



Current New and Renewable Energy utilization in New Zealand.

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**EGNRET 34, Economy Report,
Kuala Lumpur, 26-27 April, 2010**



Coverage

Renewable Energy in New Zealand

Options for Development

The National Energy Strategy

Priorities for Development

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Key Points



Renewable Energy in New Zealand

Third highest use of Renewable Energy in OECD after Norway and Iceland,

More than 30% of Primary Energy,

2008	Geothermal	48%
	Hydro	34%
	Woody biomass	15%
	Wind	2%
	Other	1%

Mostly used for Electricity Generation

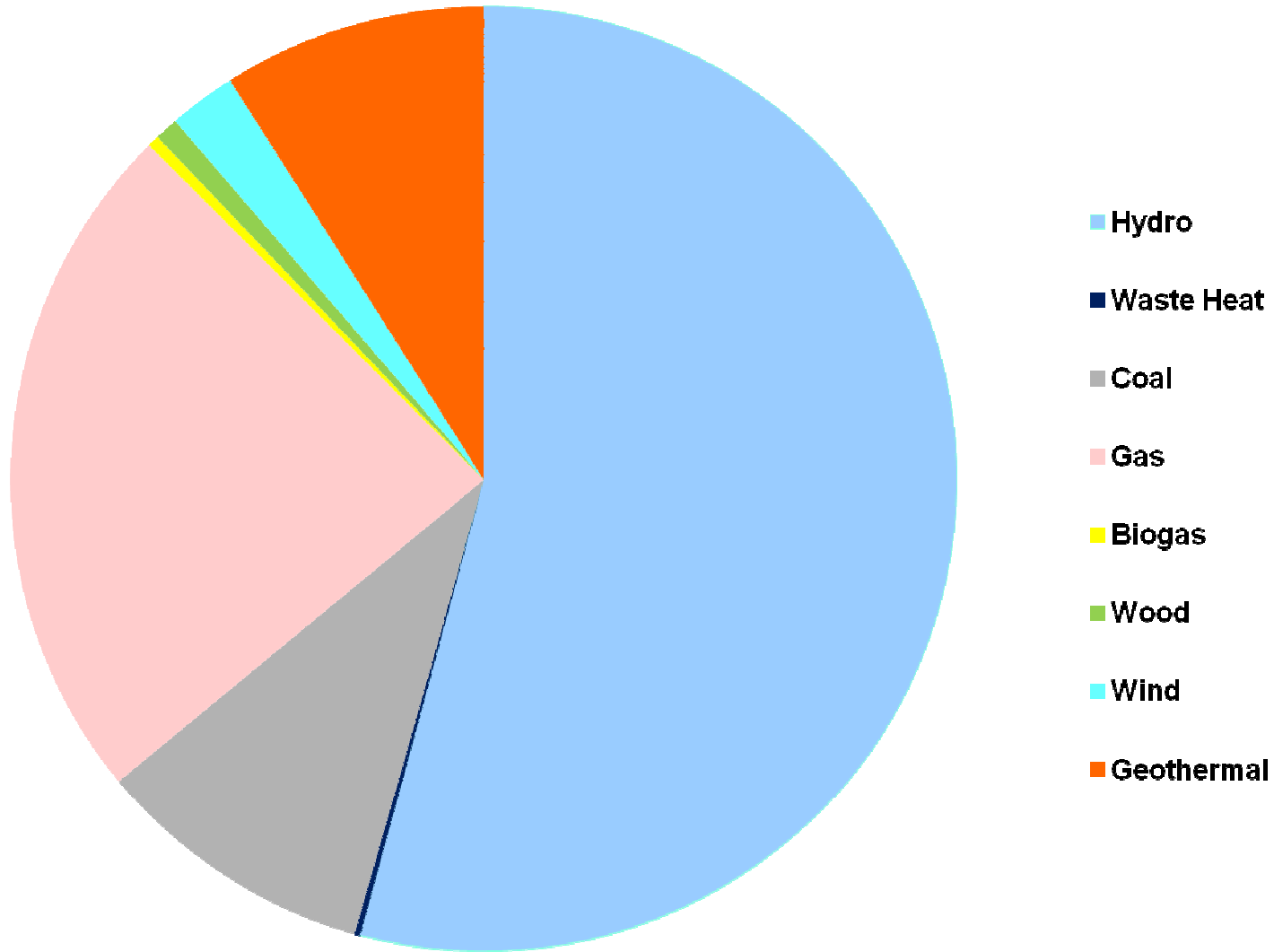


Installed Electricity Capacity, 2008 (MW)

Renewable Capacity	Hydro	5,023	55.0%
	Geothermal	731	8.0%
	Wind	321	3.5%
	Biomass	46	0.5%
	Total	6,120	67.0%
Non-Renewable Capacity	Gas	2,375	26.0%
	Coal	594	6.5%
	Other	46	0.5%
	Total	3,014	33.0%
Total Capacity		9,133	100.0%



Electricity Generation Q3 2008





Electricity Generation, 2008 (GWh)

Renewable Generation	Hydro	21,944	51.4%
	Geothermal	3,603	8.4%
	Wind	1,037	2.4%
	Wood	467	1.1%
	Biogas	197	0.5%
	Total	27,251	63.8%
Non-Renewable Generation	Gas	10,961	25.7%
	Coal	4,314	10.1%
	Oil	122.3	0.3%
	Waste Heat	57	0.1%
	Total	15,454	36.2%
Total Generation	42,705	100.0%	



Options for Development

Existing:

- Hydro, Geothermal, Wind, Biofuels,

Prospective:

- Wind, Biomass,

Potential:

- Solar, Marine

Lots of Options!



The National Energy Strategy

- **90% Electricity from RE by 2020:**
 - Hydro, Geothermal, Wind, Biomass,
- **Introduction of Electric Vehicles,**
- **Marine Energy,**
- **Second and Third Generation Biofuels:**
 - Forest Biomass and Algae,

Now subject to Review



Priorities for Renewable Energy Development

- **Hydro, Geothermal, Wind, Biomass,**
- **Introduction of Electric Vehicles,**
- **Marine Energy,**
- **Second and Third Generation Biofuels:**
 - **Forest Biomass and Algae,**

In Line with the National Energy Strategy



Market Solutions

New Zealand pursues a Market-led approach,

Most Renewable Energy is cost Competitive:

- **Solar PV is the exception,**
- **Incentives target Infrastructure,**
- **Not energy pricing,**

Electric Vehicles, Solar, Marine and Biomass:

- **May require pricing support (e.g. FiTs, RPS).**

Watch this Space!



Key Points

**Already a high level of Renewable Energy,
Wind Energy is growing Rapidly,
Lots of Renewable Energy Options,
National Energy Strategy supports RE,
Market introduction is possible for some RE,
Electric Vehicles, Solar, Marine and Biomass
may need Government Incentives**



Thank You!