
New Zealand Progress in Energy Efficiency in 2014

EGEE&C 43 Meeting 10-11 April 2014



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Content

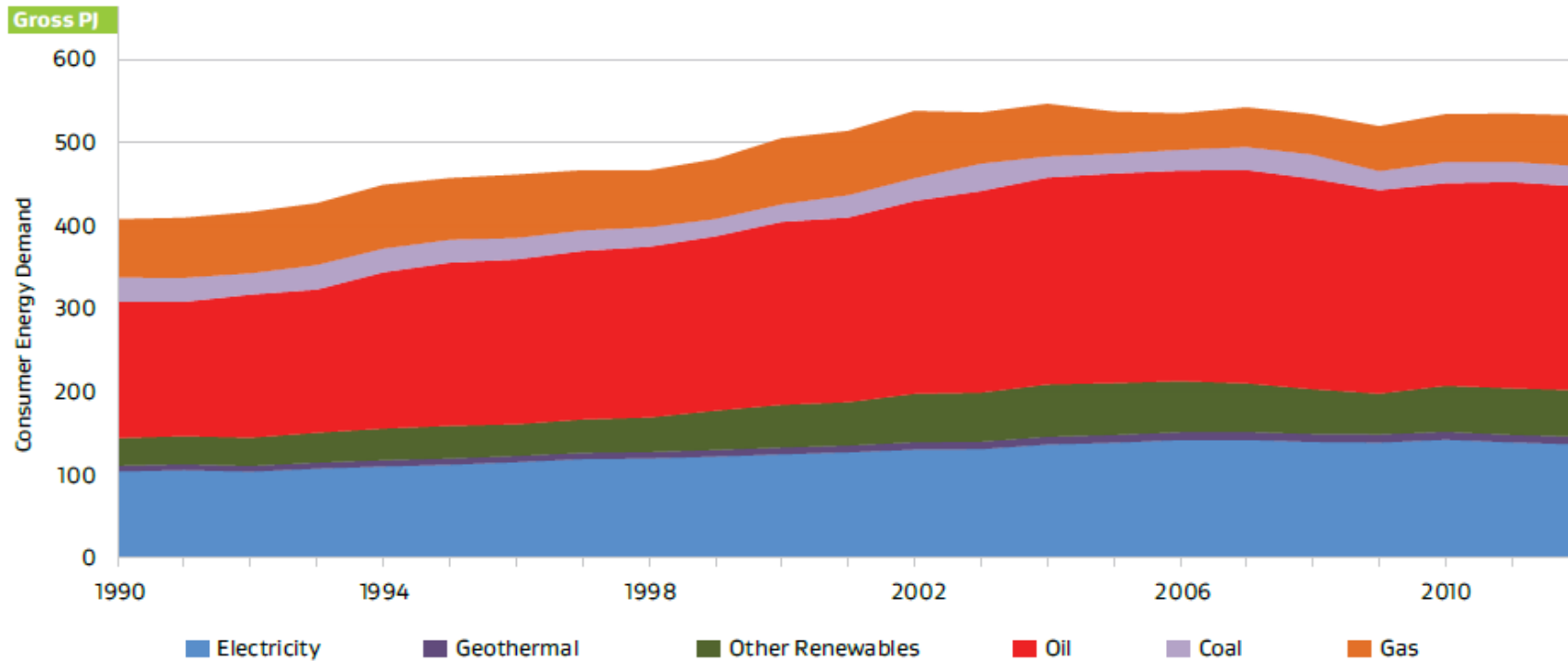
- Energy Efficiency in New Zealand
 - New Zealand Overview
 - Energy Efficiency and Conservation Authority
 - New Zealand Energy Strategy
 - New Zealand Energy Efficiency and Conservation Strategy
 - Key initiatives
 - Business
 - Residential
 - Transport
 - Products



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Energy Consumption in New Zealand

Figure A.3a: Consumer Energy Demand by Fuel

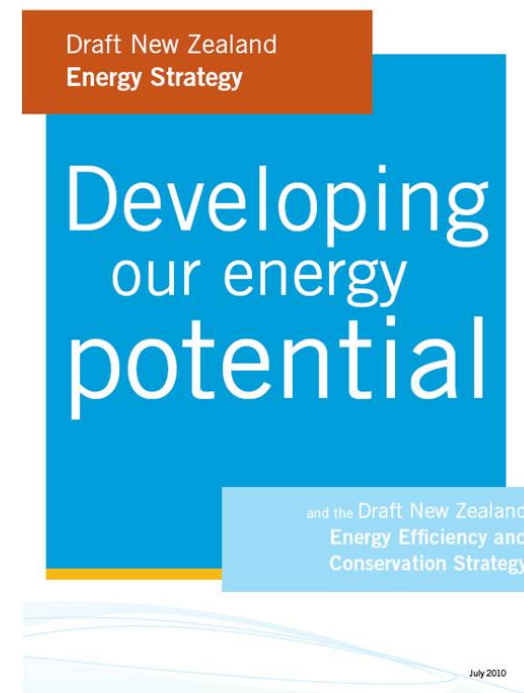


New Zealand Policy

- New Zealand Energy strategy
 - Sets official government priorities
 - Diverse resource development
 - Environmental responsibility
 - **Efficient use of energy**
 - Secure and affordable energy
- New Zealand Energy Efficiency Strategy
 - Sets energy efficiency targets:
 - Business
 - Products
 - Homes
 - Transport



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What EECA does



Transport

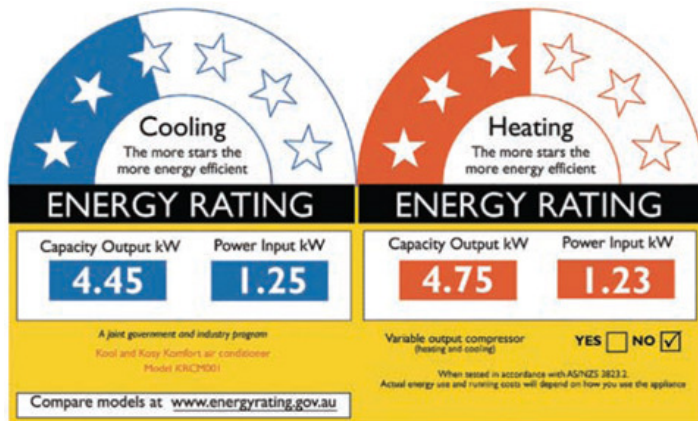


Business

Inspiring energy efficiency – advancing renewable energy



Residential



Standards and Labelling



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Business

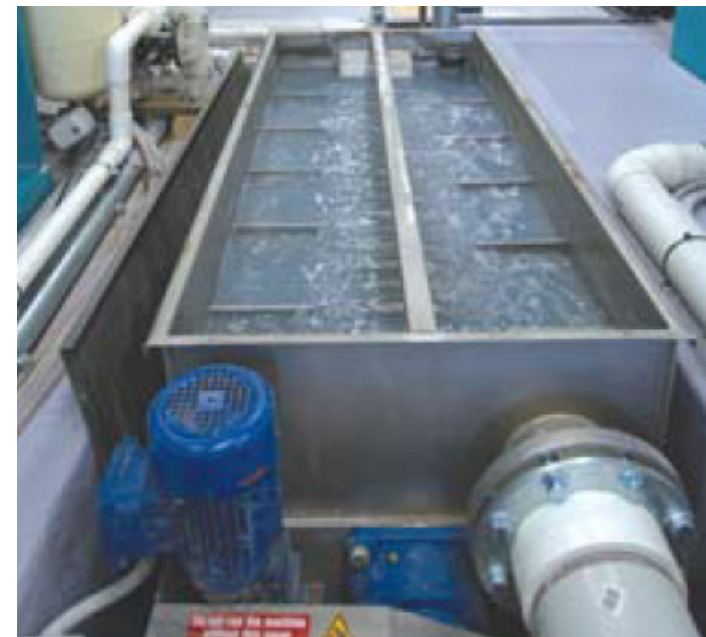
- Businesses represent the majority of energy consumption:
 - 80% of non-transport energy
- EECA is targeting to save 4PJ per annum by 2014 in business.
- Key areas of influence targeted:
 - Commercial buildings
 - Industrial motor and motor systems
 - Process heat



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Business

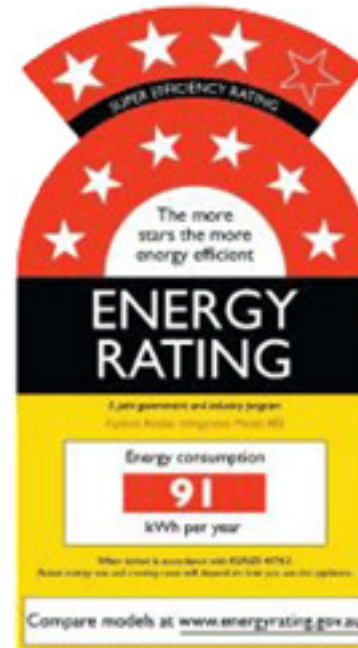
- Key initiatives to influence businesses:
 - Training
 - Energy management
 - Motor maintenance
 - Energy auditing
 - Information
 - On cost-effective opportunities
 - Energy policies
 - Standards and labelling
 - Building EE rating
 - Funding
 - Crown Loans Scheme
 - Energy Audits
 - Uptake biomass process heat
 - Assistance of EE motors



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Standards and Labelling

- Partnership with Australia
 - Largest trading partner
 - Align energy efficiency standards and regulation
- Key Programmes:
 - Minimum Energy Performance Standards (MEPS)
 - 22 Product Classes
 - Mandatory Energy Performance Labelling (MEPL)
 - 7 Product classes
 - Energy Star
 - 21 Classes
 - Vehicle Fuel Economy Label (VFEL)
 - Covers 87% of post-2000 vehicles



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Products Programme

- Key results
 - 14 PJ estimated savings
 - ~NZ\$400
 - 80% Energy Star brand awareness
 - 95% Energy Rating Label awareness
 - 95% Compliance with rating labels
 - 89% Compliance with VFEL



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Products

- New initiatives
 - Continue to update and expand MEPS and MEPL
 - Continue to update and expand Energy Star
 - 4 New and revised
 - Feasibility for Energy Star for vehicles being researched
 - Energy for windows planned
 - Compliance and monitoring capability



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Homes

- New Zealand Housing Stock
 - Largely uninsulated
 - Drafty, Cold, and damp
- High health and energy costs
- Warm Up New Zealand (WUNZ) - Heat Smart - 2009
 - Roof, under floor insulation
 - Budget of \$347m
 - Target of 188,500
- Warm Up New Zealand – Healthy Homes 2013
 - \$100m
 - Targeted to low incomes
 - Greatest benefits



Warm Up New Zealand (WUNZ)

- Project over delivering
 - Insulating at below initial cost projections
 - Leveraging funds from 3rd parties
 - Delivering 240,000 retrofits by June 2014 (~15% of stock)
- Multiple benefits:
 - Health improvements
 - Energy efficiency
 - Employment



Cost : Benefit ratio report

Cost

\$347 million

Benefit

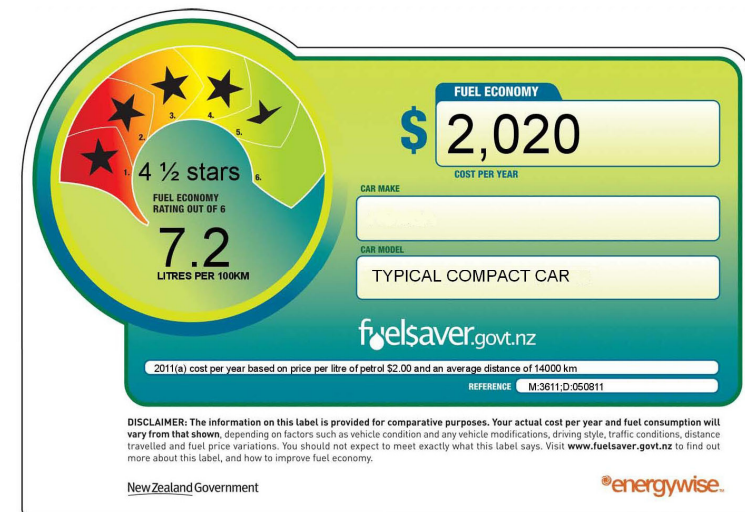
\$1.37 billion



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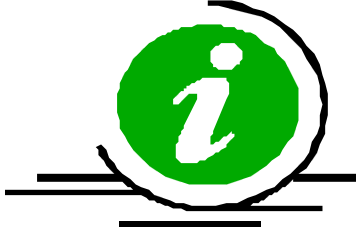
Transport

- Focus on road transport (90% of total transport energy)
- NZ Light Vehicle Fleet
 - 99% reliant on oil
 - Used imports from Japan
 - Low fuel efficiency – 8 years behind leading developments
- Energy Efficiency Approaches
 - Information (Fuel Economy Labelling)
 - Driver behaviour
 - Tyre awareness
 - Inflation
 - Low rolling resistance
 - Renewable transport fuels
 - Biofuels
 - Electric vehicles
 - Emission standards (MoT)



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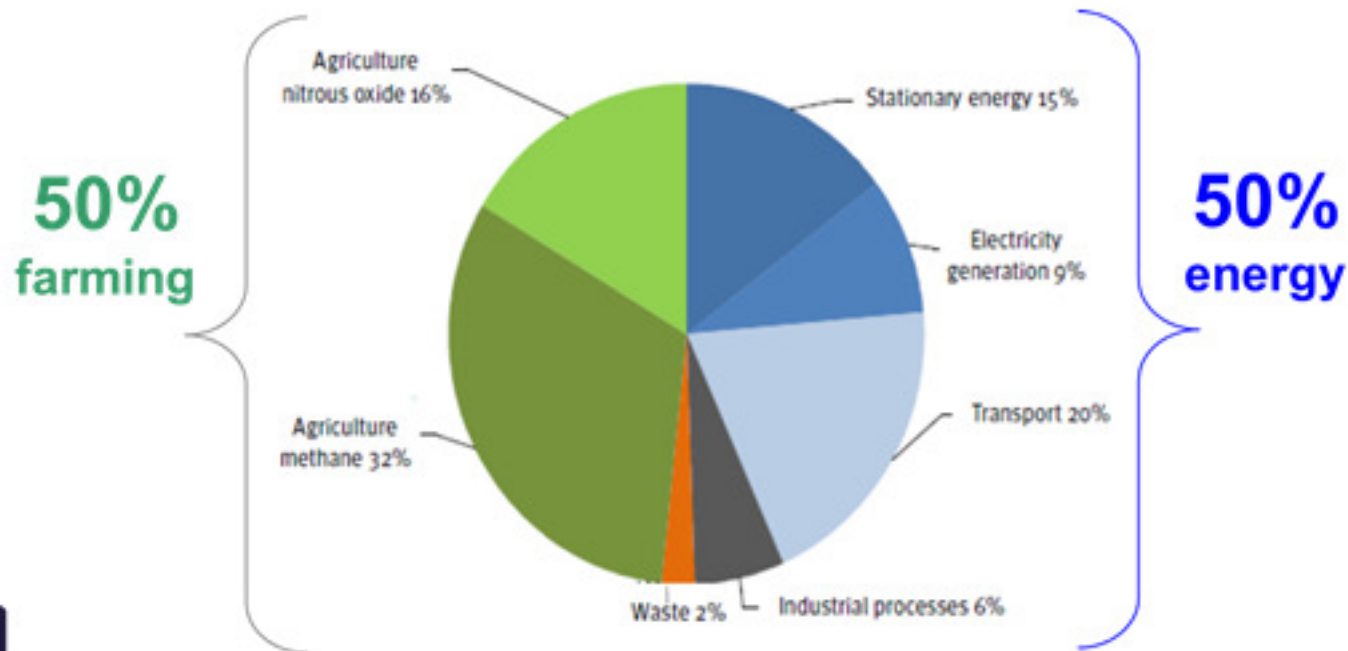
Business transport programme portfolio

Project Funding	Capability	Information
 <p>New grants programme</p> <p>Funding for:</p> <ul style="list-style-type: none"> - Fleet review - Implement recommendations such as monitoring and targeting of fuel and driver training 	 <p>Training</p> <p>Providing the skills and knowledge for Heavy Vehicle Performance Advisors to:</p> <ul style="list-style-type: none"> - Undertake fleet reviews - Implement fuel efficiency programmes within fleets 	 <p>Providing information that is relevant and useful</p> <p>Comprehensive website on heavy vehicle fuel efficiency</p> <p>Targeted information in relevant industry publications</p> <p>Seminars and workshops</p>

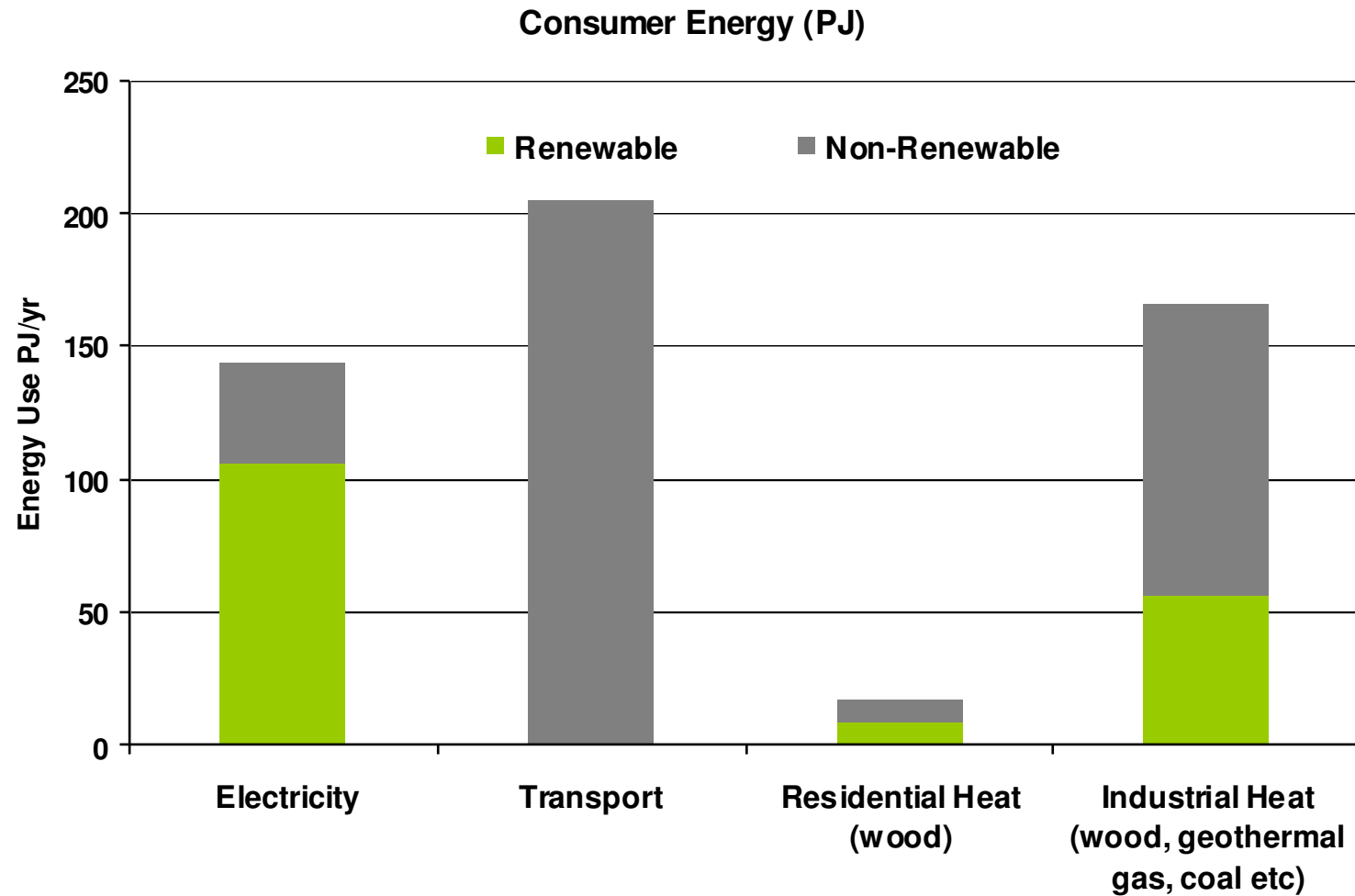
The programme is targeting savings of 10% from the fleet

Transition

- Financial constraints
- Moving away from grants
 - Will concentrate on highly replicable opportunities.
- Greater focus on emissions

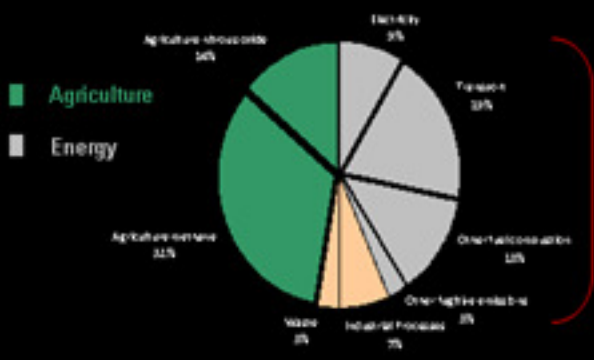


Opportunities



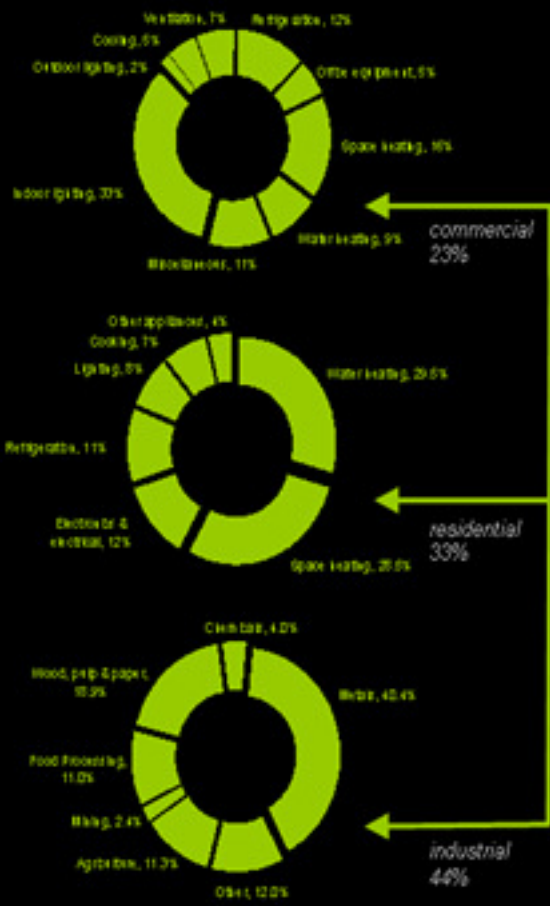
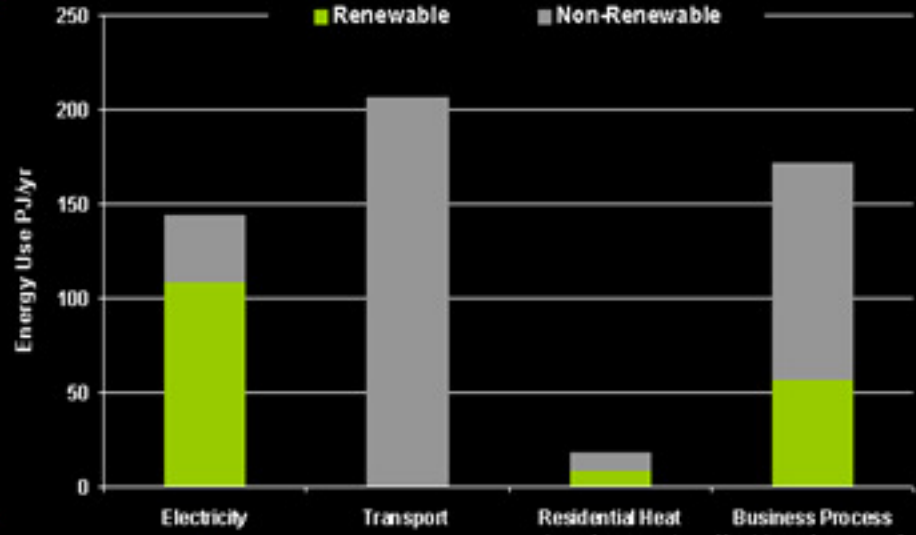
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NZ's GREENHOUSE GAS PROFILE



Nearly 50% of NZ's greenhouse gas emissions come from the energy sector

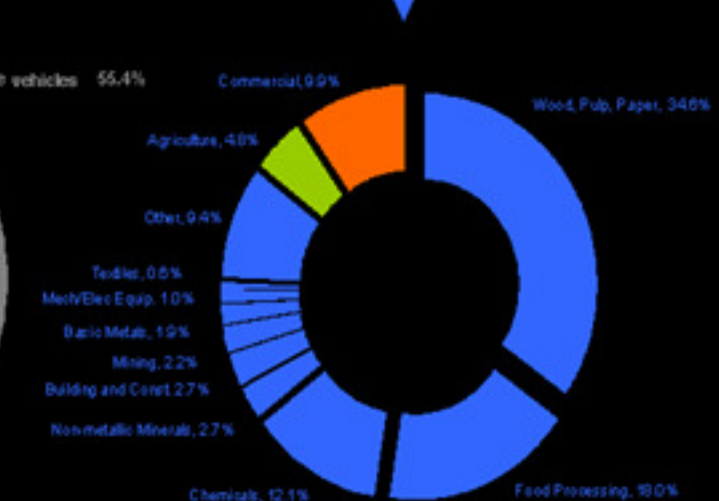
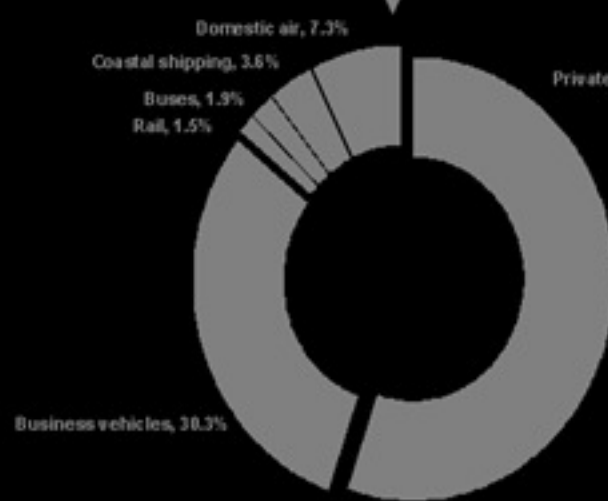
CONSUMER ENERGY USE IN NZ



ELECTRICITY

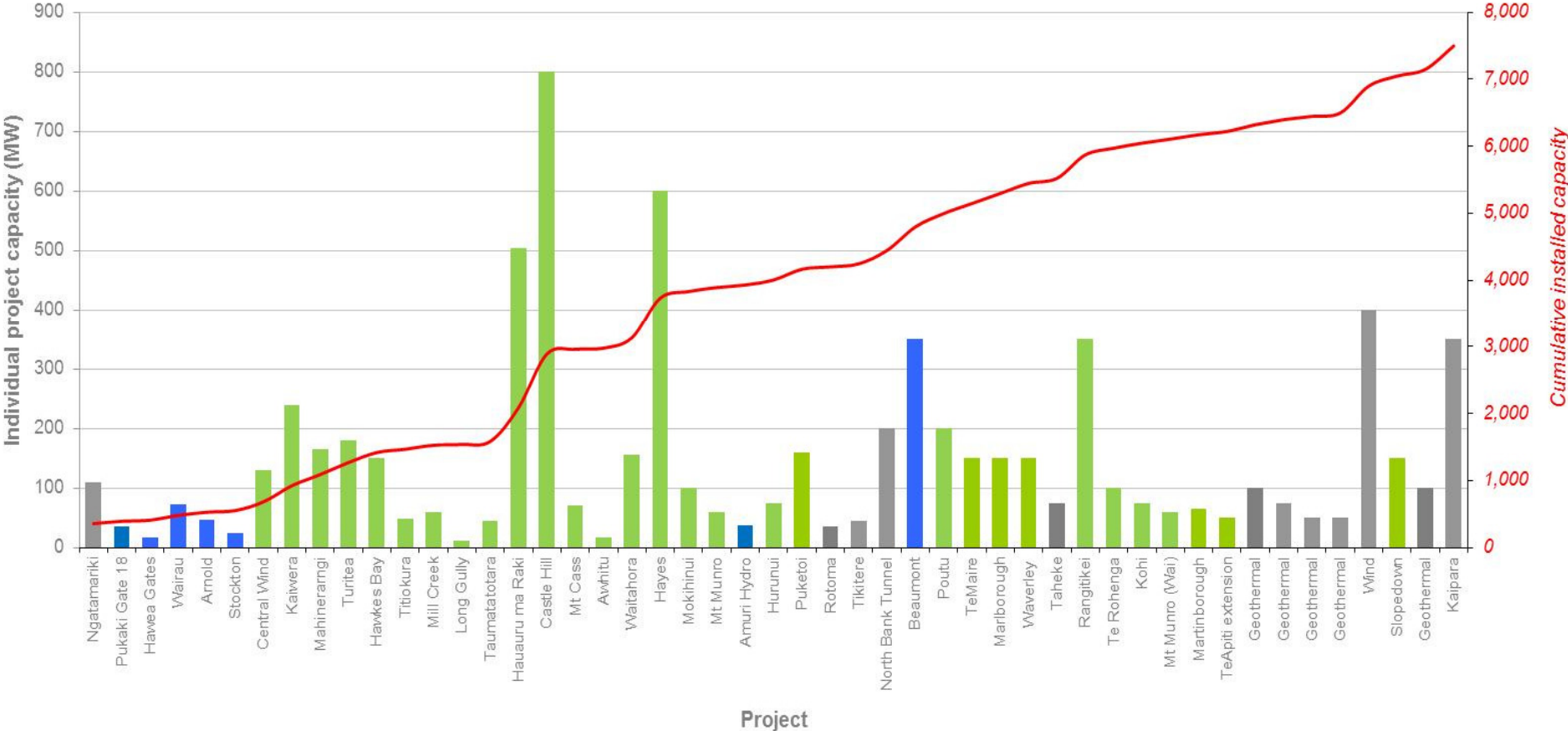
TRANSPORT

HEAT



An embarrassment of riches

NZ Renewable Electricity
 (known projects being investigated - more than 20 years demand growth)



... and this is all without marine, DG, PV...

Key Opportunities

- Transport
 - Large potential in improving fleet **efficiency**
 - Behaviour change
 - Electric Cars
- Industrial process heat
 - Large efficiency and GHG savings potential
- Renewable Energy
 - Biofuels
 - Process heat from biomass
 - Transport



Key Challenges

- Funding
 - Tight fiscal conditions from government
 - Private sector more focused on survival than efficiency
- Identifying actual barriers of action
 - Bounded rationality
- Remote market
 - NZ far away
 - Small market
- Regulation V voluntary

