

# **TECHNOLOGY OPTIONS FOR CLIMATE CHANGE MITIGATION**

**2006 EFNZ SEMINAR**

# Sponsors



# Simon Upton

## 1998 Wellington Climate Change Seminar

- “the Science doesn’t matter anymore Rob, we’ve signed a treaty.”

## 2006 Paris OECD Round Table on Sustainable Development

- “the implicit (and increasingly explicit) conclusion is that governments are relying on technology to provide solutions, not treaties.”

# Theme for today

- What are the Energy Technology climate change solutions?
- What are the policies we need to make the technology solutions happen?

A technology push rather than a market pull

# ENERGY RESEARCH INVESTMENT STRATEGY

- A research strategy that will secure an energy future that meets New Zealand's aspirations
- To develop a sustainable energy future for New Zealand, to support economic growth, environmental and social sustainability.

Prepared by EFNZ with wide industry and research involvement and close consultation with FRST and MoRST

# Overarching Themes

- **Indigenous Energy Sources**
  - What are our best options
- **Demand and Supply**
  - Role of Markets
  - Education and behaviour
- **Climate Change**
  - Meet our international obligations
- **Global trends and supply and demand**
  - Risk Averse on peak oils
- **Energy infrastructure**
  - Importance and potential changes

# The big (immediate) issues arising from the process

- Proving New Zealand's energy resources
  - Future research priorities
- Carbon Capture and Storage
  - Future proofing fossil fuel use
- Bioenergy
  - An immediate government priority
- Effective Infrastructure
  - Changes and impacts
- Hydrogen
  - If it happens we need to be prepared
- Balancing supply and demand
  - Distributed energy and smart grids

There is no single solution!

# PROGRAMME

Time	Topic	Details
10:15	Welcome Remarks-Seminar Chairman	Rob Whitney, EFNZ/CRL Energy Ltd
10:30	Basis for Climate Change	David Wratt, NIWA
11:00	World Energy Council Energy Scenarios study	Dr. Robert Schock, WEC-UK,
<b>11:45</b>	<b><i>Lunch &amp; Networking</i></b>	
12:30	International Economics of Climate Change	Michael Grubb, Carbon Trust-UK,
<i>Joint Lecture with Institute of Policy Studies at LT1, Rutherford House, Ground Floor, VUW</i>		
<b>13:45</b>	<b><i>Coffee and Tea</i></b>	
14:00	Reducing Emissions from Transport	Suzana Kahn-Ribeiro, Brazil
14:20	The Potential of Energy Management and Efficiency to Reduce Emissions	Prof. Diana Urge-Vorsatz, (presented by Michael Grubb)
14:40	Low Carbon Electricity Supply Options	Ralph Sims, Massey University
15:00	Carbon Capture & Sequestration Options in New Zealand - Latest Developments	Chris Baker, Coal Association of New Zealand
15:30	Panel Discussions on How to Promote Technology Solutions to Climate Change	Speakers plus John Kessels