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ICAO: UNITING AVIATION ON CLIMATE CHANGE

# ICAO Colloquium on Aviation and Climate Change



## *Aviation in the New Zealand Emissions Trading Scheme*

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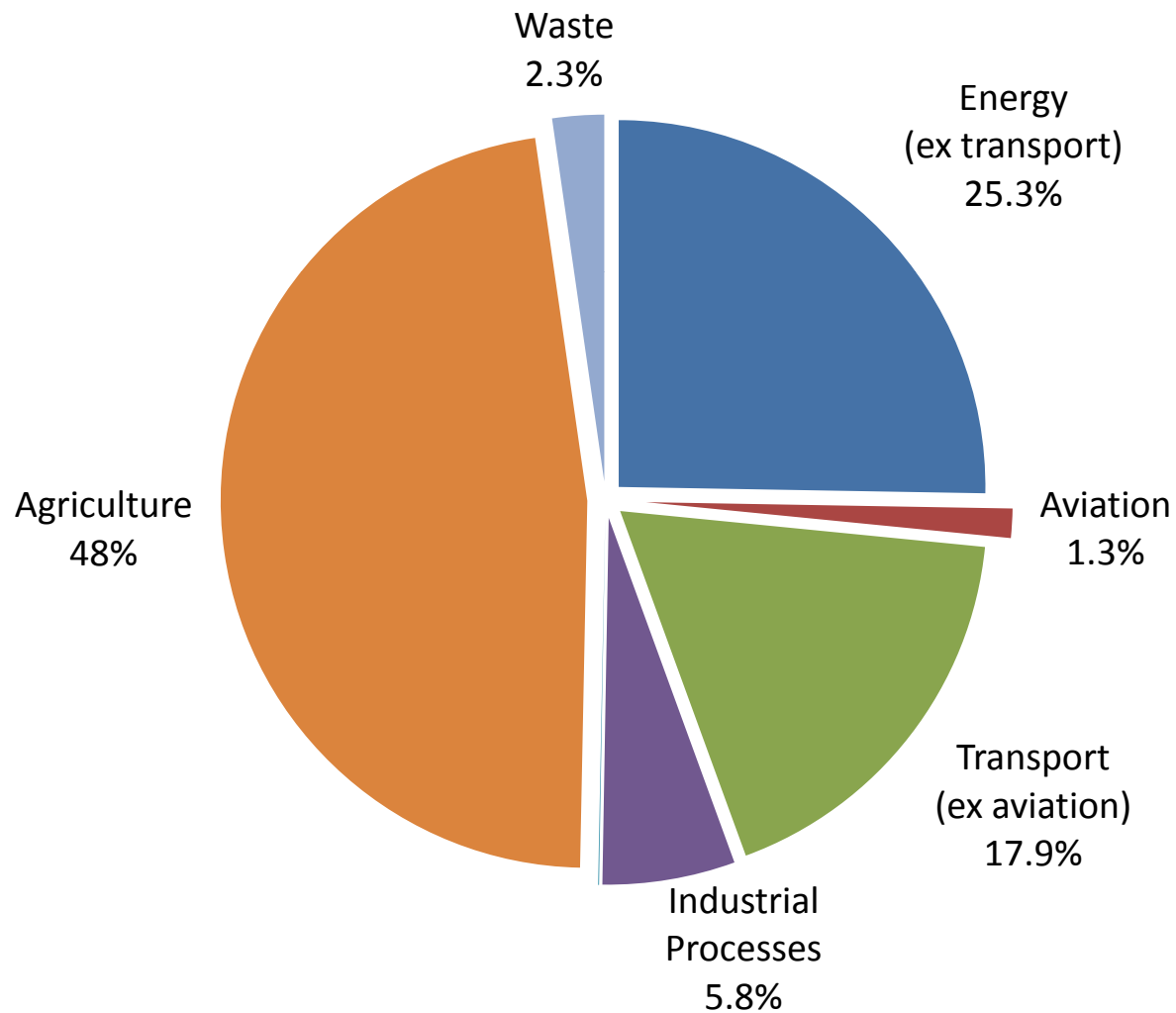
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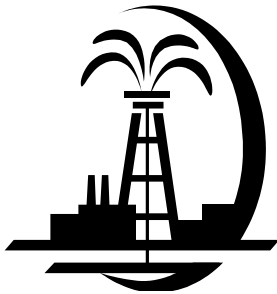


## New Zealand emissions profile (2008)





# How does emissions trading work in New Zealand?



Under the scheme an **oil company** will need to buy units to cover the emissions that will result when the fuel they sell is used. During the year the oil company sells fuel that, when used, will result in 3 units worth of emissions.

Emissions: ✗ ✗ ✗

The oil company needs to buy 3 units to cover the emissions that it is responsible for.

Deficit: ✗ ✗ ✗



A **forester** plants some trees. During the year these trees grow, earning the forester 2 units.

The forester can now sell the surplus 2 units.

Surplus: ✔ ✔

sells 2 units

sells 1 unit



An **industrial firm** is given 4 units by the government to cover some of its emissions. During the year the firm installs a new plant that reduces its emissions to 2 units.

Units: ✔ ✔ ✔ ✔

Emissions: ✗ ✗

As the firm only uses 2 units it can sell the surplus 2 units.

Surplus: ✔ ✔

sells 1 unit

Global Emission Markets

## Who are the participants in the liquid fossil fuels (transport) sector?

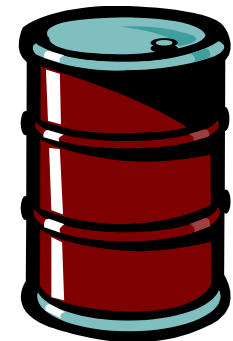
- From 1 July 2010, those that import fuel or remove fuel from refinery > 50,000 litres per year
- Purchasers of >10 million litres of jet fuel per year can participate
  - At this stage only Air New Zealand
  - They take on all legal obligations from fuel suppliers
- Who are **NOT** participants?
  - Aircraft operators (unless opted in), consumers, etc ...
  - **BUT**, the price (of emission units) will be passed on to them as increased fuel prices





## Liquid Fossil Fuels – The Details

- Obligation fuels:
  - All liquid fossil fuels (petrol, automotive and marine diesel, jet fuel, aviation gas, light and heavy fuel oils)
- Exemptions:
  - Fuels not combusted when used (solvents, lubricants)
  - Fuel used for international aviation and maritime transport
  - Biofuels
- Calculating emissions:
  - Volume of fuel X emission factor = tonnes of CO<sub>2</sub>e
- Details of methodology and emission factors:
  - Go to [www.legislation.govt.nz](http://www.legislation.govt.nz) then search for Climate Change (Liquid Fossil Fuels) Regulations 2008





## Price effects

		'Carbon' Emission Price Scenarios		
	Emission factor tCO <sub>2</sub> e/1000l	\$NZ12.5/tCO <sub>2</sub> e (max cost increase between 1 July 2010 and 31 Dec 2012)	\$NZ25/tCO <sub>2</sub> e	\$NZ50/tCO <sub>2</sub> e
		~ 9 USD	~ 18 USD	~ 36 USD
<b>Petrol:</b> Additional cents per litre	2.310	2.9 NZc	5.8 NZc	11.6 NZc
<b>Jet fuel:</b> Additional cents per litre	2.525	3.2 NZc	6.3 NZc	12.6 NZc

tCO<sub>2</sub>e = tonnes carbon dioxide equivalent

1NZ Dollar ~ 0.72 US Dollar

3 NZ cents ~ 2 US cents





## Free allocation?

**No, there will be no free allocation of units to transport sector participants...**

- Some units are allocated freely in sectors where there is a concern that a carbon price may cause production from emissions-intensive, trade-exposed sectors to shift from New Zealand to countries without an equivalent carbon pricing regime.
- The domestic transport sector does not fit this criterion, and it is expected that the cost of emission units will be passed on to consumers (e.g. via higher fuel prices, or higher fare prices, etc).





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## Questions?

[www.climatechange.govt.nz](http://www.climatechange.govt.nz)

<http://www.climatechange.govt.nz/emissions-trading-scheme/questions-and-answers.html>

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