



MAJOR ELECTRICITY USERS' GROUP

7 March 2008

Minister for the Environment

Submission on proposed Te Mihi geothermal power station call in

1. This is a submission by the Major Electricity Users' Group (MEUG) on the call in of Contact Energy's proposed geothermal power station at Te Mihi. A list of MEUG members is attached.
2. The reason for this submission is we believe the call in was unwarranted and we request the Board of Inquiry give little weight to the Minister's reasons for the call in when balancing effects.

Minister's reasons for the call in

3. The two reasons for declaring the Te Mihi geothermal power station proposal is of national significance and therefore can be called in were¹:
 - *The proposal is relevant to New Zealand's international obligations to the global environment in terms of the Kyoto Protocol including the proposal's contribution towards the achievement of the target of 90% of electricity generation to be from renewable energy sources by 2025 as set out in the New Zealand Energy Strategy to 2050.*
 - *Geothermal systems are a natural resource that is limited to a relatively small area of New Zealand. This proposal will involve a significant use of this limited resource when viewed in the context of the totality of geothermal systems available for development.*

Relevance to international obligations

4. The first part of the first reason, "*relevant to New Zealand's international obligations to the global environment in terms of the Kyoto Protocol,*" is relevant to the criteria listed in s. 141B(2)(e) of the RMA, ie

"Affects or is likely to affect or is relevant to New Zealand's international obligations to the global environment."
5. There is though an issue of materiality. The question is whether the proposed Te Mihi geothermal power's contribution to meeting the Kyoto Protocol is of sufficient national importance to warrant a call in?
6. A large number of consent applications for renewable generation projects have been lodged. The Minister of Energy listed those in a recent address to the Annual National Power Conference²:

¹ Hon Trevor Mallard, Public Notice of Direction to call in Contact's proposal to establish a new geothermal power station at Te Mihi, Taupo, 9 February 2008. Refer <http://www.mfe.govt.nz/rma/call-in-te-mihi/public-notice-te-mihi.html>

² Hon David Parker, Address to the Annual National Power Conference, "Building a secure and sustainable energy system," 22 February 2008. Refer <http://www.beehive.govt.nz/speech/building+secure+and+sustainable+energy+system+3>

- **Geothermal:** *Three more geothermal plants are being constructed by Contact, Mighty River and Top Energy. These will add 125 megawatts of capacity in the next two years. Two more plants totalling 130 mega-watts have been consented in the central North Island. Another project, Te Mihi, over 200 megawatts, is currently seeking consent. And I am aware of a number of other significant proposals being prepared. Geothermal energy is consistent, reliable and not weather dependent, so it will play an important role as a stable source of baseload. It is a proven technology, which is plainly economic.*
 - **Wind:** *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. To give you an idea of the interest in wind generation, applications for resource consent have been lodged for nine more projects totalling another 1700 megawatts. Yet more projects are in the wind. New Zealand's hydro capacity provides great balance for wind, and its future looks assured.*
 - **Hydro:** *With respect to hydro, resource consents have been lodged for five South Island hydro projects that would deliver collectively up to 415 mega watts of capacity. The actual proportion of hydro to wind to geothermal will depend on commercial decisions and environment court decisions outside the control of government.*
7. In total consents currently lodged or already consented waiting a final decision for development (excludes already under construction work) of renewable generation projects equals a capacity of 2,757 MW. The Minister also said we needed approximately 175 MW of renewable capacity to be built each year. On current consent applications alone there is up to 15 years of demand growth that could be met by renewables.
 8. The proposed capacity for Te Mihi geothermal power station is 220 MW, ie 8% of the current total renewable generation resource consents applied for in New Zealand or just over one year of the 175 MW needed to meet annual demand growth.
 9. Even in an extreme case where the Te Mihi geothermal power station does not proceed it would not be a major loss to New Zealand or global initiatives to mitigate climate change because there are many other renewable generation proposals to replace it. Note MEUG do not support or oppose such an outcome for this consent; our concern is with the relative weighting given to the reasons given by the Minister in directing this call in.
 10. MEUG suggest reliance on New Zealand's obligations under the Kyoto Protocol is an insufficient reason for this call in and is also a minor effect to be considered by the Environment Court in considering these consent applications.

Contribution to NZES 90% by 2025 renewables target

11. The second part of the first reason for the call in refers to the "*proposal's contribution towards the achievement of the target of 90% of electricity generation to be from renewable energy sources by 2025 as set out in the New Zealand Energy Strategy to 2050.*" MEUG notes that the New Zealand Energy Strategy (NZES) is a political vision. The NZES is not a National Policy Statement in terms of the RMA nor was it developed by an independent agency.
12. The political vision of 90% renewable generation by 2025 is one of many possible future scenarios that various agencies have recently considered, eg
 - a) The Electricity Commission (EC) is required to publish a Statement of Opportunities (SOO) periodically to assist Transpower, generators and consumers foresee investment opportunities and the risks and benefits for each of those investors under a range of feasible scenarios. The EC is currently consulting on one step in preparing the next SOO. That involves deciding a useful range of possible scenarios.

One of the scenarios in the discussion paper³ for comment is 'Sustainable Path', ie 90% renewable by 2025. There are four other draft scenarios that have forecast levels of renewable generation by 2025 of 85%, 80% 75% and 70%.

³ Electricity Commission, 2008 Grid Planning Assumptions: Consultation material on draft generation scenarios, 20 February 2008, paragraph 31. Refer

- b) Transpower is currently consulting on a Grid Investment Test analysis⁴ for replacement of Pole 1 of the HVDC (the inter-island link) as part of a regulated process by which the Electricity Commission approves, or not, transmission investment proposals. The 90% renewables by 2025 scenario is one of five scenarios considered by Transpower. The other four scenarios result in less renewables by 2025.
13. MEUG suggest if political "visions" and ad hoc political targets such as those set out in the NZES were to become accepted as reasonable criteria for call ins and subsequently the Environment Court or Board of Inquiry (as the case may be) were to put significant weight on those reasons; then we will end up with an economy where key developments can be dictated by Ministerial whim.
14. MEUG strongly recommend the Board of Inquiry consider the NZES target of 90% of electricity generation to be from renewable energy sources by 2025 as feasible under certain assumptions, but by no means certain if actual events differ from key assumptions. When considering the effects of the Te Mihi geothermal power station proposal, we recommend the Board of Inquiry test the robustness of the effects across several potential future scenarios.

Significant use of geothermal resources

15. The second reason for the call in states "*Geothermal systems are a natural resource that is limited to a relatively small area of New Zealand. This proposal will involve a significant use of this limited resource when viewed in the context of the totality of geothermal systems available for development.*" Presumably this refers to the criteria listed in s. 141B(2)(b) of the RMA, ie
- "Involves or is likely to involve significant use of natural and physical resource."*
16. Te Mihi, with a planned capacity of 220 MW, is a large proposal in the context of current geothermal power stations (approximately 500 MW) and soon to be commissioned plant of 125 MW. However it is not clear why the call in process needed to be triggered for this proposal on the basis of this reason when recently two other large geothermal power station proposals obtained resource consents in reasonable time. Those were Mighty River Power's second geothermal power station at Rotokawa (132 MW, consents awarded this year) and a geothermal power station at Kawerau (90 MW, consents awarded 2006).
17. MEUG do not believe use of s. 141B(2)(b) of the RMA as a reason for the call in was warranted and suggest the Board of Inquiry take little weight of this in considering effects.

Yours sincerely



Ralph Matthes
Executive Director

<http://www.electricitycommission.govt.nz/pdfs/opdev/modelling/pdfconsultation/GPA/consultation.pdf>. Submissions to the Electricity Commission close 13 March 2008.

⁴ Transpower, Inter-Island HVDC Pole 1 Replacement Investigation – Grid Investment test Consultation, 7 February 2008, page 17. Refer http://www.gridnewzealand.co.nz/f282.124464/124464_git-consultation-doc-rev-b-feb-08.pdf. Submissions to Transpower close 4 April 2008.

Appendix: List of MEUG members and Mission Statement

There are 20 member companies in MEUG plus two industry group members as listed below along with estimated annual load, onsite generation and peak demand.

MEUG member ⁵	Load GWh/y	Onsite generation GWh/y	Net Load GWh/y	Peak demand
Comalco New Zealand Limited	5,000	-	5,000	580 MW
Norske Skog	1,300	230	1,070	170 MW
Carter Holt Harvey Limited	1,105	260	845	130 MW
New Zealand Steel Limited	1,045	600	445	106 MW
Pan Pac Forest Products Limited	550	66	550	78 MW
Fletcher Building Limited	454	-	454	
Winstone Pulp International Limited	330	-	330	48 MW
The New Zealand Refining Co. Limited	235	-	235	
Telecom New Zealand Limited	190	-	190	
Oceana Gold Limited	152	-	152	16.5 MW
Holcim (New Zealand) Limited	70	-	70	
Dongwha Patinna NZ Limited	58	-	58	9 MW
Heinz Wattie's Limited	56	-	56	
Tegel Foods Limited	56	-	56	
Canterbury Meat Packers Limited	41	-	41	
Solid Energy New Zealand Limited	29	-	29	
Ravensdown Fertiliser Co-op	28	22	6	
Auckland International Airport Limited	23	-	23	13 MVA
Lion Breweries	23	-	23	6.5 MW
Methanex New Zealand Limited	18	-	18	
Business NZ	...			
Wood Processors Association of NZ	...			
	10,763	1,178	9,585	
NZ total demand ⁶	36,898			
MEUG as percentage of total ⁷	29%			

The Mission Statement for MEUG is:

"The members of the Major Electricity Users' Group are committed to ensuring the continuing availability of electricity services, at the lowest cost to the economy as a whole, consistent with sustainable development. Within this framework, the Group seeks to ensure competitive electricity prices and security of supply to the members of MEUG."

The 2007/08 external strategic objectives for MEUG are:

- 1) Improve competition;
- 2) Environmental policies that support the primary goal of economic growth;
- 3) Security of supply arrangements do not distort the market;
- 4) Most cost efficient transmission; and
- 5) Most cost efficient distribution.

⁵ Load, generation and peak load data may not be up to date because of changes in operations by individual companies since last surveyed by MEUG.

⁶ Refer Ministry of Economic Development, Energy Data File, January 2006, p139, demand for year ended 30 March 2005

⁷ Excluding demand by non-MEUG members of Business NZ and Wood Processors Association