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# New Zealand Economy Update EGEE&C 38

38<sup>th</sup> Meeting APEC Expert Group on Energy  
Efficiency & Conservation

Energy Efficiency and Conservation Authority  
of New Zealand



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## Topics to cover:

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- Update on recent developments in EE&C in New Zealand
- Overview of compliance strategies for commercial buildings in New Zealand
- Compliance under EECA's insulation subsidy scheme
- Overview of EECA commercial building activities
- Overview of EE&C activities taking place under the Canterbury Earthquake Recovery effort



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# Update on recent EE&C developments in New Zealand

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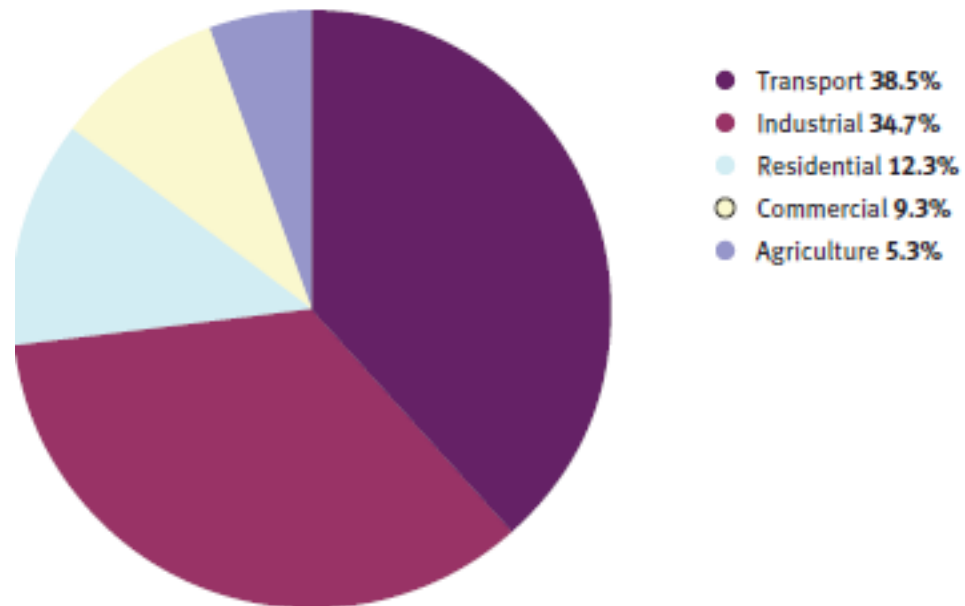
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# Snapshot of supply & demand

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Figure A.4a: Total Consumer Energy by Sector for 2010

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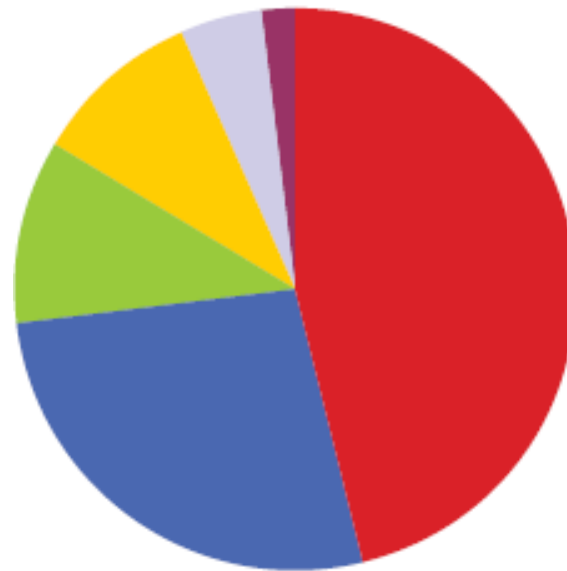




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# Snapshot of supply and demand

Figure A.3a: Total Consumer Energy  
by Fuel for 2010



- Oil 46.0%
- Electricity 27.0%
- Other Renewables 10.3%
- Gas 10.2%
- Coal 4.8%
- Geothermal Direct Use 1.8%



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# Snapshot of supply & demand

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- 20 percent improvement in energy intensity since 1990
- 30 percent growth in total consumer energy since 1990

*(source: NZ Energy Data File 2011)*

- Energy efficiency improvements have offset increased energy use by 7.6% (43PJ) from 2001-2009
- Energy savings potentials of 75PJ in next 10 years from available technologies & better energy management (1PJ = approx 278 GWh; NZ's biggest power station generates 30PJ p.a.)

*(source: EECA Statement of Intent 2011-14)*

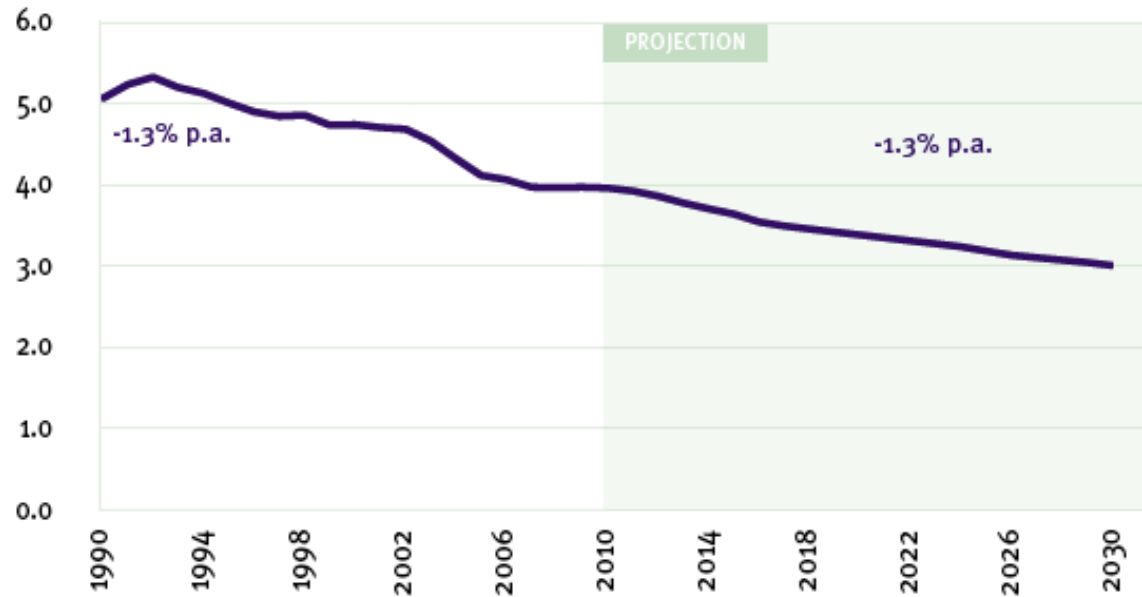


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# Snapshot of supply and demand

## Consumer Energy Intensity – Reference Scenario

GJ/\$(000)





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# New Zealand Energy Strategy 2011-2021

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- Objectives:
  - diverse resource development
  - environmental responsibility
  - achieving efficient use of energy
  - promoting energy security & affordability





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## Achieving efficient use of energy

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- warm, dry, energy efficient homes
- energy efficient transport system
- enhancing business competitiveness through energy efficiency
- better consumer information to inform energy choices.



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# New Zealand Energy Efficiency & Conservation Strategy 2011-2016

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## Drivers:

- Enhance economic growth
- Improve energy security
- Assist with energy affordability
- Defer the need for more expensive energy supply
- Reduce greenhouse gas emissions from energy
- Improve people's health, well-being and productivity



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## New Zealand Energy Efficiency & Conservation Strategy 2011-2016

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- Sector-specific objectives and targets for Transport, Business, Homes, Products, Electricity System and Public Sector
- Economy-wide target to 2016: continue to improve energy intensity at a rate of 1.3 percent per annum.



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## Reducing NZ's energy related greenhouse gas emissions

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- 50 percent reduction in GHG emissions by 2050
- New Zealand Emissions Trading Scheme
- Facilitating greater investment in renewable energy and in energy efficiency and conservation
- 90 percent electricity from renewable resources by 2025



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# Product standards & labelling

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- New / revised regulation for 7 products
- Consultation on proposals for 3 products
- Voluntary code for complex set top boxes
- ENERGY STAR for LED light bulbs
- Market research on how labelling impacts purchase decisions



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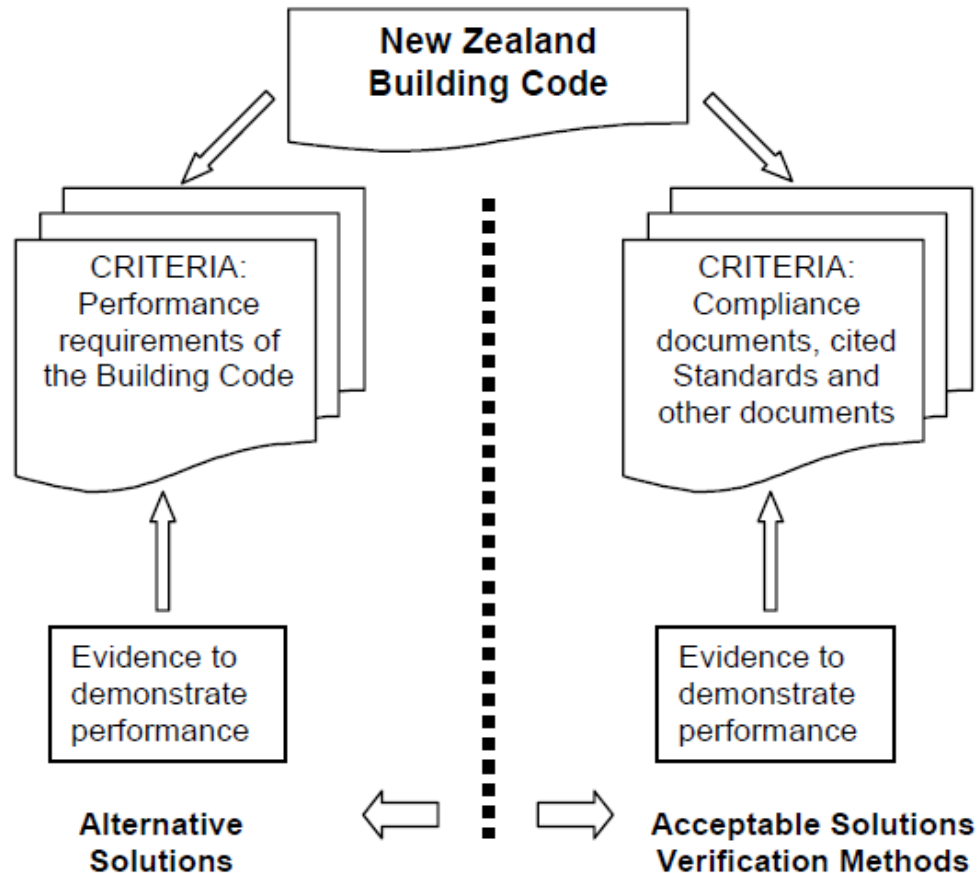
# NZ Building Code and compliance

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# Performance criteria: buildings





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# Energy Efficiency in the Code

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- Energy performance level
- Measuring thermal resistance
- Double glazing
- Insulation
- Water heating
- Electrical lighting





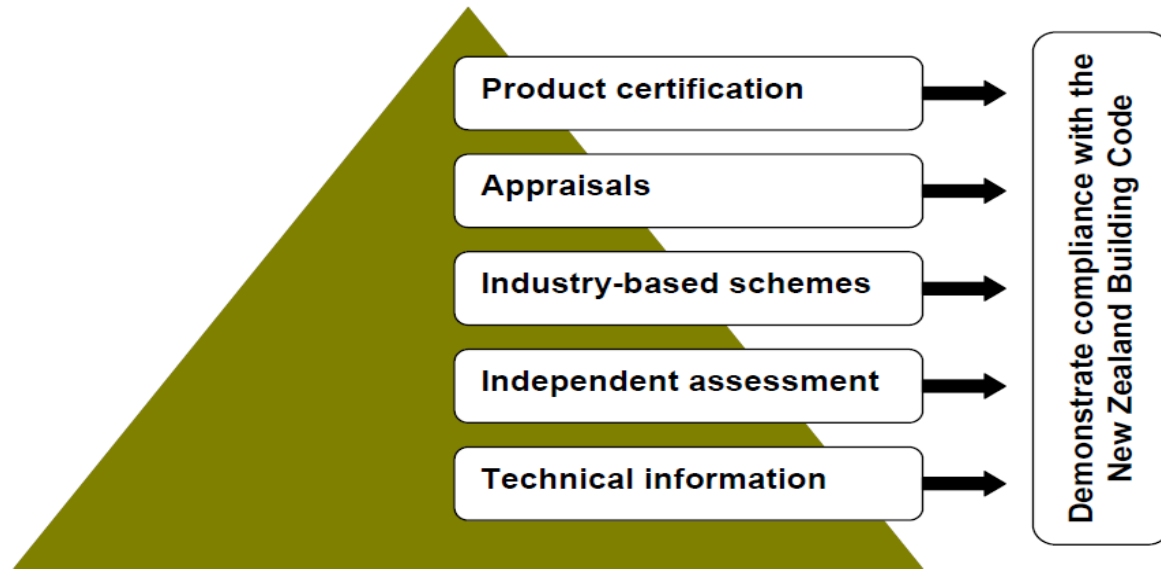
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# Demonstrating compliance

## The New Zealand Product Assurance Framework



Technical information underpins all the options, and could include test results from an in-house or independent body eg, a testing laboratory.

Imported products may have an international pedigree, but they must be specifically assessed and/or tested against the performance requirements of the New Zealand Building Code to meet local conditions.



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# Compliance under EECA's insulation subsidy scheme

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# Compliance under EECA's insulation subsidy scheme

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- Performance criteria
- Product testing / Appraisals
- Marking requirements
- Installation requirements
- On site assessment
- Compliance – auditing, reporting, sanctions



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# EECA activities for commercial buildings

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# EECA activities for commercial buildings

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- **Business** programme targets following commercial building areas:
  - lighting
  - heating, ventilation and air conditioning (HVAC)
  - Refrigeration
- Through such measures as:
  - practical, accessible and useful information
  - training to build capability in the energy auditing industry
  - judicious use of grant funding to overcome genuine barriers of access to capital
- Focus on creating self-sustaining industry



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## EECA activities for commercial buildings

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- Looking into adopting the Building Energy Rating Tool used in Australia
- Looking to develop & deliver a programme targeting opportunities in commercial buildings (delivering energy savings of 2.7PJ by 2013/14)



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# Canterbury Earthquake Recovery

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# Earthquake recovery

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- Input into central district plan
- Prioritisation to Canterbury businesses under existing programmes
- District Energy Scheme
- Commercial building programme & Green Build tool
- Energy efficient homes pilot
- Carpooling
- Exploring options for APEC project