Government Energy Policy and Solar Water Heating

Joseph Mayhew
Energy Efficiency and Conservation Authority

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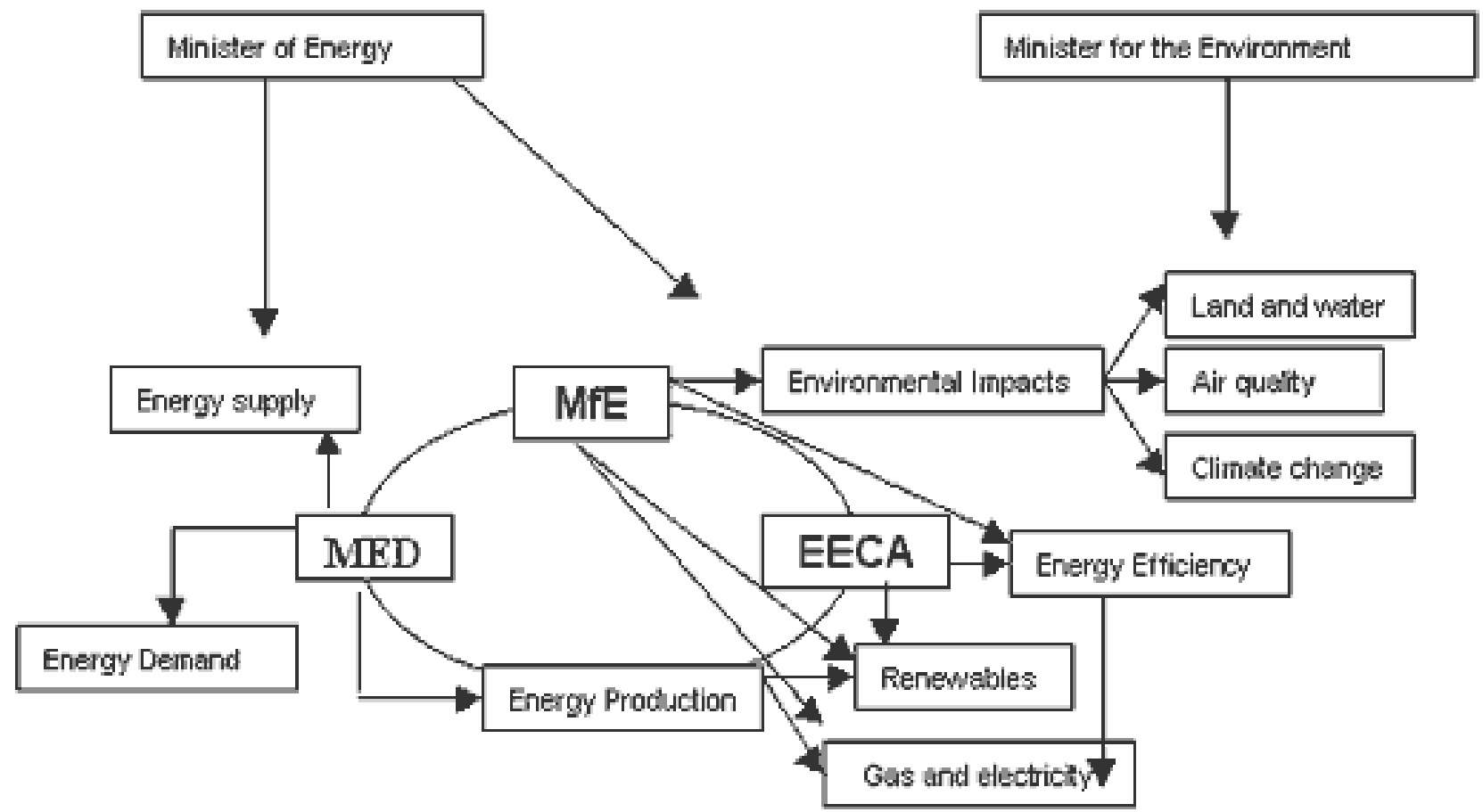
Te Tari Tiaki Pūngao

Overview

1) Responsibilities in Government
2) The current environment
3) Current policies
4) *Exercise – what would you do?*
   - *Question – what is the single most effective measure to achieve energy policy aims?*
5) Solar water heating, past and present,
6) Solar water heating - future

Energy Responsibilities in Central Government



Government Institutions

Who is responsible for what?

Ministry of Economic Development (MED)

- Resources and Networks branch
  - electricity
  - fuels and Crown resources
  - energy and the environment
- Crown Minerals group
  - Petroleum
  - Natural gas
  - Mineral estates

Government Institutions

Who does what?

Ministry for the Environment

- Environmental consequences of supply and use of energy
- Monitors EECA's performance
- Climate change

EECA, MOT, MED

- Biofuels – across government
- Fuel consumption information project – across govt.

Government Institutions

EECA

- Independent Crown entity
- 8 member Board, appointed by, accountable to, Minister of Energy
- Monitored by the Ministry for the Environment
- Established under EECA Act 2000
- EECA programmes reflect govt. policy

Overview of EECA

- To encourage, promote and support:
  - energy efficiency
  - energy conservation
  - use of renewable sources of energy
- Operational and policy mandate
- Implementation of the National Energy Efficiency and Conservation Strategy

A time of great opportunity

Energy situation changing rapidly

In last five years things have moved

Internationally

- Peak oil
- Climate change

Nationally

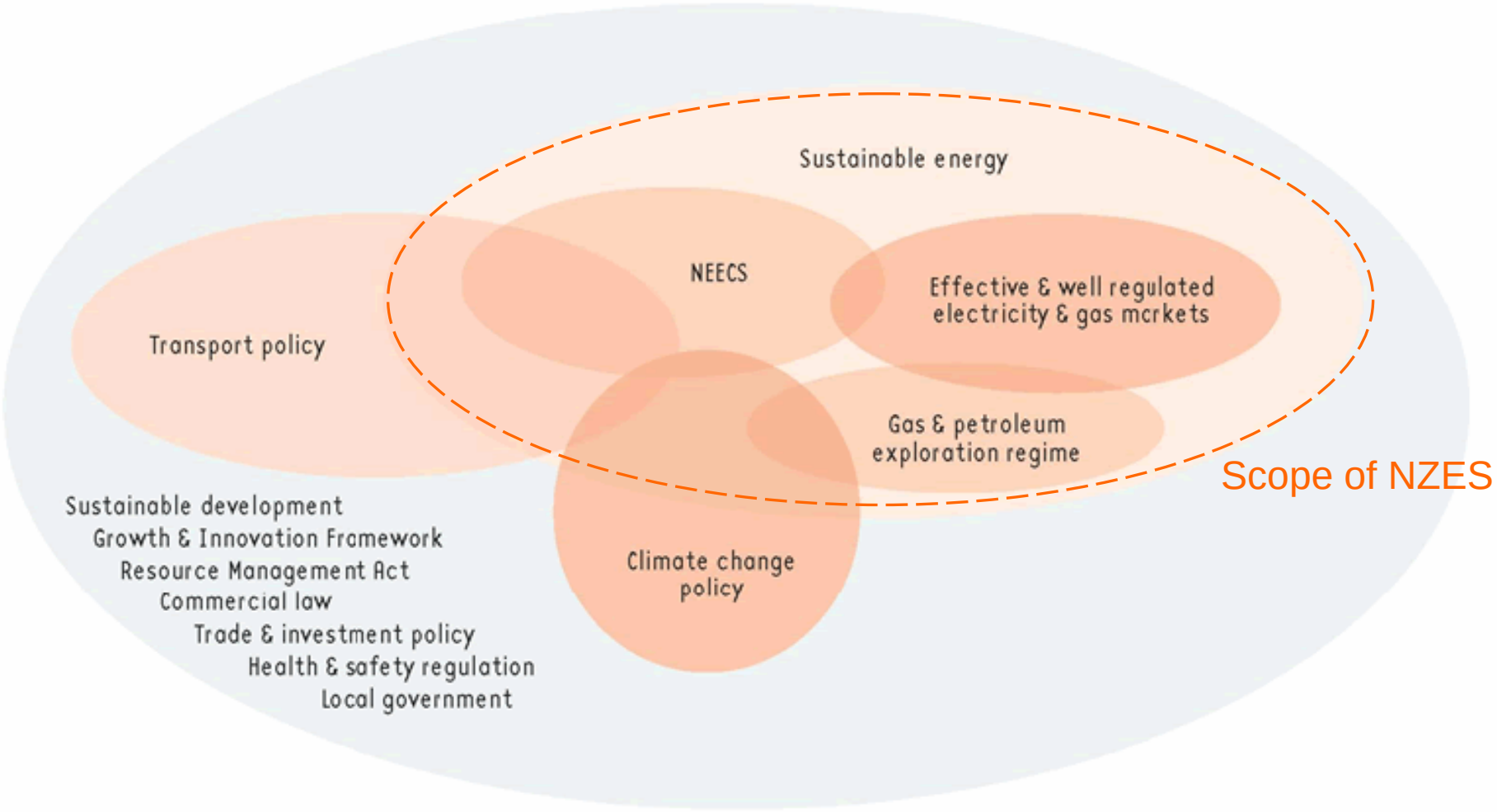
- Supply shortages – Maui gas
- Increase demand

Government energy policy

In response, Government looking at cohesive energy policy

- New Zealand Energy Policy (NZES)
- Climate change policy – 9 work programms
- NEECS II

New Zealand Energy Strategy



NZES

Identify priority actions to achieve objective

- Reliability and resilience
- Environmental responsibility
- Fair and efficient prices

•Built on Sustainable Energy Programme of Action

•Integrated with NEECS, climate change policy, fuel related parts of National Transport Strategy

NZES

Key issues

- To what extent can we reduce reliance on fossil fuels?
- Can non-transport energy be 100% renewable, or carbon neutral?
- Can we reduce energy demand and still meet needs of growing economy?
- What role should thermal generation play in transition to more sustainable energy sources?

Climate change policy

- Climate change work programme
  - New Zealand's net position – deficit of 41 million tonnes of CO2 equivalent
  - So much more than Kyoto
  - NZ 11th worst emitter per capita

National Energy Efficiency and Conservation Strategy

NEECS One

- Action plans (energy supply, industry, transport, Government, Buildings and Appliance)
- NEECS always intended as an 'all of Government' strategy
- Always going to be reviewed

Targets

- 20% improvement in energy efficiency
- 30PJ p.a. additional energy from renewable sources

NEECS Review

Explored big questions

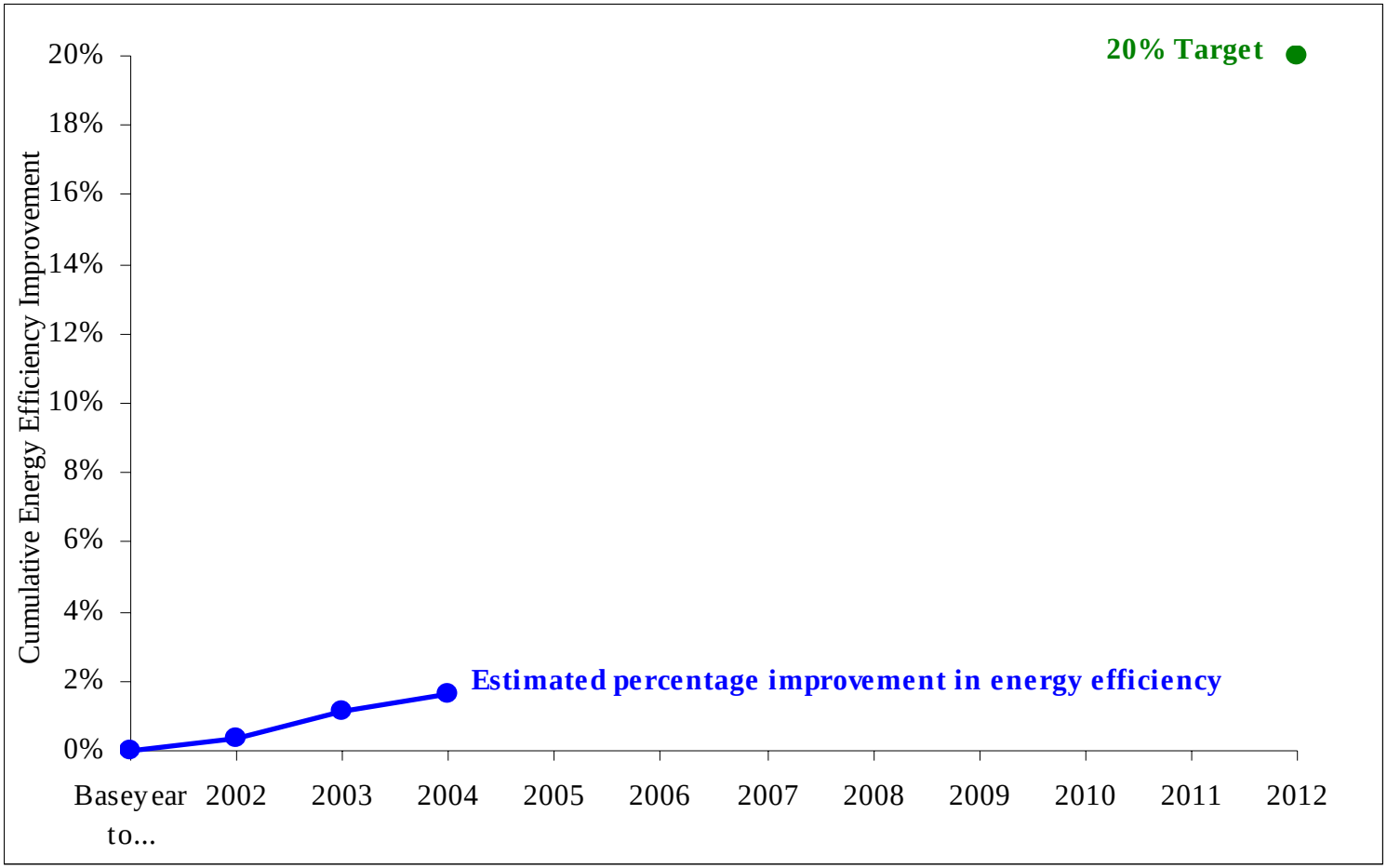
- What has happened in NZ?
- Who is doing better, and how?
- What could NZ do differently?

Successes of NEECS One

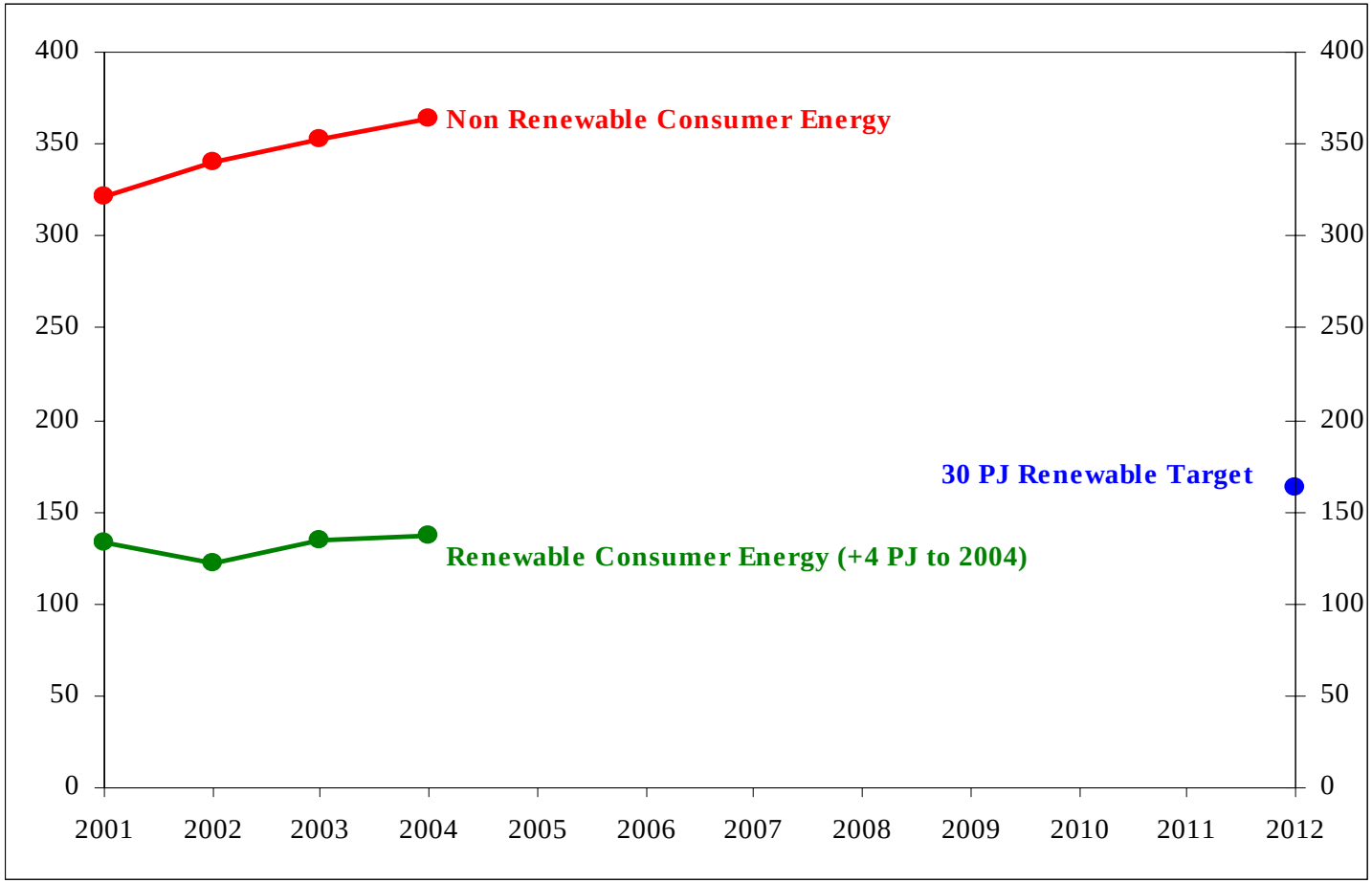
Laid the foundations

- Removing barriers, information, quality assurance
- Ambitious targets
- Not clear who would achieve them

Progress – Energy Efficiency



Progress – Renewable Energy



Opportunities

 DENMARK Use economic instruments and regulatory interventions to enhance the energy efficiency of the vehicle fleet

 HOLLAND Industry agreements for energy efficiency

 CANADA Building and appliance standards and ratings

 AUSTRALIA Mandatory reporting of energy efficiency opportunities

NEECS - II

Development of new NEECS

- looking at sectoral targets, instead of nationwide targets
- Need to think of energy in terms of demand and not always supply
- Businesses making decisions to invest in EE using same criteria as other investment

Summary

- Great change, great opportunities
- So far, about an additional 10PJ renewable energy
- Increasing, but decreasing percentage
- Energy efficiency low, wont meet target

What would you do?

What would make the most difference

- What would be the single most effective measure?
- What would be your objectives?

Examples

Govt. energy objectives

- Reliability and resilience
- Environmental responsibility
- Fair and efficient prices for current and future generations

Example

Key Question	Example
What measure?	Support wind energy
What objectives?	Increase amount of RE
What issues are there?	Integration into grid RMA issues Community concerns Noise Visual Birds Cost to consumers Lack of accurate information Competition from other energy sources
What would you need to make it happen? (Barrier removal)	Information Quality standards and requirements Cost incentives Legislative changes

Solar water heating

EECA's solar programme

Background

- NEECS action plan – how the Strategy goals achieved

What it set out to do

- Renewable energy industry development
- Support industry associations
- RE industries able to compete on equal footing
- Overcome barriers to uptake

What the solar industry was like

- Small, had had set backs

EECA solar initiatives

Finance assistance (addressing cost barrier)

- Grant towards cost of interest on a loan

Quality assurance (addressing quality barrier)

- Standards
- Installation quality
- Installation audits
- Performance monitoring

Marketing (addressing information barrier)

- Ads, brochures, magazines, TV

Current status of industry

What industry is currently like

- 14 products that meet standards
- Standards and requirements of SIA
- Indigenous manufacturers, importers
- Joint Aus/NZ standards
- Generally, quality product
- Training courses for plumbers
- Expanding rapidly

Issues

Installation

- EECA audits show some improvements
- Cylinder size
- Poor inclination
- Building consent difficult

Current issues in SWH industry

Installation capacity

- Requires ‘craftsman’ plumber to sign off
- Plumbers expensive

Expense

- An expensive option (average marginal cost $4500)
- Getting more expensive, not cheaper

Information

- Misleading information on performance
- Criticism products

Designing a new solar programme

Impact on an operational programme

Co operation agreement

- Labour-led Government co-operation agreement with Green Party
- Level one agreement, ‘enhanced SWH programme’

Speech from throne

- Aggressive approach…include solar water heating

SWH programme

Some objectives

- To build public confidence in SWH
- To build capacity across all parts of the SWH industry;
- Reduce prices to consumer
- Sustainable industry.
- To improve quality
- To increase quantity installed within New Zealand;

Designing a new programme

Enhanced SWH programme

- EECA research on industry status and installation capacity – cost of units key issue

Information gathering exercise

- what can happen and when
- initial findings used to develop options
- input into programme design

Consultation process

Programme design

- develop programme design options
- prepare discussion document
- cabinet approval
- release discussion document
- receive feedback
- develop preferred option
- cabinet approval
- release of decision of preferred option

Improving energy choices

www.eeca.govt.nz

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