

IMPROVING AIR QUALITY

National Fuel Quality Standards for Australia

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Fuel Quality Standards - Petrol

Parameter	Proposed standard	Grade	Date of effect
Sulfur	500 ppm (max)	ULP/LRP	1 Jan 2002
	150 ppm (max)	PULP	
	150 ppm (max)	All grades	1 Jan 2005
Research octane number (RON)	91 RON (min)	ULP	1 Jan 2002
	95 RON (min)	PULP	
	96 RON (min)	LRP	
Distillation	FBP 210°C (max)	All grades	1 Jan 2005
Olefins	Decision deferred		
Aromatics	45% pool average over 6 months with a cap of 48%	All grades	1 Jan 2002
	42% pool average over 6 months with a cap of 45%		1 Jan 2005

Fuel Quality Standards - Petrol

(Continued)

Parameter	Proposed standard	Grade	Date of effect
Benzene	1% max by vol	All grades	1 Jan 2006
Lead	0.005g/L (max)	All grades	1 Jan 2002
Oxygen content	2.7% v/v (max)	All grades (no ethanol)	1 Jan 2002
Phosphorus	0.0013g/L (max)	ULP, PULP	1 Jan 2002
Ethanol	Standard (limit) to be set within 12 months.		
MTBE	Decision deferred		
DIPE, ETBE, TAME, ETAE	1% by volume (max)	All grades	1 Jan 2002
TBA	0.5% by volume (max)	All grades	1 Jan 2002

Fuel Quality Standards - Diesel

Parameter	Proposed standard	Date of effect
Sulfur	500 ppm	31 Dec 2002
	50 ppm	1 Jan 2006
Cetane Index	46 (min) index	1 Jan 2002
Density	820 to 860 kg/m ³	1 Jan 2002
	820 to 850 kg/m ³	1 Jan 2006
Distillation T95	370°C (max)	1 Jan 2002
	360°C (max)	1 Jan 2006
PAHs	11% m/m (max)	1 Jan 2006
Ash and suspended solids	100 ppm (max)	1 Jan 2002
Viscosity	2.0 to 4.5 cSt @ 40°C	1 Jan 2002

Australian Refinery Production

Refinery	Petrol Production Megatons pa	Diesel Production Megatons pa
Caltex:		
Lytton QLD	1.9	1.4
Kurnell NSW	2.3	1.2
BP:		
Bulwer Island QLD	1.1	0.9
Kwinana WA	1.6	2.1
Mobil:		
Altona VIC	1.8	1.2
Port Stanvac	1.0	0.8
Shell:		
Geelong VIC	1.7	1.6
Clyde NSW	1.6	1.1

Fuel Quality Discussion Papers

No.	Title	Released
	Review of Fuel Quality Requirements for Petrol and Diesel Volumes 1 and 2	March 2000
1	Summary Report of the Review of Fuel Quality Requirements for Australian Transport	May 2000
2.	Proposed Standards for Fuel Parameters (Petrol and Diesel)	May 2000
2A	Management of Petrol Octane Enhancing Additives/Products	November 2000
3	Proposed Model for Standards Implementation	May 2000
	Proposed Standards for Fuel Parameters (Petrol and Diesel)- Revised Commonwealth Position	September 2000

Guiding Principles

- Fuel Standards to manage fuel qualities that impact adversely on the environment.
- Should not impede competition and trade.
- To be mandated and implemented nationally.
- To be enforced equally for imports and domestic supplies.
- Australian-specific requirements to be applied.
- Timetable to be based on Australian requirements.
- Flexibility in terms of compliance.

Fuel Quality Standards Act 2000

The main object of the Act is to regulate the quality of fuel supplied in Australia in order to:

- reduce the level of pollutants and emissions arising from the use of fuel that may cause environmental and health problems;
- facilitate the adoption of better engine technology and emission control technology;
- allow the more effective operation of engines.

Key Issues

- Methyl tertiary butyl ether (MTBE)
- Olefins in petrol
- Timing of 1% benzene standard
- Ethanol levels in petrol
- Mobil's proposal to use Cleanerburn with 1300 ppm sulfur diesel as alternative standard.

BCA Report - Caltex Case Study

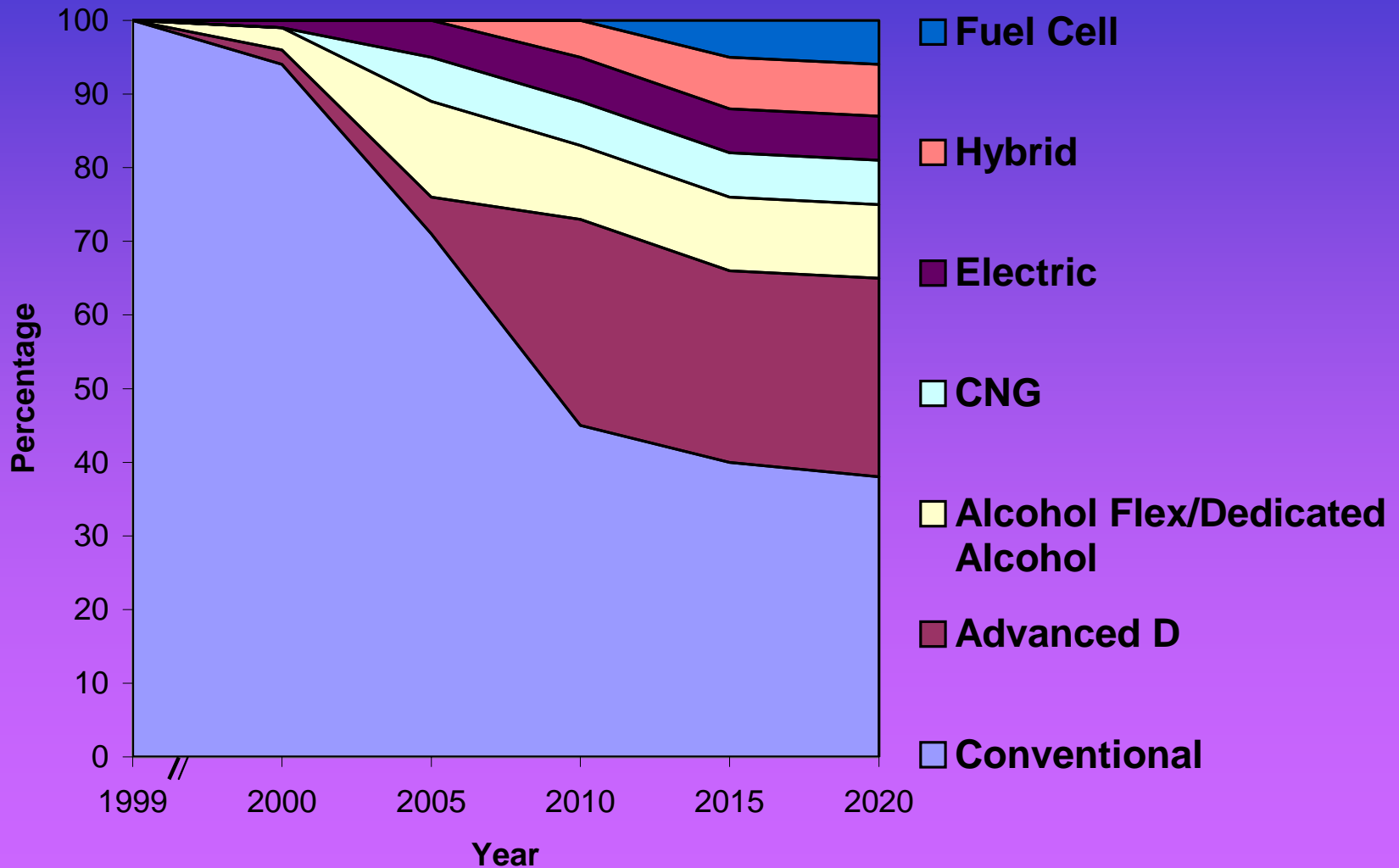
Fuel standards development process incorporated:

- a number of essential characteristics;
- a sound scientific basis;
- comprehensive economic evaluation;
- independent expert advice;
- detailed consultation with stakeholders;
- an adequate consultation timeframe; and
- an open and well defined process.

Lessons Learnt

- Understanding the context.
- Mastering the technicalities.
- Taking carriage of the health gains.
- Pursuing accuracy.
- Persisting to achieve the end objective.

Light Duty Vehicle Market Penetration (USA)



Next steps

- ‘Operability’ standards.
- Liquefied Petroleum Gas (LPG).
- Compressed Natural Gas (CNG).
- Biodiesel and Diesohol.
- Euro 4 and 5 emission standards.
- Diesel NEPM.

Summary

The agreed standards will, as far as possible:

- provide harmonisation with ‘Euro’ standards;
- satisfy the seven guiding principles incorporated to ensure standards are appropriate for the Australian context: and
- provide a balance between environmental objectives and the capacity of the refining industry to supply cleaner fuels.