

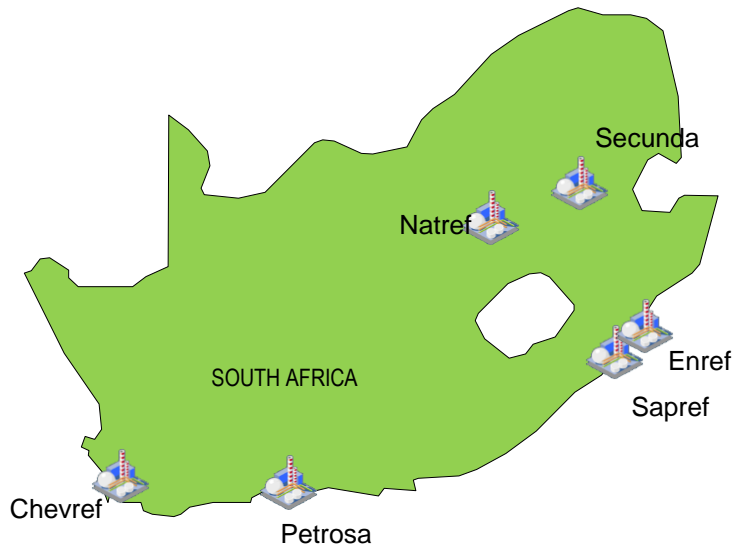
# **SAPIA Cleaner Fuels**

**March 2018**

# About SAPIA

*The South African Petroleum Industry Association (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 contributing to the development of regulation in certain areas of South African policy; proactively engaging with key stakeholders; sharing research information; providing expert advice; and communicating the industry's views to government, members of the public and the media.*

# South African Refining Fleet



Refinery	Location	Nameplate Capacity (bpd)
Natref	Sasolburg	108 000
Sapref	Durban	180 000
Enref	Durban	120 000
Chevref	Cape Town	100 000
SSF	Secunda	150 000
PetroSA	Mossel Bay	45 000
Capacity		703 000

Note: The above figures are nominal, nameplate capacities, indicative of possible crude throughput.

The refining fleet is geographical dispersed located in the major economic regions of the country producing;

- LPG
- Main fuels (petrol and diesel)
- Illuminating Paraffin (IP)
- Jet Fuel
- Bitumen (asphalt)
- Heavy Fuel Oil (HFO)
- Solvents
- Sulphur

Self sufficient in IP / Jet Fuel / HFO / Sulphur with some imports of bitumen and solvents. Major imports of petrol and diesel

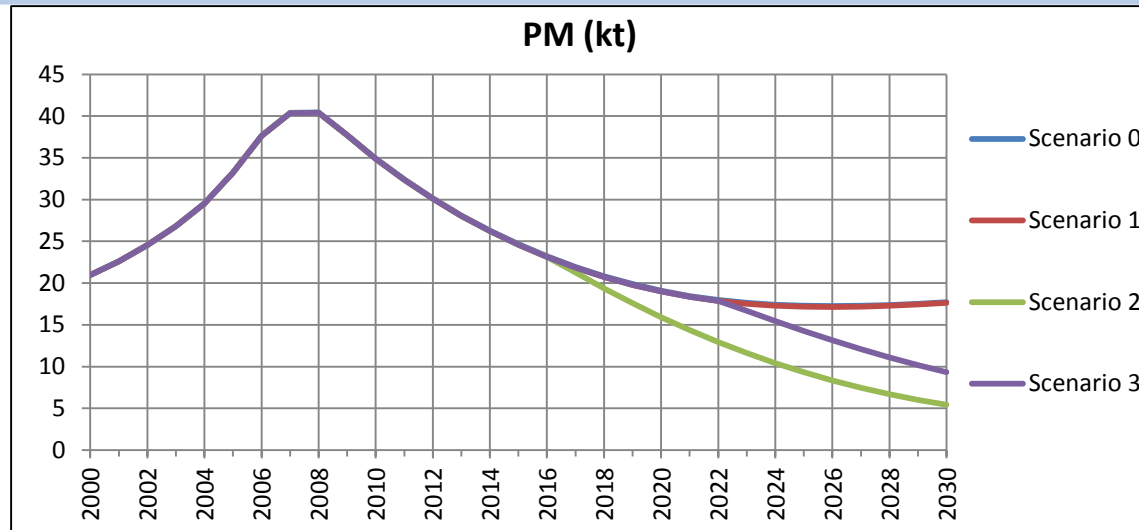
# Industry contribution to SA economy

- Oil industry supports employment ~ 700 000 people (direct, indirect and induced)
  - ~400 000 in refining sector alone
  - Direct employment ~100 000 people – 70% of which are fuel attendants
- Contribution to national GDP of 8.5% in 2014 with refining accounting to 65% of this contribution (excluding C stores, LPG and bitumen)
- Refinery activities contributed additional economic activity of R213 billion, and retail activities (excl. C stores) R80 billion
- Foreign exchange savings estimated in excess of R25bn (~\$2,5bn)
- Investment in infrastructure ~ R9bn and refinery activities R0.6bn
- CSI spend R70 million with ~40% on education projects and slightly less on community focused only projects
- Study directionally similar to Woodmac study done for ARA

# South African Clean Fuels Program

- 2006 – introduction of Clean Fuels 1 program
  - Diesel - two grades – 50 ppm S and 500 ppm S
  - Gasoline – ULP and LRP with 3 octane grades (91 / 93 / 95)
- 2012 – regulation to introduce Clean Fuels 2 by 1 July 2017
  - Refining industry position – contingent on finding a mechanism to fund necessary investments due to price regulated market
- June 2017 – rescinding and replacement of 2012 regulations. Now CF 2 will be at some date in the future to be decided by the Minister
- Clean Fuels 2 regulations;
  - Gasoline – ULP / LRP at 10 ppm S with aromatics, olefins and benzene limits (equivalent to enabling fuels for Euro V)
  - Diesel 10 ppm S and provision for B XX (10 – 50%) grades
- Question regarding the funding of investments means SA fuel quality beginning to lag Africa – recognised by Government and action required

# Fuel quality impacts



- Clean Fuels 1 has had an impact on noxious tail pipe pollutants
  - Since 2008 mandatory homologation of new vehicles to Euro II emission standards
- DEA study in 2013 showed that introduction of CF2 would provide a benefit to the country of the order of R210 bn
- Despite delay of CF2 a further regulatory intervention required as soon as possible so that benefits can be maintained

# Liquid Fuel Market developments

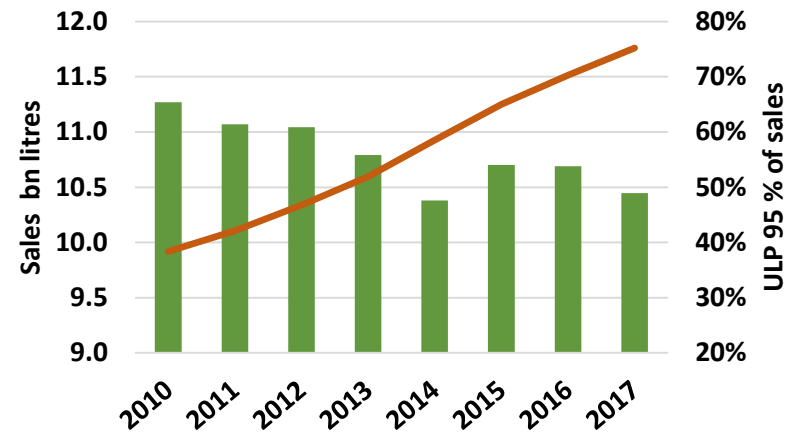
## Gasoline market

- Petrol consumption stagnant to declining – flat long term trend (imports < 5% of market)
- Traditionally a two tier market – low octane inland (93) / high octane (95) at the coast
- High octane (95) demand ~ risen from 35% of total gasoline market to now ~ 78%
- LRP penetration now <3%
- Challenges for refiners to meet ULP high octane demand and CF2

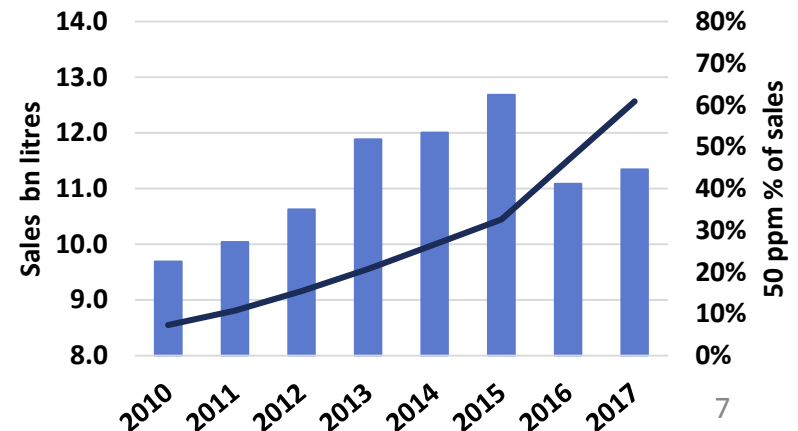
## Diesel market

- Diesel demand linked to GDP growth – growth continuing with imports ~40% of market demand
- 50 ppm diesel consumption - 2017 average ~60% but now closer to 70% - CAGR ~35% since 2010
- Refiners responding to 50ppm market by switching to manufacture this product
- 10 ppm production may present a severe challenge (hydrogen, plant capacity)

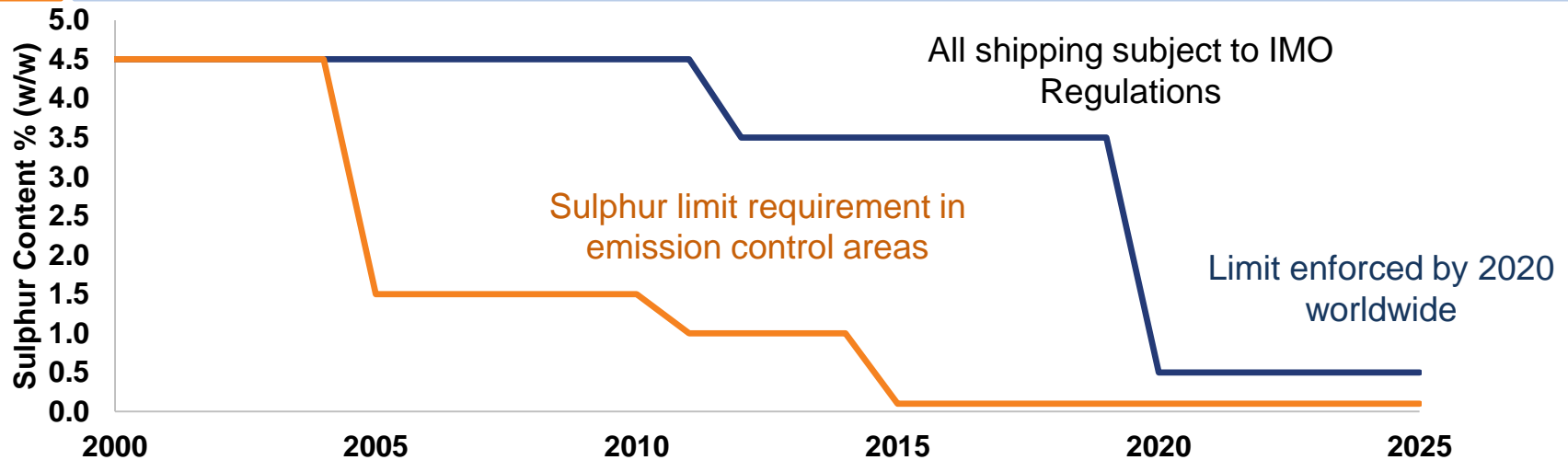
Consumption / RON 95 penetration



Diesel demand / LSD penetration



# Marpol Annex VI



- Decision by IMO in 2016 to apply a sulphur cap on bunker fuels of 0.5% effective 1 January 2020
- Cap aimed at shipping to meet their environmental obligations
- Likely see a rise in bunker costs worldwide (some estimates \$50bn)
- Many refiners will be stressed to meet the residual fuel sulphur limit and the disposal of this product likely to compete with coal
- Probably see a switch to distillate fuels to meet the cap - wider implications in the diesel market.



# Way forward

- In house studies show that a regulatory intervention is required by early next decade to preserve (at least) 2006 benefits
- Irrespective of any regulatory intervention the market will decide for both gasoline and diesel
- Refining industry will find it difficult to respond to cleaner fuels challenge without assistance from government (est investment ~\$3.9bn (2009) with no return)
  - Marpol presents a further, immediate, challenge
- Nevertheless we are working actively with the DoE to sort out obstacles to CF 2 implementation
  - Likely require some give and take from industry and government
- However, the story is not only about cleaner fuels but also manufacturing, job sustainability, foreign exchange exposure, the provision of speciality products .....

# End

Thank you  
Dankie  
Ngiyathokoza  
Ke a leboha  
Ke a leboga  
Ke a leboga  
Siyabonga  
Inkomu  
Ndo livhuwa  
Enkosi  
Ngiyabonga