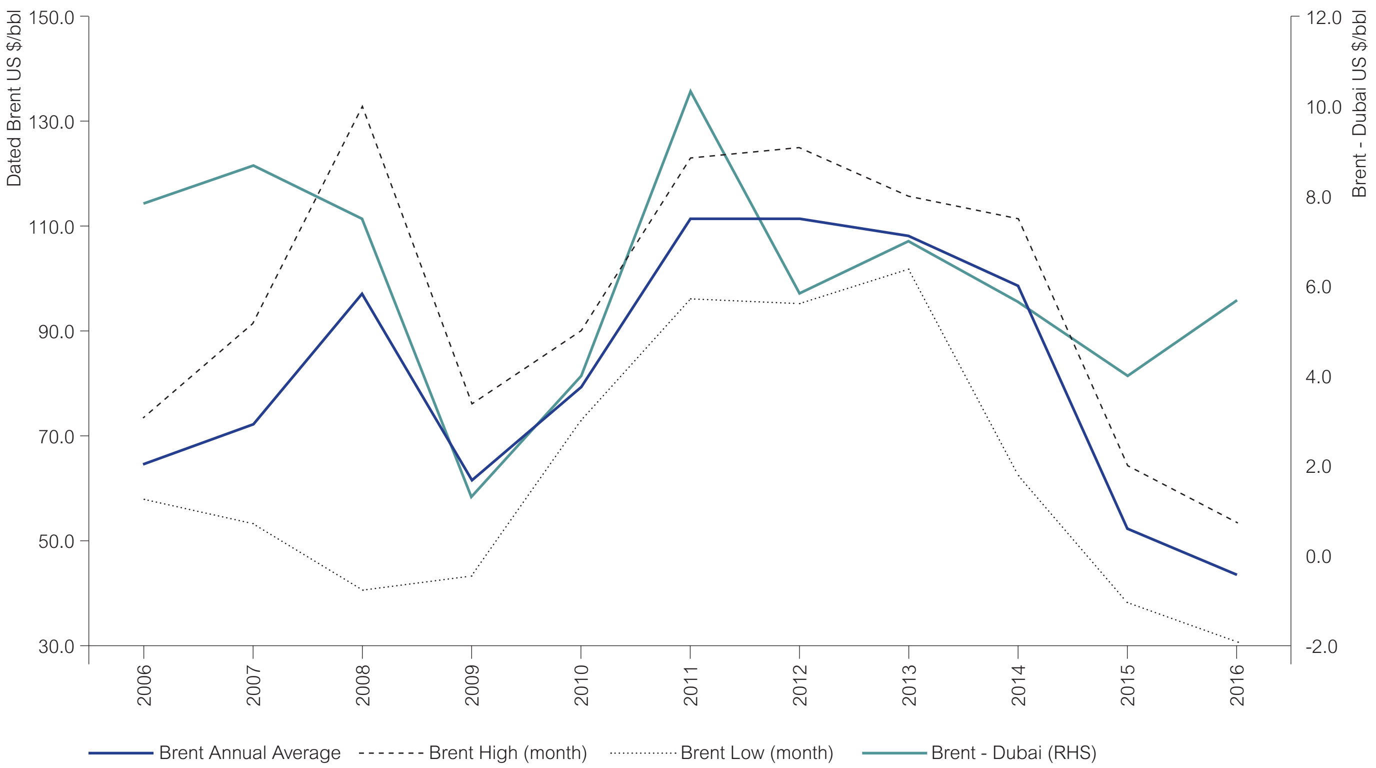


***Figure 5** Dated Brent and Dubai differential*

Brent crude prices

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Average US$price	65.1	72.5	97.0	61.5	97.5	111.3	111.6	108.7	99.0	52.0	43.7
Average rand price/barrel	422.6	511.5	548.5	520.8	715.6	810.2	918.4	1 050.7	1 074.0	661.9	643.2

Consumption of petroleum products in South Africa

	Millions of litres					
Year	Petrol	Diesel	Paraffin	Jet fuel	Fuel oil	LPG
2006	11 279	8 708	738	2 260	476	605
2007	11 558	9 755	696	2 402	465	636
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

* Source: Department of Energy website
* 2016 data sourced on 4 April 2017

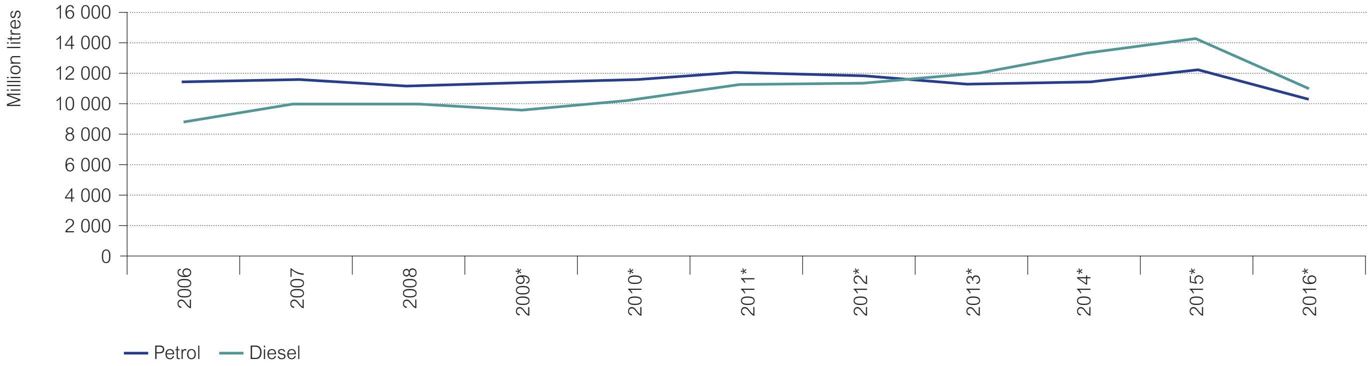


***Figure 6** Petrol and diesel consumption*

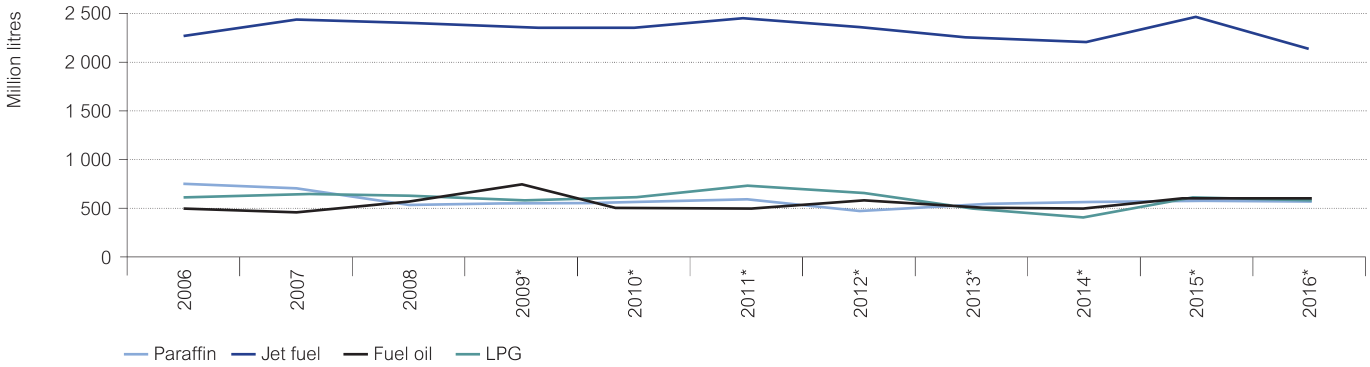


***Figure 7** Petroleum products consumption*

Petroleum products imports and exports

Thousand tonnes

	Imports				Exports			
Year	Petrol	Diesel	Jet fuel	LPG	Petrol	Diesel	Jet fuel	LPG
2016	1 047	3 716	83	62	868	1585	266	25
2015	1 402	5 451	217	30	816	1368	667	18
2014	863	4 197	229	43	750	1261	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	7.70	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
2007	1 272	2 343	229	7	296	728	64	26

*Source: South African Revenue Service

Capacity of South African refineries

Capacity (bbl/day)

Refineries	1992	1997	2007	2010	2013	2014	2015	2016
Sapref	120 000	165 000	180 000	180 000	180 000	180 000	180 000	180 000
Enref	70 000	105 000	125 000	120 000	120 000	120 000	120 000	135 000
Chevref	100 000	100 000	100 000	100 000	100 000	100 000	100 000	100 000
Natref	78 000	86 000	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	**513 000**	**651 000**	**708 000**	**703 000**	**703 000**	**703 000**	**703 000**	**718 000**

*Crude equivalent

Petrol/diesel consumption ratio

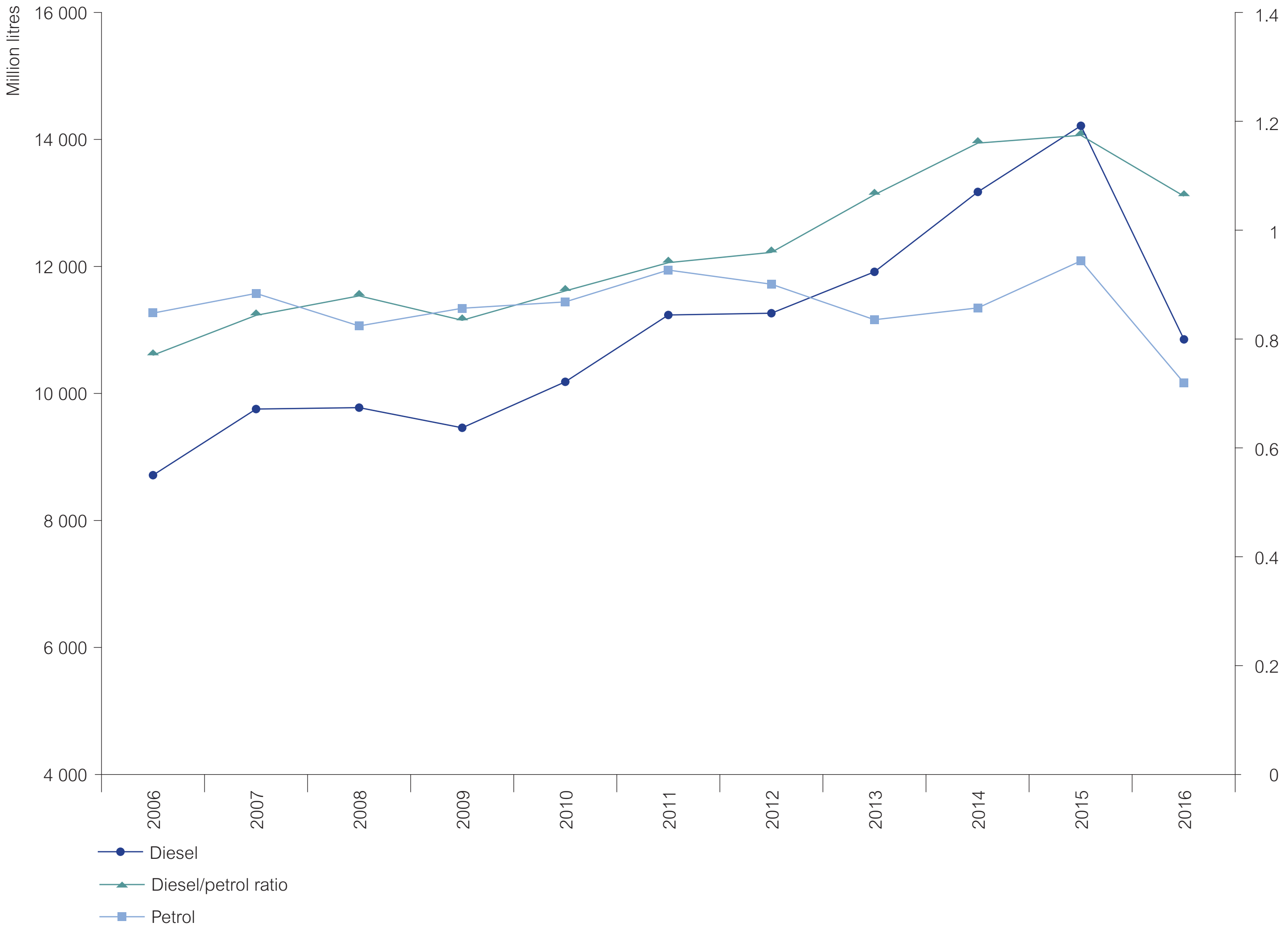


***Figure 8** Petrol and diesel consumption*

The ratio of demand between diesel and petrol in 2016 was about 10.8 parts diesel to 10.1 parts petrol which gives a ratio of 1.07. The ratio in 2014 was 1.17. Petrol consumption has continued to decreased in relation to diesel consumption from 2015 to 2016. The graph shows a significant drop in consumption of petrol and diesel in 2016 compared to previous years.

Prices in Gauteng: 30 June each year

Year	93 octane leaded petrol retail price (c/l)	0.05% sulphur diesel wholesale price (c/l)	Illuminating paraffin single maximum national retail price (c/l)	Liquefied petroleum gas maximum retail price (c/kg)
2006	636	600	589	
2007	711	625	629	
2008	983	1 080	1 186	
2009	736	646	586	
2010	827	766	723	0**
2011	1 007	926	918	2 068
2012	1 150	1 074	1 048	2 207
2013	1 216	1 137	1 106	2 289
2014	1 379	1 276	1 271	2 501
2015	1 308	1 167	1 006	2 217
2016	1 296	1 129	718	2 185

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

** Effective from 14 July 2010

Source: June price schedule by DOE

Price trends

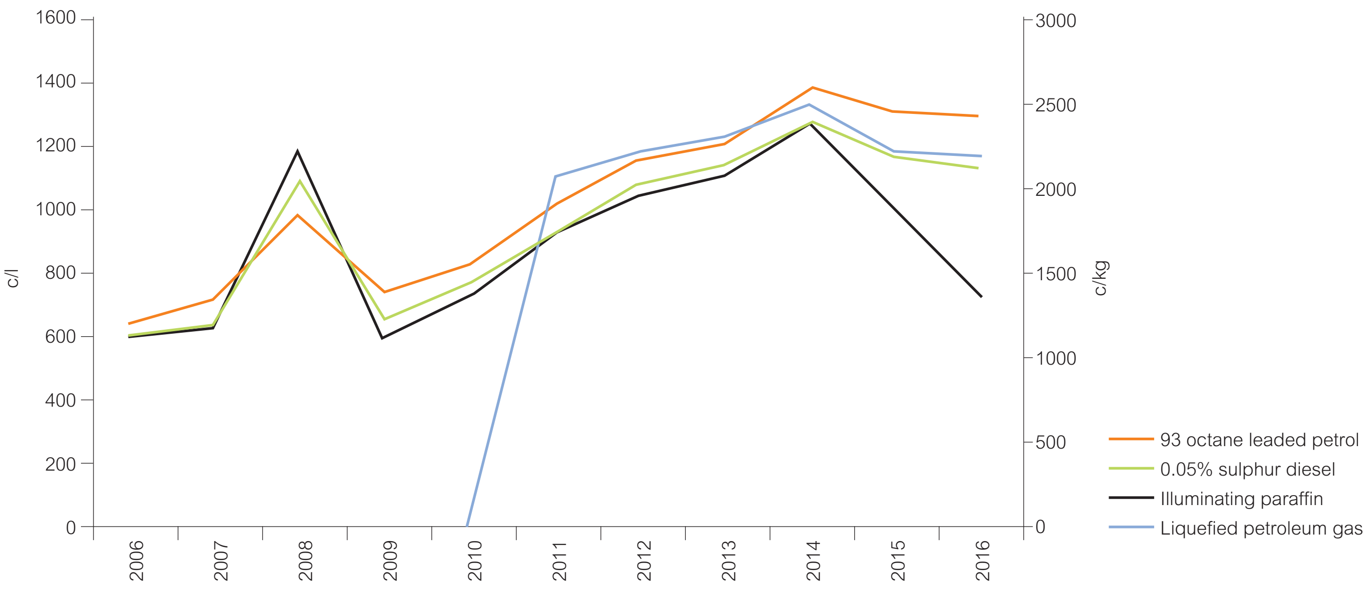
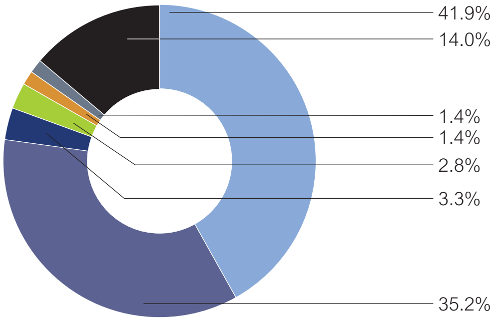


***Figure 9** Prices in Gauteng: 30 June each year*

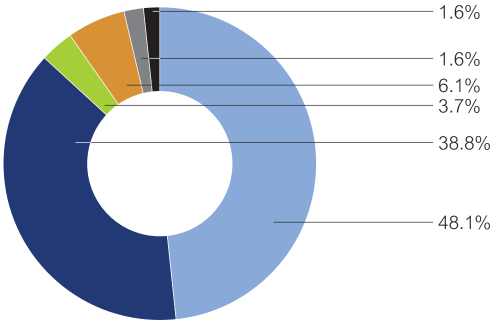
Petrol, diesel & LPG price breakdown



Contribution to the basic fuel price	527.870 c/l
Government duties and levies	443.330 c/l
Zone differential	41.000 c/l
Wholesale margin	35.600 c/l
Secondary storage	17.900 c/l
Secondary distribution	17.300 c/l
Dealer margin	176.400 c/l
Pump rounding	-0.400 c/l

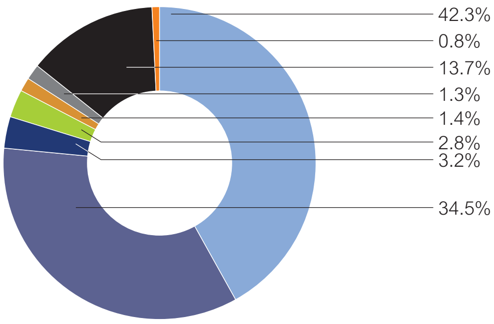
Source: Media release by Department of Energy

***Figure 10** 93 Octane petrol: Gauteng retail price 1 259.0 c/l in December 2016*



Contribution to the basic fuel price	530.630 c/l
Government duties and levies	428.340 c/l
Zone differential	41.000 c/l
Industry margin	67.660 c/l
Service differential	17.900 c/l
Service differential	17.300 c/l

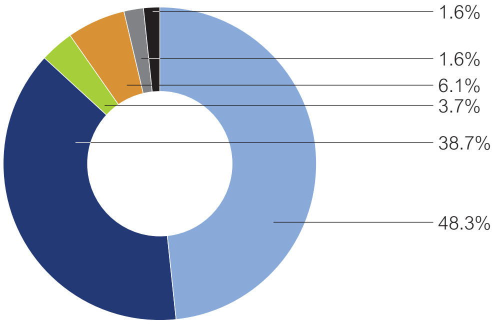
***Figure 11** Diesel (0.05% S): Gauteng wholesale price 1 102.83 c/l in December 2016*



Contribution to the basic fuel price	543.870 c/l
Government duties and levies	443.330 c/l
Zone differential	41.000 c/l
Wholesale margin	35.600 c/l
Secondary storage	17.900 c/l
Secondary distribution	17.300 c/l
Dealer margin	176.400 c/l
Pump rounding	-0.400 c/l
DSML	10.000 c/l

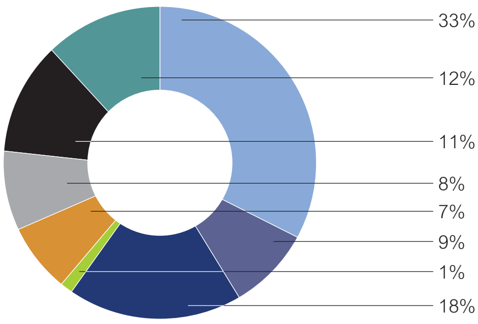
Source: Media release by Department of Energy

***Figure 12** 95 Octane petrol: Gauteng retail price 1 285.0 c/l in December 2016*



Contribution to the basic fuel price	535.030 c/l
Government duties and levies	428.340 c/l
Zone differential	41.000 c/l
Industry margin	67.660 c/l
Service differential	17.900 c/l
Service differential	17.300 c/l

***Figure 13** Diesel (0.005% S): Gauteng wholesale price 1 107.23 c/l in December 2016*



Maximum refinery gate price	691.345 c/kg
Primary transport costs	182.295 c/kg
Operating expenses	380.591 c/kg
Working capital	28.849 c/kg
Depreciation	140.326 c/kg
Gross margin: cylinder-filling plant	179.306 c/kg
Retail margin (15%)	240.407 c/kg
Value added tax (14%)	258.037 c/kg

Source: Media release by Department of Energy

***Figure 14** LPG maximum retail price: Gauteng retail price 2 101 c/kg in December 2016*

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

Petrol

Year	Customs & Excise Duty	Fuel Levy	Road Accident Fund Levy	Equalisation Fund Levy	Petroleum Products Levy	Demand Side Management Levy*	Incremental Inland Transport Recovery Levy	Total Imposts
2006	4.0	116.0	36.5	0	0	10.0	0	166.5
2007	4.0	121.0	41.5	0	0.19	10.0	0	176.7
2008	4.0	127.0	46.5	0	0.15	10.0	1.5	189.2
2009	4.0	150.0	64.0	0	0.15	10.0	3.0	231.15
2010	4.0	167.5	72.0	0	0.15	10.0	3.0	256.65
2011	4.0	177.5	80.0	0	0.15	10.0	3.0	274.65
2012	4.0	197.5	88.0	0	0.15	10.0	3.0	302.65
2013	4.0	212.5	96.0	0	0.15	10.0	3.0	325.65
2014	4.0	224.5	104.0	0	0.15	10.0	0.0	342.65
2015	4.0	255.0	154.0	0	0.15	10.0	0.0	423.15
2016	4.0	285.0	154.0	0	0.33	10.0	0.0	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 of 93 octane was 1 259 c/l in December 2016. Taxes and levies as a % of this retail price: 33.61%.

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%
2006	4.0	100.0	36.5	0	0	0	0	140.5	0	0%
2007	4.0	105.0	41.5	0	0.19	0.01	0	150.7	0	0%
2008	4.0	127.0	46.5	0	0.15	0.01	1.5	179.2	0	0%
2009	4.0	135.0	64.0	0	0.15	0.01	3.0	206.2	0	0%
2010	4.0	152.5	72.0	0	0.15	0.01	3.0	231.7	0	0%
2011	4.0	162.5	80.0	0	0.15	0.01	3.0	249.7	0	0%
2012	4.0	182.5	88.0	0	0.15	0.01	3.0	277.7	0	0%
2013	4.0	197.5	96.0	0	0.15	0.01	3.0	300.7	0	0%
2014	4.0	209.5	104.0	0	0.15	0.01	0.0	317.7	0	0%
2015	4.0	240.0	154.0	0	0.15	0.01	0.0	398.2	0	0%
2016	4.0	270.0	154.0	0	0.33	0.01	0.0	428.3	0	0%

Gauteng wholesale price of 0.05% sulphur diesel was 1102.83 c/l in December 2016. Taxes and levies as a % of the wholesale price: 36.10%.

The total annual amounts of fuel taxes collected on petrol, diesel and paraffin (calculated on 2016 volumes at June 2016 rates)

	Petrol	Diesel	Illuminating paraffin
Sales volumes (million litres)	10 160	10 846	558
95 unleaded petrol in the DSML area (million litres)**	5 283	0	0
Customs and Excise duty (c/l)	4.00	4.00	0
Fuel levy (c/l)	285.00	270.00	0
Road accident fund levy (c/l)	154.00	154.00	0
Equalisation fund levy (c/l)	0	0	0
Value Added Tax (VAT)	0	0	0
Demand side management levy (DSML) (c/l)	10.00	0	0
IP marker levy (c/l)	0	0.01	0
Petroleum products levy (c/l)	0.33	0.33	0
Petroleum products levy (c/l)	0.15	0.15	0

	Million rands			Total
Customs/ Excise duty	406	434	0	840
Fuel levy	28 956	29 283	0	58 239
Road accident fund levy	15 646	16 702	0	32 349
Equalisation fund levy	0	0	0	0
Value Added Tax (VAT)	0	0	0	0
Demand side management levy (DSML)*	528	0	0	528
IP marker levy	0	1	0	1
Petroleum products levy***	34	36	0	69
Total	**45 570**	**46 457**	**0**	**92 027**

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

** Based on SAPIA assumptions

*** 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 2016. 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	People with disability*	
	A	C	I	W	A	C	I	W	Male	Female		Male	Female
Top management	15	10	4	27	16	8	4	5	26	2	117	3	0
Senior management	114	61	57	110	53	24	20	40	19	4	502	8	1
Professionally qualified and experienced specialists and mid-management	581	345	258	428	388	209	120	212	34	9	2 584	18	6
Skilled technical and academically qualified workers, junior management, supervisors, foreman and superintendents	888	567	216	352	684	316	119	209	5	1	3 357	50	26
Semi-skilled and discretionary decision making	1 487	325	101	60	445	140	34	56	6	2	2 656	23	40
Unskilled and defined decision making	144	7	2	1	46	7	0	0	5	0	212	11	13
TOTAL PERMANENT	**3 229**	**1 315**	**638**	**978**	**1 632**	**704**	**297**	**522**	**95**	**18**	**9 428**	**113**	**86**
Temporary employees	160	140	22	44	116	37	19	9	6	1	554	0	1
GRAND TOTAL	**3 389**	**1 455**	**660**	**1 022**	**1 748**	**741**	**316**	**531**	**101**	**19**	**9 982**	**113**	**87**

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

Performance indicators	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
(Not including refineries)										
Safety: staff and contractors										
Fatalities	7	17	7	27	8	10	9	14	10	3
Lost time injuries	49	70	64	51	44	43	26	25	16	23
Hours worked (million)	28.2	91.6	28.7	24.6	26.6	30.0	28.9	31	34.9	65.4
Total recordable rate (TRR), fatalities, lost time injuries and medical treatment cases per 200 000 hours worked.	**0.8**	**1.1**	**0.8**	**0.4**	**0.5**	**0.4**	**0.4**	**0.6**	**0.2**	**0.3**
Environment:										
Fires	24	25	16	33	16	13	29	21	32	31
Health:										
Occupational illnesses	1	1	1	2	1	2	1	1	1	1
Security:										
Hijackings: on retail forecourts	17	11	26	17	5	6	9	9	9	0
Cash-in-transit robberies	49	56	67	31	18	27	11	17	24	26
Retail robberies	651	782	611	430	156	222	214	274	410	381

Crude refineries resource consumption and waste/emissions

		2009	2010	2011	2012	2013	2014	2015	2 016
Water usage: litres	**Total**	**11 053 410**	**11 633 126**	**11 757 598**	**11 234 343**	**11 181 656**	**10 644 383**	**8 588 691**	**7 774 810**
	Municipal	7 495 492	6 794 633	6 702 822	6 507 540	6 651 098	6 284 621	5 944 116	6 544 507
Electricity consumption: Gwh		936	925	1 207	850	863	932	895	950
SO_2 emissions: tons		38 024	30 246	19 440	21 210	21 677	22 054	21 206	20 166
PM emissions: tons		1 251	976	728	891	983	962	1 517	866
CO_2 emissions: tons		3 383 713	3 183 018	2 734 124	3 164 964	3 144 239	3 447 894	2 653 748	3 643 580
Waste: tons	**Total:**	**28 455**	**27 902**	**16 619**	**16 952**	**39 177**	**24 190**	**37 130**	**40 345**
	Hazardous:	21 003	23 249	12 692	11 487	26 170	18 606	27 317	32 239
	Non-hazardous:	7 442	4 653	3 927	5 465	13 007	5 583	9 813	8 106

Crude and coal/gas-to-liquid refineries health and safety indicators

Indicator	2010	2011	2012	2013	2014	2015	2016
Fatalities	3	3	0	1	0	3	1
Lost time injuries (LTI)	63	36	38	15	28	29	47
Exposure hours	70 971 882	76 971 672	19 241 699	23 530 093	61 993 158	54 175 090	53 412 875
Occupational illnesses	1	11	1	16	23	45	25
Total Recordable Rate (TRR) (fatalities, LTI and medical treatment cases per 200k hours worked).	**0.57**	**0.43**	**0.8**	**1.87**	**0.27**	**1.52**	**0.99**

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Acronyms

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
CO_{2e}	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
MIBCO	Motor Industry Bargaining Council
MDZ	Magisterial district zones
MPP	Multi-product pipeline
MTT	Ministerial task team
NEMA	National Environmental Management Act
NERSA	National Energy Regulator of South Africa
NICOLA	Network for Industrially Contaminated Land in Africa
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
PPA	Petroleum Products Amendment Act
PPC	Parliamentary Portfolio Committee
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
SSP	Sector Skills Plan
TFR	Transnet Freight Rail
TOR	Terms of reference
TPL	Transnet Pipeline
WACC	Weighted average cost of capital

Production

NOVA COMMUNICATIONS

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