

Fuel Quality Standards

Where we are and where we're headed

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18 August 2004

Energy Policy

- One of the government's core objectives is building the conditions for increasing New Zealand's long-term sustainable rate of economic growth
- Energy is an essential part of the infrastructure foundation that underpins societal well-being and economic development
- Key energy sector outcomes for New Zealand include:
 - Energy security
 - Competitive energy prices
 - Environmental sustainability
 - Fairness to consumers

MED's Role

- Ministry's focus in transport fuels is to ensure that policy and regulatory settings:
 - Provide certainty to businesses and consumers regarding the quality of fuel sold
 - Safeguard public health and the environment
 - In the longer term, can accommodate alternative transport fuels

History of petrol and diesel quality regulation

- Regulated fuels market prior to 1988
 - Licensed petrol wholesalers and retailers
 - Price controls
 - Quality maintained through non-statutory mutual agreements between government, oil industry, and motor vehicle manufacturers

Origin of regulations

- Petroleum Sector Reform Act 1988
 - Removed controls to petrol and diesel distribution, but
 - Concern that oil companies may have incentive to import cheaper, lower-quality fuel that could be unfit or unsafe for use, so
- Ministry of Energy Act
 - Amended to include the authority to prescribe specifications for refined petroleum products
 - Authority transferred to the Ministry of Energy (Abolition) Act 1989

Introduction of regulations

- Ministry of Energy (Petroleum Product Specifications) Regulations 1988
 - Operability specifications:
 - Petrol: octane number, volatility
 - Diesel: cetane index, cloud point
 - Environmental and Public Health specifications
 - Petrol: sulphur, lead, benzene limits
 - Diesel: sulphur limit

Changes to the regulations – 1990's

- Phase out of leaded petrol
- Limits for total aromatics in petrol

Major review of the regulations 2001-2002

- First comprehensive review of regulations
- Issues considered:
 - Consumer
 - Safety
 - Health
 - Environmental
 - Industry

Outcome of Review

- Found that a major upgrade of the regulations was required to recognise:
 - significant developments in vehicle technologies
 - innovations in refining
 - changes in international standards, particularly those affecting health and environmental outcomes
- Petroleum Products Specifications Regulations 2002 came into force in September 2002

Implementing New Regulations

- Some specification changes reflected existing good industry practice and took effect immediately (September 2002)
- Other changes were phased in to allow the necessary lead time for refinery upgrades, both domestic and international (January/August 2004, January 2006)

Major Changes to Petrol in Effect

- Lowered maximum allowable level of lead contamination
- Allowance of up to 10% ethanol
- Disallowance of the use of the octane-enhancing additive MTBE
- Instituted new manganese limit

Major Changes to Petrol Being Phased In

Property	PPSR 1998	Current	As of 1/1/2006
Sulphur	500 ppm	350 ppm regular 150 ppm premium	150 ppm
Benzene	4.2%	3% or 1%, depending on olefins content	1%
Aromatics	48%	42% pool average 45% cap (regular) 48% (premium)	42% pool average 45% cap
Olefins	Not specified	25% or 20%, depending on benzene content	18%

Major Changes to Diesel in Effect

- Narrower allowable density range
- New filterability standard
- New lubricity standard
- New standards for water content and particulates contamination

Major changes to Diesel Being Phased In

Property	PPSR 1998	Current	As of 1/1/2006
Distillation – T95	n/a	370	360
Cetane	47 CI or 45 CN	49 CI or 49 CN and 47 CI	51 CI or 51 CN and 47 CI
Sulphur	3,000 ppm	500 ppm pool average; 600 ppm cap	50 ppm

Where we're headed

Sulphur Content of Petrol and Diesel

- Current regulations:
 - Petrol
 - 50 ppm sulphur indicative from 2008
 - Ultimate requirement of 10-15 ppm maximum
 - Diesel
 - 10-15 ppm maximum sulphur to be required no later than 2009-10

Review of Sulphur Content – Early 2005

- Goal: fastest practicable timetable for sulphur reduction
- Factors to consider:
 - Regional fuels market -- sources of imports
 - Domestic production capabilities
 - International context
- Timetable:
 - Public discussion document released early 2005
 - Consultation period
 - Cabinet decision by mid-2005

Review of MMT and MTBE -- 2006

- Current regulations disallow use of these additives
- Review will consider latest research and experience of other countries to determine if bans should be reversed

Related Work – Regulation of Transport Fuels

- MED to undertake a project to determine the best framework for the regulation of transport fuels
- Wider framework needed to include non-petroleum fuels such as biofuels

For More Information

<http://www.med.govt.nz>