

# Petroleum Regulation Hydrocarbons Policy



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Department:  
Energy  
**REPUBLIC OF SOUTH AFRICA**

# CLEANER FUELS STRATEGY

24 JULY 2019

SOUTH AFRICAN NATIONAL WORKSHOP ON  
IMPLEMENTATION OF MARPOL VI ON 0.50% SULPHUR LIMIT

PepperClub Hotel, Cape Town, South Africa

**Ms. Vania Mahotas, Deputy Director: Petroleum Regulation, Hydrocarbons Policy**

# Overview

- Background
- Clean Fuels (CF) Roadmap
- Summary of CF Regulations
- Why CF2 has not been implemented to date
- Way Forward

# Background

- Broader considerations, such as fuel supply and security, environmental factors, health impact
- Need for Cleaner Fuels
- Government intends to improve the quality of transport fuels.

# Broader Considerations

- Interdependence of issues when planning and implementing reduction of sulphur levels in fuels
- Global Economy: competitiveness and growth
- Administration: environmental legislation, fiscal policy, degree of public intervention
- Security of Supply: imports of cleaner fuels, flexibility and logistics
- Refining Industry
- Environment and Health: emissions reduction, exposure assessments, cross media effects (CO<sub>2</sub>, water)
- Vehicle Emissions and Technologies: vehicle fleet baseline, emission standards

# Supporting Principles for Cleaner Fuels

- Improvement in ambient urban air quality
- Providing fuels that allow new efficient vehicle technology to operate
- Policy and Industry certainty
- Support for all stakeholders that underpin the RSA economy and create jobs, such as automotive industry and the APDP (Automotive Production and Development Program).

# SA CLEANER FUELS ROADMAP

- Regulations regarding Fuel Specifications and Standards in June **2006 Cleaner Fuels One (CF1)** which came into effect January **2008**
- Prohibition of the addition of lead into all grades of petrol
- Reduction of the level of sulphur in diesel from 3000 parts per million (ppm) to 500 ppm in 2006.



# CLEAN FUELS ROADMAP (cont...)

- Discussion Document on the Review of Fuel Specifications and Standards for South Africa published in **2011**
- the Amendment Regulations regarding Fuel Specifications and Standards in June **2012**(referred to as **CF2 Regulations**), to be effective 01 July 2017.
- Published revised CF2 Regulations for Public Comments June **2016**
- CF2 Regulations promulgated on 23 June **2017**
- The NEW implementation date will to be announced by the Minister through the government gazette
- South Africa should migrate directly from the current fuel specifications and standards (CF1) which are compatible with Euro 2 emissions standards to the improved fuel specifications and standards which are equivalent to Euro 5 emissions standards (CF2).
- CF2 improved the sulphur content in both petrol and diesel to be reduced from **500 ppm** to **10 ppm**.





# Comparative Summary of the Clean Fuel Regulations

## Unleaded Petrol

SPECIFICATIONS	Regulation 627 of JUNE 2006 (CF1)	Regulation 431 of JUNE 2012 (CF2)	Regulation 582 of June 2017 REGULATIONS
<b>UNLEADED PETROL</b>	METAL-FREE UNLEADED PETROL WITH RON 91,93 or 95	UNLEADED PETROL WITH RON 93 or 95	UNLEADED PETROL WITH RON 93 or 95
<b>Lead</b>	<13mg/l	<13mg/l	<5mg/l
<b>Aromatics</b>	<50% v/v	<35% v/v	<35% v/v
<b>Benzene</b>	<5% v/v	<1% v/v	<1% v/v
<b>Sulphur</b>	Not specified	10mg/kg	10mg/kg
<b>Olefins</b>	Not specified	Not specified	<18% v/v
<b>Manganese</b>	Only in definitions	18mg/l	<18mg/l

# Comparative Summary of the Clean Fuel Regulations

## Metal Containing Unleaded Petrol

	Regulation 627 of JUNE 2006 (CF1)	Regulation 431 of JUNE 2012 (FINAL REGULATIONS)	Regulation 582 of June 2017 REGULATIONS
SPECIFICATIONS	<b>METAL-CONTAINING UNLEADED PETROL WITH RON 91,93 or 95</b>	<b>LEAD REPLACEMENT PETROL WITH RON 93 or 95</b>	<b>LEAD REPLACEMENT PETROL WITH RON 93 or 95</b>
Lead	<13 mg/l	<13 mg/l	<b>&lt;5mg/l</b>
Manganese	<36mg/l	<36mg/l	<36mg/l
Potassium	<10mg/l	<10mg/l	<10mg/l
Phosphorus	<14mg/l	<14mg/l	<14mg/l
Aromatics	<50% v/v	<35% v/v	<35% v/v
Benzene	<5% v/v	<1% v/v	<1% v/v
Sulphur	Not specified	10mg/kg	10mg/kg
Olefins	Not specified	Not specified	<b>&lt;18% v/v</b>
	<b>Only one of manganese, potassium or phosphorous-based additives may be added</b>	<b>Only one of manganese, potassium or phosphorous-based additives may be added</b>	<b>Only one of manganese, potassium or phosphorous-based additives may be added</b>

# Comparative Summary of the Clean Fuel Regulations

## Diesel (including Biodiesel)

	Regulation 627 of JUNE 2006 (CF1)	Regulation 431 of JUNE 2012 (FINAL REGULATIONS)	Regulation 582 of June 2017 REGULATIONS
<b>SPECIFICATIONS</b>	<b>STANDARD GRADE DIESEL</b>	<b>LOW-SULPHUR DIESEL</b>	<b>LOW-SULPHUR DIESEL</b>
<b>Sulphur</b>	<500mg/kg	10mg/kg	10mg/kg
<b>Biodiesel</b>	<5% v/v	<5% v/v	<5% v/v
<b>B10</b>	<10% v/v biodiesel	<10% v/v biodiesel	5 >15% v/v biodiesel
<b>B20</b>	<20% v/v biodiesel	<20% v/v biodiesel	15 > 25% v/v biodiesel
<b>B30</b>	<30% v/v biodiesel	<30% v/v biodiesel	25 > 35% v/v biodiesel
<b>B40</b>	Not mentioned	Not mentioned	35 > 45% v/v biodiesel
<b>B50</b>	<50% v/v biodiesel	<50% v/v biodiesel	45 > 55% v/v biodiesel
<b>B100</b>	100% biodiesel	100% biodiesel	100% biodiesel
	<b>LOW-SULPHUR DIESEL</b>	<b>LOW-SULPHUR DIESEL</b>	<b>LOW-SULPHUR DIESEL</b>
<b>Sulphur</b>	< 50mg/l	<10mg/kg	10mg/kg

# WHY CF2 REGULATIONS HAS NOT BEEN IMPLEMENTED TO DATE

- The effective date of 01 July 2017 was informed by the time required to finalize implementation issues and allow sufficient time for refiners to upgrade their refineries to manufacture CF2 quality fuels.
- Having considered that implementation of the CF2 quality fuels by 01 July 2017 was no longer possible since the implementation issues and refineries upgrade in order to manufacture CF2 quality fuels were not finalized, the Department deemed it necessary to repeal the CF2 Regulations with implementation date of 01 July 2017

# WHY CF2 REGULATIONS HAS NOT BEEN IMPLEMENTED TO DATE (CONT...)

- To comply with the CF2 Regulations, oil companies have to invest in refinery upgrades because the current configurations of their refineries do not allow them to produce cleaner fuels as specified by the CF2 regulations. The cost of such refinery upgrades was estimated at US \$3.9 billion (in 2009 figures).
- The oil refining companies have expressed their unwillingness to invest in refinery upgrades because of the size investments required coupled with the absence of the guarantee that they are going to recover their investments fully.
- Oil refining companies propose amongst other things, the imposition of a levy over and above the normal prices of the regulated products as a means of recovering their investments over a relatively short period of time; e.g. 5 years. This levy would be collected from consumers over and above the CF2 products' prices.

# WAY FORWARD ON CLEANER FUELS

- CF2 remains Government policy, therefore, the next step would be to finalize the implementation date in order to provide policy certainty
- Minister to announce the new implementation date of the Clean Fuels 2 Regulations
- Continue to engage stakeholders on how to best realize these objectives

# Thank You!

**Ms. Vania Mahotas**

**Deputy Director: Petroleum Regulation**

**Hydrocarbons Policy**