

# The Electricity Situation

## Renewable Projects

*“To achieve the proposed renewable electricity target, the majority of new generation investment would need to be renewable. This implies that we need around 175 megawatts of new renewable generation capacity every year. Already this year we’re building 300 MW.”*

*“...two more wind projects, in Manawatu and Wellington, are now under construction and are expected to deliver 188 megawatts. A further five wind farms, collectively totalling 312 megawatts, have been consented, and applications for resource consent are being processed for nine more projects totalling almost 1700 megawatts – with more on the way.”*

*“Three more geothermal plants are being constructed now by Contact Energy, Mighty River Power and Top Energy, and these are expected to add 125 megawatts of capacity in the next two years. Another 130 megawatt plant has been consented in the central North Island, and another project, Te Mihi, is currently seeking consent. Yet more proposals are being prepared.”*

*“With respect to hydro, resource consents have been lodged for five South Island hydro projects that would deliver collectively up to 415 megawatts of capacity.”*

**Excerpts from Speech by Minister of Energy to NZWEA Conference, 8 April 2008**

“The relative economics of different fuel types, adjusted for the cost of emissions, will drive investment decisions... Over the last 12 – 18 months rising natural gas prices and the prospect of carbon price on emissions, have resulted in renewables becoming increasingly competitive... With uncertainty over the price and availability of gas in the longer term, renewables represent the most cost effective long-term source of new generation.”

**Contact Energy CEO David Baldwin, Presentation on 4 June 2008**

*Crest Energy has proposed a 200MW tidal generation project for the entrance to the Kaipara Harbour. The resource consent hearing took place in May 2008.*

**SKM identified and assessed the renewable energy potential in Northland and Auckland:**

*“For the Northland Region, this renewable potential comprises: Approximately 1,000 MW of wind capacity... Wave energy in the thousand MW range... Remaining hydro potential of about 30 MW” (EECA - SKM Renewable Energy Assessment Northland Region 16 July 2006)*

*“If carefully planned, approximately 500 MW of wind capacity could be installed over a number of years with environmental impacts that were broadly acceptable to local communities.” (EECA - SKM Renewable Energy Assessment Auckland Region 16 March 2007)*

*“Approval has been given for a marine energy trial in Cook Strait, which the project's backers believe has the potential to provide more than the country's current generation capacity... calculations suggest there is enough tidal movement in Cook Strait to generate 12GW of power, more than one-and-a-half times New Zealand's present generation capacity.”*

**New Zealand Herald, 14 April 2008**

## Thermal Alternatives to Genesis Energy’s Baseload Proposal for Rodney

**“There are currently consents held for over 1,000MW of potential thermal generation”**

Advice from Minister of Energy, Cabinet Paper CAB (07) 479, 14 September 2007

- On 15 April 2008 Contact Energy announced the purchase of two gas turbines. These will be fired up during periods of peak electricity demand, with the new 200MW Stratford plant expected to be in service before winter 2010.

- Contact Energy Baseload CCGT: Existing consented sites for up to 800 MW of baseload Combined Cycle Gas Turbine which renewables cannot be delivered in time a new 400MW gas-fired power station on their existing Otahuhu power station site.
- The existing 155MW diesel-fired Whirinaki power plant.
- With Marsden B, the basic infrastructure is already in place for development of another dry year reserve plant, if required.
- Consideration should be given to the conversion of Huntly's coal-fired plant to gas.

*"Faster reductions in emissions may occur if the Genesis-owned Huntly plant can be economically retired into a drought year reserve role, or **switched to gas.**"*

(Excerpt from Hon David Parker's Speech to NZWEA Conference, 8 April 2008)

## Power Price Rises & Gas Discoveries

*"The steep rise in electricity prices that consumers have faced in the last decade has been caused mainly by the rise in gas and coal prices that have forced up the cost of fossil fuelled electricity... To suggest that New Zealand gas prices will buck that recent history, and the overseas trend of increasing oil and gas prices, is optimistic and wishful thinking from a lobby group whose interest lies in selling more gas... With renewable, once built, their fuel is free. Wind and geothermal steam don't go up in price. The same can't be said of gas."*

**Minister of Energy, NZ Herald, 28 March 2008**

*"In the last five years we've had very large increases in the cost of gas. Early 2000 gas was somewhere around \$2.50 to \$3 a GJ. Wholesale gas is probably now in the order of \$8 to \$9 a GJ. That's a very rapid increase in the cost of gas but what it has done is that it's mobilised an enormous amount of effort in renewable projects that are cheaper. And those cheaper renewable projects will bring power into the market without big cost increases. And so the renewables strategy is not only good for avoiding the cost of carbon but it is sort of a flatlining of future costs."*

**Dr Keith Turner, former CEO of Meridian Energy, 4 April 2008**

*Any gas discoveries in the Deep South basin would be unlikely to remove the risk of New Zealand facing international gas prices as the explorers working in that area have already identified that the processing of the gas for export is the most likely outcome of any significant discoveries... Contact agrees with the general thesis of the New Zealand Energy Strategy that New Zealand does not need more baseload thermal generation at this time..."*

**Excerpts from Contact Energy's submission on the Climate Change (Emissions Trading & Renewable Preference) Bill**

*"Before proceeding with their last gas-fired project, e3p, Genesis Energy entered into a risk-sharing agreement with the Government. The e3p project was only commercially viable because the Government was prepared to underwrite the fuel supply risk. The giant Maui field is now in its declining years and the new fields replacing it are much smaller. Gas supplies are looking tight by the middle of next decade and the crunch would come sooner if Contact were to build another gas fired plant at Otahuhu and/or Genesis were to build one at Rodney... More gas may be found, of course, but there is probably only a five-year window of opportunity for doing so, because of the lead-times involved in the alternative, importing liquefied natural gas (LNG). LNG might make sense for a power company with a lot of capital sunk into gas-fired generation capacity. But it would be a fateful decision for the economy as a whole."*

**Brian Fallow, Business Columnist NZ Herald, 6 September 2007**