



Energy Efficiency and
Conservation Authority
Te Tari Tiaki Pūngao

New Zealand Government

EGEE&C 34 Economy Report New Zealand



Chinese Taipei, October 2009





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Vital Statistics: NZ Today

Growth since 1990:

- 60% growth in economy
- 25% growth in population
- 27% growth Total Primary Energy Supply
- 39% growth Total Consumer Energy*

Used by final consumers; excludes use for non-energy purposes (e.g. gas for methanol or urea production or coal used in steel production) and excludes energy used or lost in delivering energy to consumers (e.g. electricity lines losses and energy “lost” during transformation e.g. in geothermal electricity generation)



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Vital Statistics: NZ Today

- Consumption per capita up 10% since 1990
- Demand per person p.a. 120 GJ (2007)
(3,400 litres of petrol equivalent)



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Energy Outlook to 2030 (BAU)

- **No additional fossil fuel base load** electricity generation plants expected
- **1.5% p.a. growth in electricity demand** (down from 1.8% historical rate)
- **Energy intensity improvements:** slight increase forecast of ~1.0 to ~1.2% p.a. (partially offsets demand growth)



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Energy Outlook to 2030 (BAU)

- **Wholesale electricity prices rise**
(~1.6% p.a. above rate of inflation; ~40% in real terms)
- **Total energy sector emissions flatline**
(~40% above 1990 levels)
- **Transport emissions grow**
- **Electricity emissions decline**



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Energy Outlook to 2030 (BAU)

- New Zealand remains **addicted to oil** but demand growth slows
- Demand growth **higher for diesel** than petrol
- http://www.med.govt.nz/templates/MultipageDocumentTOC____41969.aspx



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Recent Developments in NZ

- **New Government** elected late 2008
(first time in about a decade)
- First priority to **review existing policies**
(including energy policies) and...
- Deal with impacts of **world recession**



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Energy Efficiency Developments

First policy announcements:

- Decision not to proceed with incandescent phase-out
- Repealed 10 year thermal ban to ease strain on energy sector
- Repealed biofuel sales obligation
- Instead, a new incentive for domestically produced bio-diesel sales.



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Bio-diesel Grant Scheme

- Pays 42.5 cents per litre of bio-diesel sold as blends up to 20% bio-diesel.
- Provides a similar incentive to what was already available for bio-ethanol.
- Sales of both bio-diesel and bio-ethanol are continuing to expand, although from a low base.



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Bio-fuel Sustainability

- Voluntary bio-fuel sustainability reporting (target operational by December 2009)
- Based on the reporting scheme used in the UK Renewable Transport Fuels Obligation
- NZ Biofuels and Electric Vehicles Conference February 2009



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Updating NZ Energy Strategy & EE&C strategy

- In February 2009, the Minister of Energy and Resources announced intention to update NZ Energy Strategy & NZ Energy Efficiency & Conservation Strategy.
- Refocus on energy security and economic growth



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Electricity Market Review

- On 1 April 2009 Minister of Energy and Resources initiated **review of the electricity market**
- address concerns around
 - security of supply
 - affordability of electricity
 - electricity sector governance
- Review undertaken by the Electricity Technical Advisory Group and the Ministry of Economic Development.



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Electricity Market Review

- Minister released a discussion paper 12 August 2009
- Sets out preliminary recommendations to improve electricity market performance for public consultation.
- The process closed on Wednesday, 16 September 2009.



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Warm Up New Zealand

- May 2009 national budget Government announced the extension of Government funded subsidies to insulate New Zealand homes.
- A target of 180,000 homes to be insulated over a four year period at a cost of \$323 to the Government
- **8,000 homes to date in 8 weeks**



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Warm Up New Zealand

Measures include:

- ceiling and under-floor insulation,
- hot water cylinder wraps
- draft stopping of doors
- complementary clean heating measures such as
 - heat-pumps
 - flued gas heaters
 - wood and wood pallet burners.



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Warm Up New Zealand

- 33% of the total cost of insulation to \$1300 and \$500 for a clean heating device to any homeowner or landlord.
- Home owner on low income or with special health needs - subsidy increased 60% for insulation (without a cap) and \$1200 for heating.
- Landlords with tenants on low income or with special health needs - same subsidy for insulation and \$500 for a clean heating device.



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Warm Up New Zealand

- Total funding may be higher in regions where third party funding from charities, lines companies or councils is provided.
- Programme very popular and demand from service providers to undertake this work nearly four times greater than the finances allow



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Work plan for Products

- Recent approval of a comprehensive forward work plan to introduce new or revised MEPS and labelling for a range of products including:
- **Revisions to existing Standards – commercial and industrial equipment**
- Distribution transformers
- Electric storage water heaters
- Electric motors (three-phase)
- Refrigerated display cabinets (commercial refrigerators)



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Work plan for products

- **Revisions to existing Standards – consumer products**
 - Air conditioners /heat pumps
 - Refrigerators and freezers – domestic
- **MEPS – commercial and industrial equipment**
 - Commercial chillers (AC Chiller towers)
 - Refrigerated beverage vending machines
 - Close control (computer room) air conditioners
 - Ice makers External power supplies
 - Water dispensers (boiling and chilled)
 - Internal power supplies



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Products work plan

MEPS – consumer products:

- Televisions
- Swimming pool systems
- Set top boxes (digital TV decoders) (without hard drive)
- Compact fluorescent lamps
- Computers (including laptops) and monitors
- Standby energy use for electrical equipment
- Gas water heaters

Labelling

- Televisions



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Products work plan

New products targeted for investigation under this work plan (2009-13)

Information & communication technologies - Including: Data centres (including servers); ICT storage and peripheral devices; Imaging equipment

Heating and cooling - including: Portable air conditioners; Multi split air conditioners; Evaporative air conditioners

Gas - including: Gas space and decorative heaters; Gas industrial equipment (e.g. boilers & kilns); Outdoor radiant heaters

Home entertainment - Including: AV receivers / Home Theatre systems; Set top boxes (with hard drives), Games consoles; DVD and Blu Ray Players; Video recording devices with removable media including DVD, Blu Ray and Solid State memory

Industrial products - including: Air compressors; Industrial fans; Industrial pumps

Hot water - including: Solar water heaters; Electric heat pump water heaters



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Other Headlines

- National Tourism Energy Efficiency Programme
- **Energy Spot** Energy Savings Campaign Launched
- Accelerated upgrade on national grid
- RMA reform and launch of an Environmental Protection Agency in NZ to coordinate RMA
- **ETS review** – reduce impacts of scheme on households. Legislation targeted for finalisation before climate change talks in Copenhagen