

National's Energy Policy

ENSURING SECURITY OF SUPPLY

New Zealand cannot afford to have an insecure supply of electricity. Our economic well-being, our growth prospects, and our earning power depend on New Zealand families and businesses knowing that they can rely on there being enough electricity to service their needs.

The Government has failed in its responsibility to ensure secure supply. This winter was the third one since this Government came to office that New Zealanders were asked to seriously save power.

National will make security of supply a priority by acknowledging the extent of future demand, reforming the Resource Management Act, accepting that gas will be part of the mix, and streamlining investment and decision-making processes.

1. Acknowledging the Extent of Future Demand

New Zealand's historical average annual increase in demand for electricity is 2.2%. Labour believes it will be 1.2% on average to 2025.

National will:

- Plan for realistic levels of future demand growth, because running out of electricity is a risk we are not prepared to take.

2. Reforming the Resource Management Act (RMA)

National will reform the RMA to allow more generation to be built. This will include:

- Introducing Priority Consenting. Some future large electricity generation and transmission projects may be facilitated under this new law.

- Streamlining and simplifying the day-to-day workings of the RMA by introducing to Parliament a bill to reform the RMA within the first 100 days of our first term. The legislation will include removing the ministerial veto over consents, reducing the number of consent categories, and putting an end to frivolous and vexatious objections.

3. Accepting that Gas will be Part of the Mix

The lesson from this winter is that thermal electricity generation is essential to keeping the lights on. National will send a clear signal that gas will be part of the energy mix needed for security of supply

National will overturn the Government's ban on new base-load thermal power stations.

4. Streamlining Investment and Decision-making Processes

National will streamline the investment and decision-making processes for investing in new electricity transmission. New Zealand is a small country, yet it now has a very complex and costly electricity regulatory environment. Because of the relative lack of transmission capacity, Transpower and the industry have recognised the need for significant investment in the next decade.

National will:

- Undertake a careful review of the roles that the Electricity Commission, the Commerce Commission, and Transpower play in the electricity sector. We will do this with a view to ensuring the best outcomes for consumers – in terms of security of supply and affordability – and we will do so with the goal of eliminating unnecessary role duplication.

- In our first year of office, carefully work through the options arising from this review with one possible outcome being the disestablishment of the Electricity Commission.
- Require Transpower to negotiate in good faith to achieve access agreements that recognise the interests of landowners.

MEETING OUR ENVIRONMENTAL RESPONSIBILITIES

National is determined to provide clear policy settings that favour renewable electricity generation.

National will:

- Introduce an emissions trading scheme within nine months of taking office that balances our environmental responsibilities with our economic opportunities.
- Support the 90% renewables target but not let it get in the way of security of supply.

We expect our proposed ETS will result in no new coal stations being built – unless proven technologies for carbon capture and storage change the emissions profile of coal.

FOCUSING ON AFFORDABILITY

National will:

- Increase the supply of electricity through RMA reform and regulatory reform, slowing the upward price pressure of recent years.
- Take a close look at the Electricity Commission's review of the electricity market. We will take action on any recommendation we agree will improve the market and improve affordability for consumers.

- Support energy efficiency by making sure the Energy Efficiency and Conservation Authority and its programmes are well funded.
- Adopt an approach of encouragement towards energy efficiency, rather than one that denies consumers' choice.
- Ensure energy efficiency projects do not get bogged down in red tape.
- Introduce a \$1,000 per household solar water heating grant and simplify the complex building consent rules for solar water heating.

OIL AND GAS

National is excited about the hydrocarbon resource potential that lies within New Zealand's borders. More than 1.2 million square kilometres of New Zealand's economic zone could have hydrocarbons underneath it. Our total petroleum potential could be as much as 24 billion barrels of oil equivalent.

National will:

- Work on practical measures to encourage more gas discovery and recovery.
- Review the existing Crown Minerals regime to examine the appropriate risk reward arrangements needed to fully develop New Zealand's domestic oil and gas industry.
- Send a clear signal that gas will continue to be a significant fuel source for the foreseeable future.
- Invest a new \$25m in seismic exploration over the next three years.

Energy Policy Backgrounder

SECURITY OF SUPPLY

The effect of insecure electricity supply

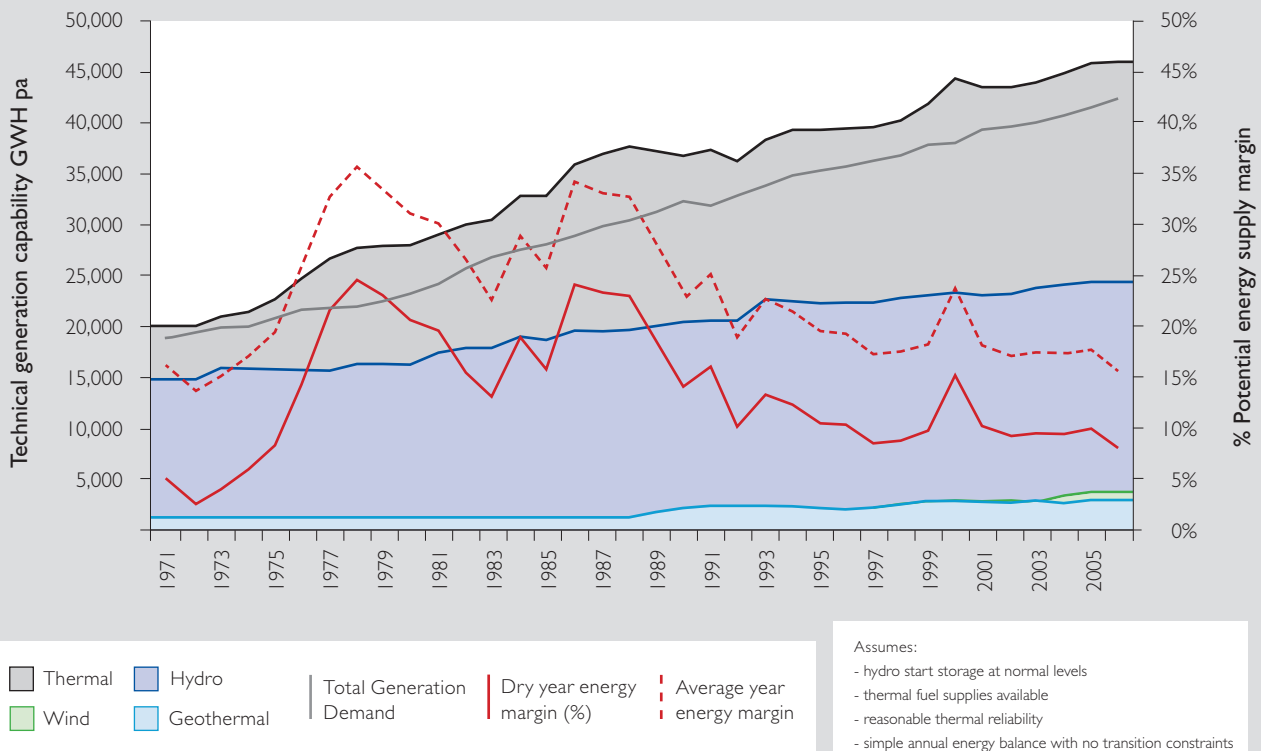
Treasury estimated that GDP fell temporarily by \$200 million as a result of the electricity shortage in 2001. The Reserve Bank has quoted estimates by market observers that the impact of the 1992 shortage was \$600 million on the national bottom line.¹

Our dry-year security margins have been falling since 1999

Figure 1 is from the Electricity Commission. It shows that since 1999 average dry-year energy margins have fallen. The 2008 figure is not included, but is likely to be lower again than 2006/7.

Note that in New Zealand it is the ability of the system to supply energy during an extended period of low inflow into hydro power station catchments which determines the security of power supply. This is different from many other countries, where security of supply is determined by the ability of the power system to meet short periods of peak demand.

Figure 1. Average Energy Security Margin²



¹ See Ministry of Economic Development paper from May 2003: "Electricity Security of Supply: Policy Settings: Regulatory Impact Statement Business Compliance Cost Statement". http://www.med.govt.nz/templates/MultipageDocumentTOC_____17402.aspx

² Electricity Commission, "Issues Paper - Survey of Market Performance" for Market Design Review (2007) <http://www.electricitycommission.govt.nz/pdfs/opdev/wholesale/market-design/Market-Design-Review.pdf>

Only around 1140MW of net new capacity – around 125MW per year – has been built since 2000.

Since 2000 the plants in Table I have started generating.

Table I. New Generating Plants³

Owners/Operators	Plant Name	Commissioned	Fuel type	Capacity (MW)
Top Energy	Ngawha Extension	2008	Geothermal	13
Contact Energy	Pohipi / Wairakei	2008	Geothermal	20
Mighty River Power	Kawerau	2008	Geothermal	90
Meridian Energy	Manapouri Half Life Refurb	2007	Hydro	130
TrustPower	Tararua III	2007	Wind	93
Meridian Energy	White Hill	2007	Wind	58
Genesis Power	e3p	2007	Gas	385
Mighty River Power	Southdown Cogen Expansion	2007	Gas	45
Contact Energy	Tauhara	2006	Geothermal	15
Pan Pac	Pan Pac Cogeneration	2005	Biomass/Steam	13
Contact Energy	Wairakei Binary	2005	Geothermal	14
Tuaropaki Power Company	Mokai II	2005	Geothermal	39
Contact Energy	Otahuhu-B Expansion	2005	Gas	24
Contact Energy	Whirinaki	2004	Diesel	155
Genesis Power	Huntly-P40 OCGT	2004	Gas	40
Meridian Energy	Te Apiti	2004	Wind	91
TrustPower	Tararua Wind Farm II	2004	Wind	68
Meridian Energy	Manapouri II	2002	Hydro	170
Contact Energy	Te Rapa Cogen	2000	Gas	44
Tuaropaki Power Company	Mokai I	2000	Geothermal	55
Contact Energy	Otahuhu-B	2000	Gas	380
			Total	1942

³ Ministry of Economic Development, Energy Data File (June 2008), p 132; Owners/Operators' websites.

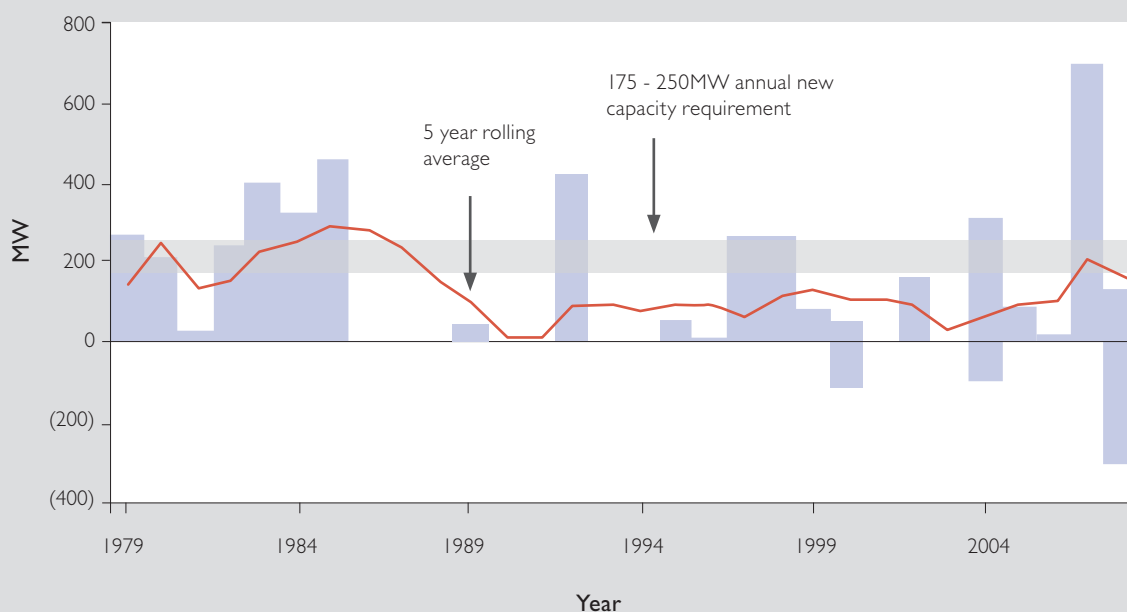
Since 2000 the plants in Table 2 have been decommissioned.

Table 2. Decommissioned Plants⁴

Owners/Operators	Plant Name	Decommissioned	Fuel type	Capacity (MW)
Contact Energy	New Plymouth	2007	Gas	300
Contact Energy	Stratford	2001	Gas	200
Contact Energy	Whirinaki	2000	Gas	162
Contact Energy	New Plymouth Unit 5	2000	Gas	135
			Total	797

Figure 2 shows how new generation has fallen behind in recent years.

Figure 2. Net New Generation Build⁵



Note that net new generation build has exceeded 175MW in only 5 of the past 20 years, and two of those years wouldn't have registered had it not been for government underwrites to commission new plant (Whirinaki and the e3p risk-sharing agreement).

4 McDouall Stuart, "On Firmer Ground: NZ Energy Sector Report 2008", p 9; Contact Energy – Power Stations <http://www.contactenergy.co.nz/web/view?page=/content/w/pages/shared/powerstations&vert=au>

5 McDouall Stuart, "On Firmer Ground: NZ Energy Sector Report 2008".

We should acknowledge the extent of future demand

The Minister of Energy, Hon David Parker, has said that “in order to reach our 90% target by 2025, we need to build about 175MW of renewable electricity generation each year”.⁶

But that claim is predicated on demand growth of only 1.2%⁷, and the historical average increase in demand is 2.2% per year.⁸ In 2006, the Electricity Commission forecast demand growth over the next 20 years to be 2% per year.⁹ In its 2005 briefing to the incoming Minister, the Electricity Commission’s mean forecast for future national electricity demand growth was for annual growth of around 2.7% for the next few years, falling slowly to 2.0% by 2015, and 1.3% by 2030.¹⁰

We need RMA reform

Delays in getting consents for new projects:

- TrustPower has just gained resource consents from the Marlborough District Council for its proposed 72MW hydro scheme on the Wairau River. The hearing process took 18 months with 1500 submitters – the longest resource consent hearing in New Zealand’s history. The decision is likely to be appealed. Three appeals are already before the Environment Court after the interim approval granted in June 2007, including one from the Department of Conservation.¹¹

6 Hon David Parker, “90% renewable energy target is achievable” (6 March 2008). See <http://www.beehive.govt.nz/release/90+renewable+energy+target+achievable>

7 Written question 05540 (2008).

8 Meridian Energy, “Options, Choices, Decisions: Understanding the options for making decisions about New Zealand’s electricity future” (2007), p 6. See <http://www.meridianenergy.co.nz/NR/rdonlyres/8F26402C-29FB-4A3F-AC3A-6F130BA7EFID/22346/optionsChoicesdecisions1.pdf>

9 Electricity Commission, “Commission demand forecast model” (2006). See <http://www.electricitycommission.govt.nz/opdev/modelling/index.htmldelete>

10 Electricity Commission, Briefing to the Incoming Minister of Energy (October 2005). See <http://www.electricitycommission.govt.nz/pdfs/publications/briefing-Oct05.pdf>

11 Energy and Environment Business Week (12 August 2008). See <http://www.nzenergy-environment.co.nz/>

- Meridian’s project West Wind in Makara, first mooted in the late 1990s, has only just started to be built after years of hearings, appeals, and delays.
- The Environment Court appeal on Meridian’s Project Hayes, a 630MW wind farm in Otago, has been delayed until January 2009 (the project started in 2006).
- Meridian’s Project Aqua (which was to be a 520MW power station on the lower Waitaki) did not proceed for many reasons, with the RMA being a major one.

Delays in getting consents for existing projects:

- Contact Energy spent six years re-consenting the Wairakei geothermal plant and six years re-consenting the Clutha River/Mataau hydro operations (both 2001 to 2007 from start to finish).¹²

Cost:

- Keith Turner, then-CEO of Meridian, said in early 2007 that the delay in consenting the Makara wind farm added an extra \$80 million to the cost of the project.¹³
- TrustPower says the Wairau hydro scheme has cost the company more than \$2 million.¹⁴

It is much easier to get consent for thermal generation than it is for renewables

The Government’s reference group on electricity generation found in 2006 that “it is apparent that recent thermal stations (being gas fired) have been consented more rapidly and decisions appealed less often than renewable projects involving new hydro, wind, or geothermal resources.”

12 Grant Bradley (New Zealand Herald), “Energy Projects Put on the Fast Track” (21 December 2007). See http://www.nzherald.co.nz/section/1/story.cfm?c_id=1&objectid=10483658

13 Radio New Zealand Newswire “State owned power company says cost of RMA delays \$80m to date on new wind farm” (15 February 2007).

14 Energy and Environment Business Week (12 August 2008). See <http://www.nzenergy-environment.co.nz/>

The same report found that “applications for thermal and wind projects that have not been appealed have typically taken about 3-6 months to process from lodgement of the application to the issuing of a decision. Most applications for hydro and geothermal projects tend to have taken longer (up to a year or more)...”¹⁵

The electricity industry wants RMA reform

Keith Turner of Meridian Energy said in March 2007 that:

“We have a real danger in this country, that the time it takes to get a consent is so long, that keeping a good supply and demand balance (of power) rests with the Resource Management Act (RMA) process.”¹⁶

He said in March 2008 in relation to the Government’s 90% target:¹⁷

“These are lofty goals... You can already see resources starting to mobilise toward them. But the biggest challenge will be the Government response and how much teeth the Government gives it. It’s one thing to say what we should do. It’s another thing to give us the tools to enable us to do it.”

Contact Energy’s David Baldwin has said that “there is no room for unnecessary delays and endless appeals in consenting new renewables.”¹⁸

At times this winter, thermal electricity was providing more than 50% of New Zealand’s power needs

In May 2008, the proportion of electricity being

¹⁵ Ministry of Economic Development Reference Group on Electricity Generation, “The Merits and Potential Scope of National Guidance on the Management of Electricity Generation under the RMA” (Draft Report, May 2006). See <http://www.med.govt.nz/upload/45172/generation-reference-group-draft-report.pdf>

¹⁶ James Weir (The Press), “Nats blast plan delays” (30 March 2007), p 8.

¹⁷ Andrew Janes (Dominion Post), “The Way the Wind Blows” (March 1 2008) See <http://www.stuff.co.nz/4421107a13.html>

¹⁸ Contact Energy, “A 90% Renewables Target – How might it look” (April 2008). See http://www.contactenergy.co.nz/web/pdf/financial/20080226_90percent_renewable_future.pdf

generated from thermal sources was 53.6%.¹⁹

The majority of submitters to the select committee considering the Emissions Trading Scheme Bill wanted the thermal ban ditched

All the major electricity generators were opposed:²⁰

- Meridian Energy: “The moratorium will increase uncertainty about the ability of an investor to commercially invest in any technology...” and “...the proposed thermal moratorium is clearly not a market mechanism but an unusual regulatory intervention which has the high potential to distort market mechanisms.”
- Contact Energy: “The thermal moratorium in the bill will increase security of supply risks. It introduces a new source of inflexibility, rigidity, and timing risks into the electricity sector which will reduce the sector’s ability to respond quickly to changing circumstances. Contact recommends the moratorium be removed completely.”
- Genesis Energy: “Genesis Energy strongly submits that the creation of a renewable preference is unnecessary and undermines the credibility of the NZETS.”
- Mighty River Power: “...does not support the introduction of a moratorium on thermal electricity generation... a moratorium is likely to raise the costs to the New Zealand economy of electricity generation over and above the cost of the ETS on its own.”

As well as other energy companies:

- Vector: “Opposes the proposed thermal moratorium, as it is an unnecessary regulatory approach that is likely to have perverse

¹⁹ Written question 05515 (2008).

²⁰ All of the submissions are available at: http://ourhouse.parliament.nz/en-NZ/SC/Papers/Summaries/1/1/485CFEsummaryCCETRP_1-Climate-Change-Emissions-Trading-and-Renewable.htm

consequences and is, indeed, inconsistent with the analytical approach underlying the ETS.”

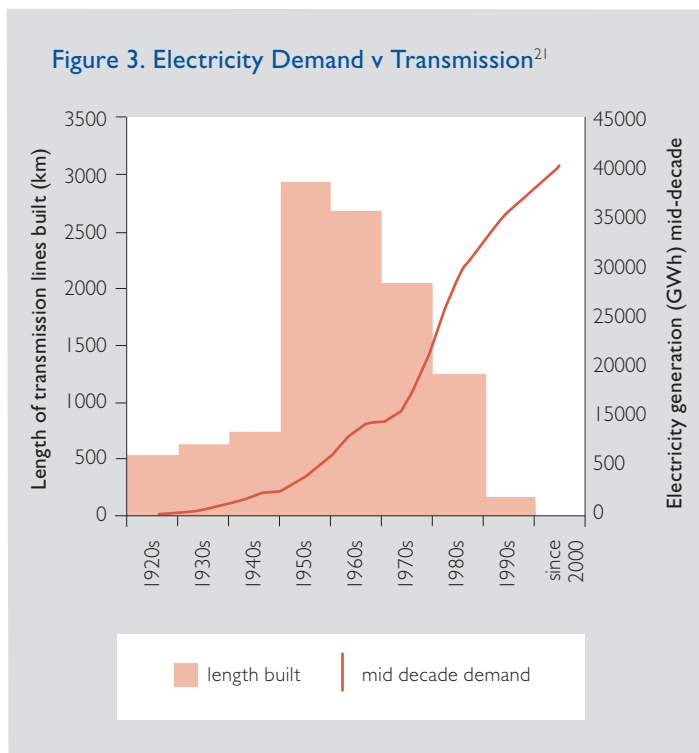
- Solid Energy: “Considers that the proposed moratorium on thermal generation will undermine the security of supply of New Zealand’s electricity system. There is a significant risk that the moratorium will undermine this by making it more difficult for the electricity market to react rationally, efficiently, and appropriately to market signals requiring additional investments.”
- Todd Energy: Ban poses “serious risks to energy prices, security of energy supply, and the New Zealand economy.”

So were significant lobby groups:

- Major Electricity Users’ Group: “A ban on new thermal generation will increase risk to security of supply, forgo the opportunity for a lower electricity price path, have adverse impacts on the gas market, and undermine investor confidence in our regulatory framework. [We] urgently ask the Minister to retract Part 2 of the bill”.
- New Zealand Business Council for Sustainable Development: “Sees no need for a moratorium on thermal power plants provided carbon is priced appropriately...It does not seem consistent with our long-term sustainability aspirations to preclude the use of fossil fuels if they can be used in a way that does not add to the total emissions in the atmosphere...”

Transmission is vital

Figure 3 (from 2005) shows the level of transmission under-investment in the recent past.



²¹ Steve Barrett, CEO of Contact Energy, “Creating Positive Energy in the New Zealand Energy Sector” (September 2005). See http://www.contactenergy.co.nz/web/pdf/financial/2005_Creating_Positive_Energy_In_The_NZ_Energy_Sector.pdf

ENVIRONMENTAL RESPONSIBILITIES

In the past eight years well over half of new electricity generation has come from thermal sources

Table 3 shows new thermal plants that have started generating since 2000.

Table 3. New Thermal Plants

Generator	Name	Date	Type	MW
Genesis Power	e3p	2007	Gas	385
Mighty River Power	Southdown Cogen Expansion	2007	Gas	45
Contact Energy	Otahuhu-B Expansion	2005	Gas	24
Contact Energy	Whirinaki	2004	Diesel	155
Genesis Power	Huntly-P40 OCGT	2004	Gas	40
Contact Energy	Te Rapa Cogen	2000	Gas	44
Contact Energy	Otahuhu-B	2000	Gas	380
Total				1073

1073MW of new thermal capacity out of 1942MW of total new capacity (Table 1) is 55%.

A failure to ensure security of supply has led to dirty last-minute electricity solutions

The diesel-fired emergency plant Whirinaki burned 36.2 million litres between January and June 2008.²²

- 7.6 million litres in the period between 1 January 2008 and 31 March 2008.
- 2.8 million litres in April.
- 13.5 million litres in May.
- 12.2 million litres in June.

This compares with:²³

- 155,000 litres in 2004.

²² Written questions 06246, 05511, 03837, 03279 (2008).

²³ Written question: 03840 (2008).

- 1.1 million litres in 2005.
- 6.2 million litres in 2006.
- 147,000 litres in 2007.

Whirinaki was used on 29 days in June 2008, 31 in May, 20 in April, and 32 between January and March.²⁴

This compares with:²⁵

- 6 days in 2004.
- 15 days 2005.
- 31 days in 2006.
- 2 days in 2007.

²⁴ Written questions 06247, 05510, 03835, 03277 (2008).

²⁵ Written question 03838 (2008).

New highly-efficient gas plants can significantly reduce emissions

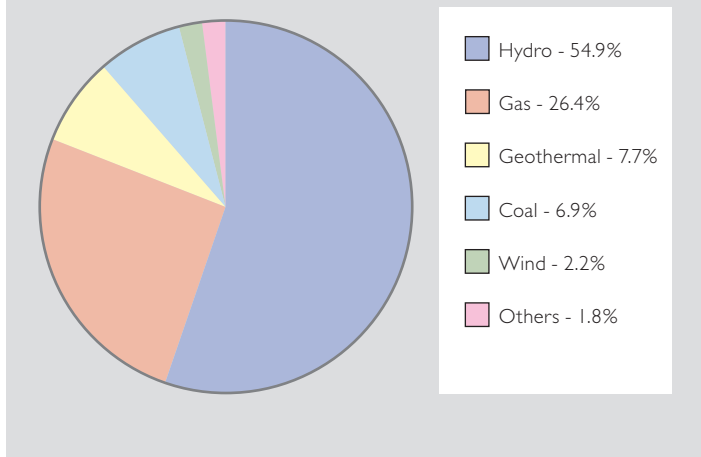
Genesis Energy says the Huntly e3p plant will reduce emissions from the electricity sector by around 1 million tonnes per annum.²⁶ There was a 27% reduction in emissions from Huntly between July 2007 – a month after e3p was fired up – and January 2008.²⁷

When opening the plant in September 2007, Hon Trevor Mallard, the Minister of State-owned Enterprises, said “e3p will lead to a reduction of around 1.8 million tonnes of carbon dioxide emissions per year which would otherwise have been emitted from the coal-burning Huntly power station. That amounts to around 20% of carbon dioxide emissions from all power generation in New Zealand.”²⁸

Labour has set a target for NZ to have 90% renewable electricity generation by 2025. The current figure is around 65%.

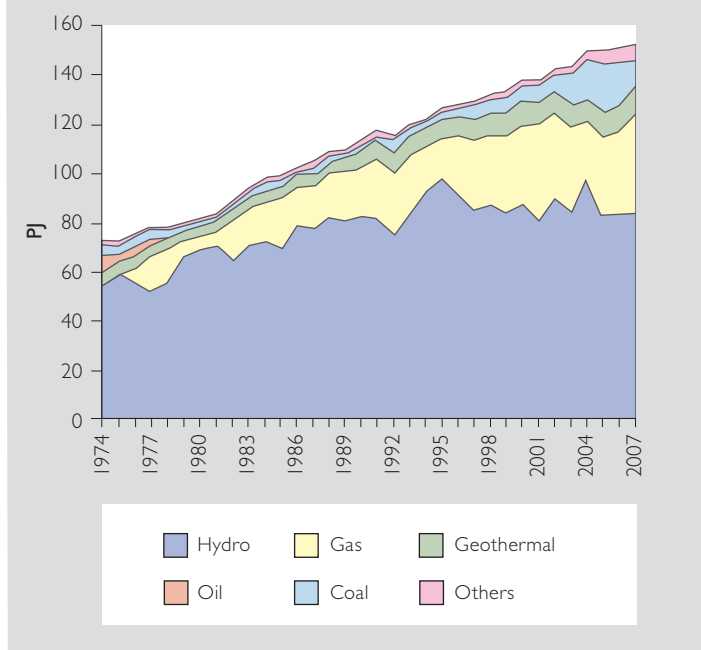
New Zealand's electricity generation mix in 2007 is shown in Figure 4.

Figure 4. NZ Electricity Generation by Fuel Type for 2007²⁹



New Zealand's historical generation record is shown in Figure 5.

Figure 5. Generation Fuel Mix³⁰



26 Murray Jackson, “Meeting New Zealand's Energy Appetite” – Presentation to Energy Federation of New Zealand lunchtime seminar (14 June 2007).

27 Grant Bradley (New Zealand Herald), “Switch from coal to gas reduces carbon” (20 March 2008). See http://www.nzherald.co.nz/section/3/story.cfm?c_id=3&objectid=10499223

28 Hon Trevor Mallard, “E3P leads the way to a sustainable New Zealand” (31 August 2007). See <http://www.beehive.govt.nz/speech/e3p+leads+way+towards+sustainable+nz>

29 Ministry of Economic Development, Energy Data File (June 2008), p 96; Ministry of Economic Development, NZ Energy Quarterly (March Quarter), p 5.

30 Ministry of Economic Development, Energy Data File (June 2008), p 98.

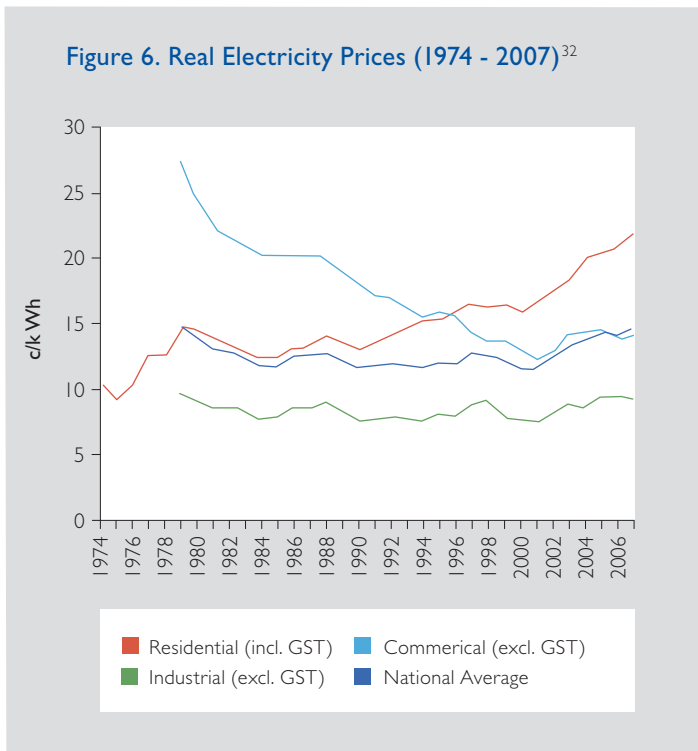
AFFORDABILITY

Over the past five years, households have faced electricity price rises of around 48%.

See the Ministry of Economic Development:
Schedule of Domestic Electricity Prices (Updated to
15 May 2008).³¹

	May 2003 (c/kWh)	May 2006 (c/kWh)	May 2007 (c/kWh)	Feb 2008 (c/kWh)	May 2008 (c/kWh)	Change May 2007 to May 2008 (%)
Weighted Average Retail Charge - Incumbent	15.28	19.42	20.74	22.25	23.00	10.9

Figure 6 from the Ministry of Economic
Development represents the increases well.



OIL AND GAS

More than 1.2 million square kilometres of New Zealand's economic zone could have hydrocarbons underneath it. Our total petroleum potential could be as much as 24 billion barrels of oil equivalent.³³

³¹ See http://www.med.govt.nz/templates/MultipageDocumentPage_37594.aspx

³² Ministry of Economic Development, Energy Data File (June 2008), p 129.

³³ Chris Uruski (Frontier Basins, GNS Science), "Deep-Water Basins: The New Frontier" – Presentation to National Party Members of Parliament, December 2007.