NEW ZEALAND

1. GOALS FOR EFFICIENCY IMPROVEMENT

1.1. Overall Energy Efficiency Improvement Goals

The New Zealand Governmentôs economy-wide energy efficiency target is for New Zealand to continue to achieve a rate of energy intensity improvement of 1.3% per annum.[1]

1.2. Sectoral Energy Efficiency Improvement Goals

A number of sector-specific goals are in place to help achieve the overall energy efficiency improvement goals set out in the New Zealand Energy Efficiency and Conservation Strategy (NZEECS):

- **Transport** ï By 2016: The efficiency of light vehicles entering the fleet has further improved from 2010 levels.
- **Business**
  - By 2016: An improvement in the energy intensity levels of the commercial and industrial sectors.
  - By 2025: To utilize up to 9.5 PJ per year of energy from woody biomass or direct-use geothermal in addition to that used in 2005.
- **Residential**
  - By 2016: Insulate 46,000 homes with high health-risk occupants under the new ñWarm Up New Zealand: Healthy Homesò program (in addition to the 241,000 houses insulated under the ñWarm Up New Zealand: Heat Smartò program that operated from 2009 to 2014).
- **Appliances –** By 2016: Extend minimum energy performance standards, labeling, and Energy Star product coverage to remain in line with major trading partners.
- **Electricity System –** By 2025: 90% of electricity will be generated from renewable sources, thus providing supply security.
- **Public Sector –** By 2016: Improve energy use per full-time staff member compared to the 2010 baseline.

1.3. Action Plans for Promoting Energy Efficiency

The NZEECS 2011ï2016 is the main program for promoting energy efficiency in New Zealand.

a) Objectives

The use of energy-efficient technology and practices, energy conservation, and renewable sources of energy can achieve the following:

1. Enhance economic growth through increased productivity.
2. Improve energy security by reducing energy demand, including imported sources of energy.
3. Assist with energy affordability by reducing consumer energy costs.
4. Defer the need for a more expensive energy supply by making better use of existing energy.

[1] The New Zealand Energy Efficiency and Conservation Strategy 2011ï2016.

5. Reduce greenhouse gas emissions from energy.
6. Improve peopleôs health, wellbeing, and productivity through warmer and more energy-efficient homes.

As such, the NZEECS contributes to the delivery of the governmentôs energy priorities set out in the New Zealand Energy Strategy.

b) Applicable sectors

Transport, business, residential, products, electricity, and government.

c) Outline

The NZEECS was completed as a requirement of the Energy Efficiency and Conservation Act 2000 and released in August 2011. The NZEECS replaced the second Energy Efficiency and Conservation Strategy released in 2007. The Strategy is written as a companion document to the New Zealand Energy Strategy (NZES), and it presents the governmentôs policies and actions on energy efficiency, energy conservation, and renewable energy. It also gives effect to the energy efficiency, energy conservation, and renewable energy objectives set out in the NZES.

The NZEECS promotes the careful use of a combination of government measures, which can be grouped as follows:

- Information ï targeting consumer and business needs.
- Incentives ï funding or financial products to help build capability and leverage investment.
- Codes and standards ï to underpin confidence in energy-efficient products and practices.
- Research and development ï to support innovative capability.

These measures may often be delivered in partnership with industry associations, not-for-profit energy trusts, and other parties. The exact combination of measures adopted by relevant government agencies to deliver the NZEECS will vary according to the scale of the opportunities and the specific needs of the stakeholders.

The NZEECS is due for review in 2016.

d) Financial resources and budget allocation

Actions in the NZEECS are funded by a wide range of sources, including the government, private sector, voluntary sector, and individuals. In fiscal year 2013/14, $89 million was allocated for the Energy Efficiency and Conservation Authority (EECA) in order to promote energy efficiency. This figure is revised on an annual basis.

e) Method for monitoring and measuring the effects of action plans

The Minister of Energy and Resources is accountable for the overall performance of the strategy. The Ministry of Business, Innovation and Employment (MBIE) reports on the implementation of the strategy to the minister.

f) Expected results

To achieve the goals outlined in Sections 1.1 and 1.2.

g) Future tasks

The strategy is amplified in the EECAôs Statements of Intent, Output Agreements, and Annual Reports.

Institutional Structure

a) Name of organization

The EECA is the principal energy efficiency program delivery agency.

b) Status of organization

The EECA is a Crown entity, established under the Energy Efficiency and Conservation Act 2000 and subject to the Crown Entities Act 2004. The EECA is governed by a chairman and board members (up to a maximum of eight) who report to the Minister of Energy and Resources. The EECA acts as a policy maker, regulator, program funder, and implementer.

c) Roles and responsibilities

The EECAôs function is to encourage, promote, and support energy efficiency, energy conservation, and the use of renewable energy sources in New Zealand. The EECA works closely with government operational and policy agencies in order to help them design, implement, and monitor policies related to energy efficiency.

The MBIE has the responsibility of providing high-level energy efficiency policy advice to the Minister of Energy and Resources and monitoring progress towards the NZEECS objectives.

The Ministry of Transport and the New Zealand Transport Agency are responsible for most of the transport-related energy efficiency initiatives with the exception of vehicle fuel-consumption labels (see Section 2.2.3 below). The EECA has a Letter of Understanding with the New Zealand Transport Agency regarding the management of fuel-consumption information.

Other agencies that share responsibility for energy efficiency include the following: the Ministry of Agriculture and Forestry (renewable fuels, industry), the Housing New Zealand Corporation (state housing improvement programmes), Standards New Zealand (for energy efficiency in products/equipment), and the Ministry of Foreign Affairs and Trade (WTO, mutual recognition arrangements, APEC forums, etc.). The New Zealand government also works closely with the Australian Government on product and appliance standards and labeling.

There are 17 regional government authorities (11 regional councils and six unitary councils) in New Zealand. Each regional council is required to produce a ñregional policy statementò that covers all natural resources, including energy. The NZEECS must be taken into consideration in the preparation of regional policy statements. Land transport strategies must also be consistent with the NZEECS.

d) Covered sectors

Industrial, business, commercial buildings, transport (fuels), residential households, products, and equipment.

e) Established date

In 2000, as part of the Energy Efficiency and Conservation Act.

f) Number of staff members

As of June 30, 2014, the EECA includes 83 permanent staff members.

1.4. Information Dissemination, Awareness Raising, and Capacity Building

a) Information Collection and Dissemination

The New Zealand Government conducts monthly surveys to monitor the publicôs awareness, willingness, and commitment to energy efficiency. Brand association and energy use behavior change are also monitored. Survey results are published on a monthly and quarterly basis. The business sector also publishes case studies to promote energy technologies and behavioral changes in the industry.

b) Awareness Raising

Information about energy efficiency is provided to New Zealanders through a number of channels, the main mechanisms of which include the following:

- The following websites focus on the EECAôs three distinct audiences (i.e., people at home, businesses, and our corporate stakeholders):
  - EECA (corporate website) www.eeca.govt.nz.
  - ENERGYWISE (consumer-focused website) www.energywise.govt.nz.
  - EECA Business (all businesses) www.eecabusiness.govt.nz.

- The Energy Spot television programs that cover topics such as hot water wastage, energy-efficient renovation, saving fuel in business, and choosing efficient lighting. There are currently more than 30 programs available for viewing at http://www.energywise.govt.nz/resource-centre/videos/.
- Mandatory labeling of appliances and vehicles (including second-hand vehicles) plus voluntary labeling, i.e., Energy Star.
- The EECA Awards (held every two years) that celebrate and promote energy efficiency practices in communities, businesses, and industries. This includes a wide range of marketing and advertising campaigns for print, radio, and TV.

c) Capacity Building

Capacity building for the energy services sector that helps businesses identify and implement cost-effective efficiency measures is seen as the key to achieving the governmentôs energy saving targets.

Capacity-building interventions in the business sector have traditionally been delivered by universities and technical institutes, mostly as part of wider engineering courses. More recently, the focus has intensified on developing specific energy management training in the following areas of high-economic potential:

- Commercial buildings: Courses are in place to improve electricity management and efficiency in the commercial building services industry (targeting energy specialists, facilities managers, and commercial property valuers). Courses are delivered by the Energy Management Association New Zealand (EMANZ), which is an industry association of energy management experts, including energy auditors, energy managers, and suppliers of energy-efficient products and services.
- Industrial sector: The University of Waikato provides training and accreditation programs in energy efficiency for pumps, fans, and compressed-air systems.
- Transport: The EECAôs Heavy Vehicle Fuel Efficiency Program is designed (among other things) to improve the fuel efficiency of heavy-vehicle fleets through expert advice and driver training. The EECA trains independent and in-company fuel advisors and trainers.

Under the ñWarm Up New Zealand: Heat Smartò and ñWarm Up New Zealand: Healthy Homesò programs, service providers have been required by the EECA to provide proof that they have the internal capacity and capability to deliver the programs and meet the required standards. Applicants have been assessed on these criteria by an independent evaluation panel

that makes annual reviews to ensure that they have the ongoing capacity to deliver the program while meeting the standards.

The EECA financially supports the Insulation Association of New Zealand (IAONZ), which has developed a four-stage training module for insulation installers.

d) Research and Development in Energy Efficiency and Conservation

The lead agency for the governmentôs policy on research and development is the Science, Skills, and Innovation Division of the MBIE. It includes the mandate to transform New Zealand by driving science and innovation to improve the economic, environmental, and innovation sectors.

In New Zealand, 70% of energy is consumed by businesses. In this sector, the EECAôs stated objective is to support ñenhanced business competitiveness and lower CO^2 emissions.ò This objective of the New Zealand Energy Efficiency and Conservation Strategy supports the 2025 targets of improved industrial and commercial energy intensity and the 9.5 PJ per year of energy from woody biomass or direct-use geothermal (in addition to that used in 2005). The EECA Business Program is designed to overcome market barriers across the three groups related to the scale of energy use, and to that end, it includes the following capability initiatives: training and accreditation programs for service providers and training programs for end-users and key influencers.

The EECA also administers an internal research program that focuses on the following areas:

- Better information ï energy-efficient technology research.
- Research energy end-use in industrial, commercial, and residential buildings.
- Primary production and manufacturing sector energy end-use research.
- Macro-economic modeling of energy efficiency potentials.
- Behavior change research and understanding end-user service needs.

2. MEASURES FOR ENERGY EFFICIENCY IMPROVEMENTS

2.1. Government Laws, Decrees, and Acts

a) Name

Energy Efficiency and Conservation Act 2000

b) Purpose

To promote energy efficiency, energy conservation, and renewable energy in New Zealand. The act can be found at www.legislation.govt.nz/act/public/2000/0014/latest/whole.html#dlm54948

c) Applicable sectors

Undefined.

d) Outline

This act established the Energy Efficiency and Conservation Authority (EECA) as a stand-alone Crown entity with the responsibility of promoting energy efficiency, energy conservation, and renewable energy across all sectors of the economy. It empowers the preparation of regulations implementing product energy efficiency standards and labeling as well as the disclosure of information to compile statistics on energy efficiency, energy conservation, and renewable energy. This act also provides the enabling legislation for the NZEECS.

e) Financial resources and budget allocation

The funds allocated vary each year. The EECAôs budgeted figures are confirmed by its Statement of Intent, which is published on an annual basis. Funding comes from several sources including the government, the private sector, the voluntary sector, and individuals. These funds cover all costs including administration, grants, and financial assistance. The budgeted figures are as follows: NZD 22,697,000 in 2006/07; NZD 36,361,000 in 2007/08; NZD 52,124,000 in 2008/09; NZD 83,173,000 in 2009/10; NZD 150,960,000 in 2010/11; NZD 155,761,000 in 2011/12; NZD 116,040,000 in 2012/13; and NZD 89,000,000 in 2013/14.

f) Expected results

To promote energy efficiency, energy conservation, and the use of renewable energy sources in New Zealand.

2.2. Regulatory Measures

2.2.1. Minimum Energy Performance Standards (MEPS) and Labeling

a) Name

Energy Efficiency (Energy Using Products) Regulations 2002

b) Purpose

To reduce energy demand, enhance economic growth through improved productivity, provide savings to end-users by improving the energy efficiency of a product class. This will be achieved through setting MEPS that result in improvements to the most energy-intensive models for sale in a product class and category, and requirements to display energy performance labels. The program stimulates the production and purchase of more energy-efficient products, while ensuring that a wide range of products are available to meet consumersô needs. It is a joint Australia-New Zealand program that offers industries in both economies improved economies of scale and reduced business-compliance costs.

c) Applicable sectors

All energy-using products, especially appliances, lighting, and equipment in the residential, commercial, and industrial sectors.

d) Outline

Energy Efficiency (Energy Using Products) Regulations were first published in 2002. The New Zealand Government entered into the Equipment Energy Efficiency Program (E3) with Australia in 2004-05. MEPS and labeling are the main mechanisms that the E3 uses to improve product efficiency in which requirements are set out in energy performance standards. The standards set out the testing method to establish a productôs energy performance and consumption. All covered products must meet or exceed this standard before they can be sold to consumers. The E3 jointly funds the following:

- The profiling of products and technologies on the market, and assessments of their energy efficiency potential.
- Cost-benefit analysis of options for intervention.
- Consultation documents and regulatory impact statements.
- Development and publication of joint Australia/New Zealand standards.
- Compliance testing of products.
- Marketing and communications.

Labeling is mandatory for the following electrical products for sale in New Zealand:

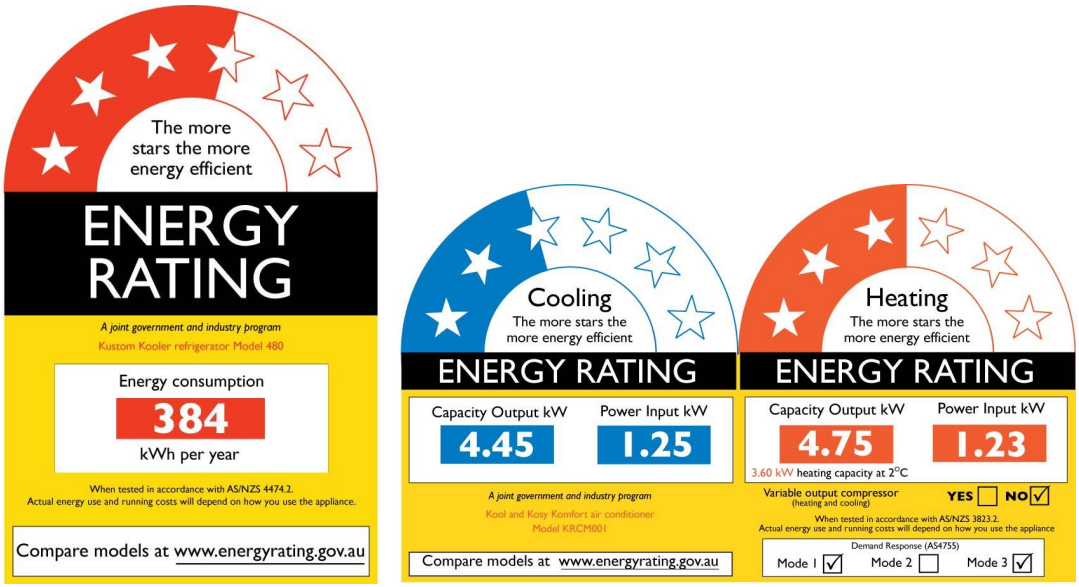
- Refrigerators and freezers
- Clothes washers
- Clothes dryers

- Dishwashers
- Air conditioners
- TVs
- Monitors

The following products are also regulated on the basis of MEPS:

- Refrigerators and freezers (revised 2011).
- Mains pressure electric storage water heaters (from 2002).
- Small mains pressure electric storage water heaters (< 80L) and low pressure and heat exchanger types (from October 1, 2005).
- Three-phase electric motors (0.73kW to < 185kW) (from October 1, 2001, revised April 2006).
- Single-phase air conditioners (from October 1, 2004, revised April 1, 2006, 2007, 2011, 2013, and 2014).
- Three-phase air conditioners up to 65kW cooling capacity (from October 1, 2001, revised October 1, 2007, 2011, 2013, and 2014).
- Distribution transformers (from October 1, 2004).
- Ballasts for linear fluorescent lamps (from March 1, 2003). In addition to MEPS, ballasts also have to be marked with an energy efficiency index (EEI).
- Linear fluorescent lampsð from 550mm to 1500mm inclusive with a nominal lamp power > 16W (from October 1, 2004).
- Commercial refrigeration (self-contained and remote systems) (from October 1, 2004).
- Compact fluorescent lamps (from 2012).
- External power supplies (from 2011).
- Set-top boxes (from 2011).
- TVs (from 2012).
- Commercial building chillers (from 2011).
- Close-control air conditioners (from 2011).
- Gas water heaters (from 2011).
- Computers and monitors (2014).
- Multi-split air-conditioner systems (2014).

The plan also identifies other products for investigation or review, including electric and heat pump water heaters; solar water heaters; residential, commercial, and LED lighting; commercial air conditioners; commercial and household refrigeration; and three-phase motors.



e) Financial resources and budget allocation

NZD 4.8 million a year is allocated to MEPS and labeling, Energy Star, and Vehicle Fuel Economy Ratings.

f) **Expected results**

The energy saved in 2014/15 by residential products sold under the Efficient Products Program was 2.4PJs. In relation to the level of compliance with mandatory energy performance labeling regulations by retail stores, 95% compliance was achieved in 2014-15.

2.2.2. Fuel Efficiency Standards

- **Name**

Vehicle Fuel Economy Labeling

- **Purpose**

To achieve reductions in fossil fuel demand and emissions, and savings to end-users by improving the average fuel efficiency of the vehicle fleet.

- **Applicable sectors**

Transport.

- **Outline**

The Energy Efficiency (Vehicle Fuel Economy Labeling) Regulations were first published in 2007. The Vehicle Fuel Economy Labeling scheme came into effect in April 2008, which made it compulsory for vehicle traders and online vendors to display information about the fuel economy of their vehicles. The aim of the program is to allow consumers to make more informed decisions when purchasing a vehicle, and place appropriate values on fuel economy. In addition, it allows consumers to consider the effect that fuel efficiency will have on the environment and their fuel costs. This is designed to stimulate the supply and purchase of more fuel-efficient vehicles. The regulations also require that fuel-economy information labels be displayed on all new and used passenger vehicles (manufactured after 2000) at the point of sale, provided that the information is available. The seller should use the information provided on the vehicle fuel-economy label generator page (see http://www.eeca.govt.nz/vehicle-fuel-economy-labels/label-generator#970). These regulations

apply to any vehicle sold by a motor vehicle trader or on Internet trading websites. The fuel economy information is expressed as follows:

- Fuel economy cost per year.
- Fuel economy rating out of six stars.
- Fuel economy liters per 100 km.
- This policy contributes to the New Zealand Energy Efficiency and New Zealand Strategy 2011-16, which includes an economy-wide, energy-efficiency target for New Zealand to achieve a rate of energy intensity improvement of 1.3% per annum, and the transport sector target that states, ñBy 2016: The efficiency of light vehicles entering the fleet should have further improved from 2010 levels.ò

- **Financial resources and budget allocation**

See Section 2.2.1 (e).

- **Expected results**

The level of compliance with the Vehicle Fuel Economy Label regulations by new and used car dealers is 93% (95% for new and 91% for used).

Voluntary Measures

a) Name

Energy Star

b) Purpose

To achieve reductions in energy demand and energy-related greenhouse gas emissions as well as savings to end-users through the uptake, demand, and marketability of high-efficiency products.

c) Applicable sectors

Residential and commercial.

d) Outline

The Energy Star concept was developed by the U.S. Environmental Protection Agency in 1992 as a voluntary labeling program designed to promote energy-efficient products and reduce greenhouse gas emissions. It provides an independent endorsement mark for high-efficiency products that can be used by industry/retail partners in product labeling, promotional materials, and advertising.

Energy Star was launched in New Zealand in 2005, and by 2015, coverage had been extended to 20 product categories, including white ware, windows, home electronics, office equipment, air conditioners (heat pumps), solar water heating, and different types of lighting.

e) Financial resources and budget allocation

See Section 2.2.1 (e).

f) Expected results

Energy Star awareness is high at 80% and the overall market share of Energy Star products sold (compared to the rest of the market) is increasing. As of 2015, it has reached 41%.

NABERS NEW ZEALAND (NABERSNZ)

a) Purpose

Improve energy performance in commercial buildings

b) Applicable sectors

Commercial buildings.

c) Outline

In May 2013, EECA Business, in collaboration with the New Zealand Green Building Council (NZGBC), launched a scheme to measure and rate the energy performance of commercial buildings in New Zealand. The New Zealand scheme, NABERSNZ, is based on the successful National Australian Built Environment Rating System (NABERS). NABERSNZ is a voluntary scheme that aims to assist owners and tenants to reduce energy use and costs as well as reduce greenhouse emissions. Under NABERSNZ, qualified assessors measure and score the energy performance of office buildings, giving tenants and owners rating of up to six stars.

Since the inception of the program, nearly 600 self-assessments have been completed and 29 certified ratings have been processed. A total of 14 certified ratings were processed in 2014/15.

2.3. Financial Measures Taken by the Government

2.3.1. Tax Scheme

New Zealand does not have a tax scheme for stimulating energy efficiency improvements.

2.3.2. Low-Interest Loans

- **Name**

Crown Energy Efficiency Loan Scheme

- **Purpose**

The EECA-administered Crown loans scheme supports capital investment for public sector agencies.

- **Applicable sectors**

Government (central).

- **Outline**

The scheme, introduced in 1989, provides funds to government agencies in order to encourage investment in energy efficiency measures in their building, facilities, and vehicle fleets. The loans are repaid by the recipient department/agency over a calculated time period. The enduring energy savings accrue to the recipient for the remaining life of the project or measure.

- **Financial resources and budget allocation**

The EECA provides baseline funding of NZD 2 million per year for Crown loans to government organizations (public sector, including health and local government), which are applied to energy efficiency, technology or renewable energy initiatives.

- **Expected results**

The aim of these loans is to achieve annual savings of no less than 20% of the capital cost of the energy-efficient projects. Projected annual cost savings are at least 20% of the full cost of the project. The figures regarding such Crown loans are as follows: NZD 1.92 million in 2011/12; NZD 1.32 million in 2012/13; and NZD 1.92 million in 2013/14 of which the annual cost saving figure stood at 25%.

2.3.3. Subsidies and Budgetary Measures

a) Name

Warm Up New Zealand: Heat Smart Program

b) Purpose

To improve energy efficiency in the residential sector; to improve the health of people living in cold, damp houses; to stimulate the market for energy efficiency services, including employment in the insulation, manufacturing, and installation industries; and to reduce economy-wide energy demand.

c) Applicable sectors

Residential.

d) Outline

The New Zealand Insulation Fund was announced by the New Zealand Government on May 28, 2009 after which it came into effect on July 1, 2009 as Warm Up New Zealand: Heat Smart. Initially the centerpiece energy program in the residential sector, it was eventually replaced by a new insulation program: Warm Up New Zealand: Healthy Homes (see below). Funding under this program was provided to fit homes with insulation and clean-heating devices, such as heat pumps and approved wood burners, and to remove or decommission non-compliant (dirty) burners.

The program met 33% of the cost (up to NZD 1300, including tax) of installing ceiling and under-floor insulation to all houses built before 2000. Houses with sufficient ceiling and under-floor insulation were also eligible for clean-heating device funding of up to NZD 500. Lower-income households (i.e. Community Services Cardholders) were eligible for more funding; that is, 60% of the total cost of insulation and NZD 1200 toward a clean-heating appliance (provided that the home was insulated). Landlords with Community Services Cardholder tenants could also receive the 60% subsidy and up to NZD 500 for the clean-heating device (again, provided that the home was insulated).

The program also worked on a co-funding basis with a wide range of partners: local government; Iwi (Maori); service providers; local public health providers; charitable trusts; and energy retailers. With these partners, the EECA retrofitted more than 230,000 houses over the four years of the program, which ceased in September 2013. Between NZD 15 million and NZD 20 million per annum in private sector, third-party funding raised under the program assisted low-income households.

Generally, third-party funding applies to low-income households to cover the 40% of the costs of insulation not provided by the program. Various funders provided different mechanisms and eligibility criteria for their funding. For example, some territorial local authorities provided funding via a targeted rate on a rateable property for all households, not only low-income households. Other funders offered direct contributions via service providers for low-income households such as health referrals from local doctorôs offices.

The program included a two-year independent evaluation program that measured the effectiveness and efficiency of its energy, health, and economic outcomes. The long-term goals for the fund included energy savings, health benefits, and stimulating the supply and demand side for energy-efficient upgrades.

e) Financial resources and budget allocation

The government allocated NZD 323 million over four years in the 2009 budget. In November 2009, the government announced that the program would be enhanced by an additional NZD 24 million, targeted exclusively at low-income families.

f) Expected results

A total of 241,000 houses were insulated by the programôs conclusion. An independent evaluation of the Warm Up New Zealand: Heat Smart program by Motu[1] showed that two types of people benefited the most: low-income individuals and those facing a higher risk of health issues. Among the positive outcomes, there was the following: improved health (due to warmer, drier conditions after the insulation was installed; reduced mortality of

approximately 74%; a drop in hospitalization rates and costs, particularly in relation to asthma, respiratory, and circulatory illnesses; lower pharmaceutical costs; reduced absenteeism from school and/or work; and fewer medical visits.

The evaluation of the program also found that 85% of the insulation uptake was additional to the background market rate and thus, it is directly attributable to the program. This equates to an additional 6.6 million m2 of insulation and an additional NZD 35-53 million in producer surplus per year, which is worth NZD 192 million (NPV 4% discount rate) over the four years of the program.

a) Name

Warm Up New Zealand: Healthy Homes

b) Purpose

To improve energy efficiency in the residential sector, and improve the health of people living in cold, damp houses by targeting low-income households for home insulation, particularly families with children and individuals with high health needs.

c) Applicable sectors

Residential.

e) Outline

In May 2013, the government announced an investment of NZD 100 million to insulate 46,000 homes through a new three-year insulation program. This program targeted low-income households, particularly those with children, the elderly, and those at high risk of developing cold-related illnesses. Unlike its predecessor, Warm Up New Zealand: Heat Smart, the new program does not provide any funding to general-income households or for clean-heating devices. The governmentôs investment of up to 60% of the cost of a homeôs insulation is augmented by significant levels of funding from trusts and other third parties. This makes insulation available to those households in most need, at low or no cost.

As of September 2015, 41,000 houses had been insulated under the program.

f) Financial resources and budget allocation

The government is investing NZD 100 million over three years. In addition, more than NZD 50 million is expected to come from project partners, such as trusts, Iwi, and other community organizations.

g) Expected results

Approximately 46,000 homes will be insulated under the program.

2.3.4. Other Incentives

a) Name

Efficient Lighting/The Right Light Program

b) Purpose

To encourage the uptake of efficient lighting technologies.

c) Applicable sectors

Residential and commercial.

d) Outline

The EECAôs efficient lighting program supports the Right Light information and capability building program.

e) Expected results

The Right Light campaign encourages consumers to invest in energy-efficient lighting by focusing on the savings that can be made over the lifetime of the bulbs. To date, the success of the campaign has been measured via supermarket sales of efficient lighting. This year, 25% volume market share was achieved.

The value share (dollar sales) was found to be a better proxy for market shift as people transition from cheaper incandescent light bulbs to longer-lasting efficient lighting. As of June 30, 2015, the value share was 59.8% compared to the target of 60%.

a) Name

Heavy Vehicle Fuel Efficiency Program

b) Purpose

To improve the vehicle efficiency of the heavy-vehicle fleet.

c) Applicable sectors

Commercial.

d) Outline

The Heavy Vehicle Fuel Efficiency Program, which started in 2012, helps heavy-vehicle fleets develop systems and disciplines that save fuel, reduce CO^2 emissions, and leads to greater road safety. The focus of the program is on working alongside fleet managers to put fuel management action plans in place. This involves driver behavior change, vehicle selection, and better management systems. Realistic fuel savings of approximately 7% per fleet are possible, especially when strong leadership is demonstrated by company management.

e) Expected results

The tons of CO^2 emissions avoided from the fuel use of heavy vehicles should lead to a savings of 2,000 tons of carbon emissions per annum.

a) Name

EECA Business Program

b) Purpose

Support enhanced business competitiveness and lower CO^2 emissions.

c) Applicable sectors

Commercial.

d) Outline

The EECA Business Program is designed to overcome market barriers across three groups related to the scale of energy use:

- Top 200 energy users ï the program is for direct engagement with senior decision-makers to create long-term, company-wide energy management partnerships.
- Large energy users (1,000) ï where engagement is led by accredited service providers, industry associations, and sector groups.
- Medium and small energy users (200,000+) ï where targeted EECA information campaigns are used to influence change.

The program ensures that the right combination of information, incentives, and standards are in place, and targets priority sectors in which there is the potential for energy-efficient improvements (e.g., meat and dairy, pulp and paper, and commercial buildings). The components of the program include the following:

- Information and influencing ï long-term, multi-site energy management partnerships.
- Capability initiatives ï training and accreditation programs for service providers, and training programs for end-users and key influencers.
- Information initiatives ï business information programs, rating/labeling programs.
- Co-funding energy audits to identify opportunities and co-funding energy-efficient equipment options (for electricity savings only) with priority on changing procurement policies and leveraging future investments.
- Commercial building design advice targeting lighting, HVAC, and refrigeration.
- NABERSNZ (National Australia Building Energy Rating Scheme: New Zealand) ï voluntary energy rating scheme to help owners and tenants reduce energy use and costs (see separate entry for details).
- Industrial energy efficiency improvements through targeting motorized systems and processed heat. Process heat is New Zealandôs second-largest area of energy use, with only one-third of fuels in this area coming from renewable sources (such as wood and geothermal).
- Demonstration projects and feasibility funding to test new, replicable technology focusing on energy-intensive industries. Case studies are produced to encourage replication throughout the industry.

Crown loans program

- The EECA-administered Crown loans scheme supports capital investment for public sector agencies.

Carbon dioxide reduction

Energy efficiency business case development in meat and dairy heat plants

- Implement the direct use of renewable heat and an EECA-led partnership to establish a ñrenewable heat hubò in Southland.

2.4. Energy Pricing

New Zealandôs energy sector is guided by free market principles. As an independent Crown entity, the Electricity Authority regulates the operation of the electricity market.

Since New Zealandôs pricing is market-based, its effect on energy efficiency improvement programs varies with fluctuating supply and demand for energy. Generally, when energy prices increase, due to weather conditions (e.g., a drought decreases hydroelectricity generation, New Zealandôs primary source of electricity) or global fuel prices, people are more likely to adopt more energy-efficient behaviors.

2.5. Other Efforts for Energy Efficiency Improvements

2.5.1. Cooperation with other Government Organizations

The MBIE and the EECA work closely with the following government organizations: the Ministry of Health; the Ministry of Social Development; the Ministry for the Environment; the Ministry of Transport; the Ministry of Agriculture and Forestry; Housing New Zealand; and Statistics New Zealand. The EECA also works closely with local government and district health boards.

2.5.2.Cooperation with Non-Government Organizations

In general, non-government organizations (NGOs) and community energy groups in New Zealand have sufficient knowledge and awareness of energy efficiency improvement programs implemented by the central government under the NZEECS. NGOs have also

established partnerships with central agencies to realize the goals of the NZEECS in certain areas. The central government agencies have been providing financial and technical support to local governments in implementing energy efficiency and renewable programs. Local governments are currently focused on energy efficiency improvement efforts to lower or maintain their energy expenditures, while NGOs are focused on alleviating fuel poverty and improving health outcomes among lower-income families. Through the EECA, NGOs, community and energy groups are implementing the Warm Up New Zealand: Healthy Homes program and using local networks to assist in reaching more participants.

2.5.3. Cooperation through Bilateral, Regional, and Multilateral Schemes

The New Zealand Government cooperates with other economies and New Zealand agencies on energy efficiency, which include the following:

- The Australian Department of Resources, Energy, and Tourism (DRET) and Australian State Regulators (through the E3 committee) to set joint standards and regulatory requirements for appliances and equipment.
- APEC and International Energy Agency (IEA) membership and forums.
- Energy Regulators Advisory Council (Australia and New Zealand) to align regulations for energy-using products such as gas/electrical safety and radio spectrum management.
- The Commonwealth Scientific and Industrial Research Organization (CSIRO, Australia).
- RegulatorsôForum.
- The World Trade Organization (WTO) Technical Barriers to Trade (TBT) notification.

2.5.4. Other Cooperation/Efforts for Energy Efficiency Improvements

Through the Warm Up New Zealand: Heat Smart and the Warm Up New Zealand: Healthy Homes programs, the EECA has had, and will have, contractual agreements with private service providers to safely install insulation and clean-heating measures into homes.

REFERENCES

Energy Efficiency and Conservation Act 2000

http://www.legislation.govt.nz/act/public/2000/0014/latest/DLM54948.html?search=ts_act_efficiency_resel&sr=1

EECA (2009) *Legislation*, Energy Efficiency and Conservation Authority, Wellington, www.eeca.govt.nz/about-eeca/eecas-role/legislation.

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New Zealand Energy Efficiency and Conservation Strategy 2011-2016 New Zealand Energy Efficiency and Conservation Strategy 2007: Making it Happen

Vehicle fuel economy labels, Energy Efficiency and Conservation Authority, Wellington, http://www.energywise.govt.nz/ratings-and-labels/vehicle-fuel-economy-labels.

Warm Up New Zealand: Healthy Homes, Energy Efficiency and Conservation Authority, Wellington see https://www.energywise.govt.nz/funding-and-support/free-insulation-and-installation-support .