

**BOARD OF INQUIRY
TE MIHI GEOTHERMAL POWER STATION PROPOSAL**

In the Matter of the Resource Management Act 1991

And

In the matter of resource consent applications by Contact Energy Limited
in respect of the Te Mihi Geothermal Power Station Proposal

BRIEF OF EVIDENCE IN CHIEF OF EDWARD JAMES KILTY

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Introduction

1. My name is **EDWARD JAMES KILTY**. I am employed by Contact Energy Limited (“Contact”) as Project Director - Generation.
2. I have the following qualifications and experience relevant to the evidence I shall give:
 - I have an LLB (first class honours) degree from Waikato University;
 - Following my being admitted to the bar in 1998 I worked for the firm Buddle Findlay based in Wellington as first a solicitor then a senior solicitor until May 2002. In that role I acted both for government sector and commercial clients on a range of company, securities, IT and commercial law matters;
 - Between May 2002 and July 2006, I was employed by Contact as legal counsel within its in-house legal team. During that time I was responsible for providing legal and commercial input into all aspects of Contact’s major generation and business development projects. Relevantly for the purposes of this evidence, I managed Contact’s involvement in litigation matters related to Contact’s purchase of the Poihipi Power Station in which Mr AS McLachlan and interests associated with him were parties. Through that involvement, I have a good understanding of the legal issues surrounding Contact’s ownership and operation of the Poihipi Power Station, some aspects of which have been put in issue by the McLachlan interests in their submission;
 - Between July 2006 and February 2008, I was employed by the New Zealand Post Group as Group Legal Counsel responsible for the management of legal risks across the group;
 - In February 2008, I rejoined Contact as Project Director – Generation. This is a management position, not a legal one. In this role, I am responsible for management of Contact’s portfolio of geothermal and hydro generation development options. Relevantly for the present purposes, this includes the Te Mihi Geothermal Power Station project.
3. My evidence primarily covers of issues of fact. To the extent that I am giving evidence as an expert (on legal issues), I confirm that I have read the ‘Code of Conduct for Expert Witnesses’ contained in the Environment Court

Consolidated Practice Note 2006. My evidence has been prepared in compliance with that Code. In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

Scope of Evidence

4. My evidence will cover the following matters:
 - I will present a broad description of Contact and its role in the energy industry and its contribution to meeting national electricity demand;
 - I will outline the commercial rationale for the Te Mihi power station project;
 - I will discuss from a management perspective the subsidence investigation programme Contact has put in place to assist future management of the Wairakei-Tauhara Geothermal System;
 - I will respond to certain matters put in issue by Mr AS McLachlan and interests associated with him.

Introducing Contact

5. Contact was established by the New Zealand Government as a State-Owned Enterprise in November 1995 to introduce competition in the electricity generation sector. Contact commenced operations in early 1996 when it acquired a portfolio of electricity generation and gas assets from the State Owned electricity generator ECNZ (Electricity Corporation of New Zealand).
6. In 1998 Contact entered the retail energy market. Contact now supplies energy to 621,000 New Zealand businesses and homes from a mix of electricity, natural gas, and LPG (via its wholly-owned subsidiary, Rockgas). I have attached as exhibit EJK1 a map identifying the location and nature of Contact's various facilities throughout New Zealand.
7. In October 1998, the Government decided to proceed with a 60% public share float of Contact, combined with a share sale of 40% to a cornerstone shareholder. The successor cornerstone shareholder, Origin Energy, (through its subsidiary companies) now holds 51% of the issued share capital in Contact.

8. Contact was listed on the New Zealand and Australian stock exchanges in May 1999. Contact has since delisted from the Australian stock exchange but is still listed on the New Zealand Stock Exchange. As at 30 April, the company had 84190 shareholders.
9. Contact is currently the second largest company by market capitalisation on the New Zealand Stock exchange.
10. Contact owns and operates approximately 1860 megawatts of New Zealand's installed generation capacity – this equates to 22% of generation in New Zealand. Contact's generation portfolio is a diverse blend of hydro, thermal and geothermal generation and it is actively pursuing expansion of its generation portfolio to include wind.
11. Contact's three existing geothermal generation stations (Wairakei Power Station (including the Wairakei Binary Plant), Poihipi Road Power Station and Ohaaki Power Station) have a combined current capacity of 282 megawatts. Between them, the three stations generated 1968 gigawatt hours in the year ended June 30 2007. That represented approximately 60% of total geothermal electricity generation and approximately 5% of New Zealand's electricity demand in that period.
12. Contact has resource consents to permit construction and operation of a small (20MW approximately) power plant and/or direct use of geothermal energy on the Tauhara field up to a maximum extraction of 20,000 tonnes of geothermal fluid per day. In mid 2006, Contact commissioned the first of these direct supply projects at the Tenon Timber Mill on Centennial Drive. The Mill is now supplied with approximately 5000 tonnes per day of geothermal fluid to heat its kilns, which has allowed it to discontinue the use of natural gas for this purpose. Contact is actively investigating construction of a binary plant to utilise the balance of the Tauhara fluid as well as additional direct heat supply options. The combination of the two will probably require a separate resource consent application for a relatively small volume of additional extraction from the Tauhara field and Contact has such an application in preparation.

Te Mihi Power Station Rationale

13. The essential commercial rationale of the Te Mihi Power Station project is to replace the Wairakei Power Station with a new and more efficient plant that can generate more electricity from the same volume of geothermal

water and energy. The construction of the new power station will have associated environmental benefits that will be discussed by other witnesses. From my perspective, staged reduction and eventual elimination of the cooling water discharge from Wairakei Power Station to the Waikato River is a key benefit from the project proceeding as planned.

14. When I joined Contact in May 2002, applications to re-consent Wairakei had been filed a little over a year previously and as far as I am aware, there was no thought within the Company's senior management team that the Wairakei Power Station would not continue in operation for the next 20-25 years.
15. As part of Contact's applications to re-consent Wairakei, Contact proffered a hydrogen sulphide treatment system estimated (at the time of the application) to have a capital cost in the order of \$8.5 million. After the first instance decision on Contact's applications was released in mid-October 2004 and in parallel with the appeal process, Contact advanced its planning to implement this treatment option and it rapidly became apparent that preliminary capital cost estimates were significantly understated (the current estimated capital cost for the hydrogen sulphide treatment plant is in the order of \$24 million). This prompted reconsideration of the wisdom of a capital investment of this size to support a 50 year old plant that was inevitably going to incur increased operation and maintenance costs over time.
16. As a result, Contact started to look at alternative options. That process started in earnest in mid-2005, but it was not until early 2007 (after I had left Contact) that a final decision was made to pursue the Te Mihi Power Station project and a public announcement made of the Company's intention to pursue a power station development intended to replace Wairakei.
17. The projected capital cost of the first stage of the proposed Te Mihi Power Station is in the order of NZD300m – 400m. This is of course a substantial investment.
18. That is the reason why Contact has sought the longest possible term for the various resource consents sought as part of the project.
19. I acknowledge that the suite of resource consents sought as part of this process includes consents not directly related to construction and operation of the proposed power station. Mr Stephen Daysh will explain the rationale for including those additional consent applications in his evidence. Mr Daysh will also propose a set of consent conditions with his evidence. I confirm that he does so with my authority on behalf of Contact.

System Management Planning/Subsidence Investigations

20. While I was not involved in the Wairakei re consenting process, having left Contact prior to the Environment Court appeals being heard, I understand that a key outcome of those appeals was a significant emphasis on the need for integrated management planning of the Wairakei-Tauhara Geothermal System and that the primary driver in that management planning is the need to address the adverse effects of subsidence. I also understand that the Environment Court placed considerable emphasis on the need for research and analysis into the causes of areas of increased subsidence that have occurred on the outskirts of Taupo.
21. Mr B S Carey will give evidence on the draft system management plan submitted with Contact's Te Mihi applications as its principal technical author. Although Mr Carey is no longer a Contact employee, I confirm that in presenting the draft system management plan outlining Contact's plans for the future development of the system, Mr Carey speaks with the authority of Contact.
22. As regards the identified need for investigation analysis of subsidence mechanisms, Mr C J Bromley of GNS Science will describe the content of the investigation project that Contact has put in place. The programme is ambitious and I understand breaks new ground in terms of scope and proposed methods of analysis. From a management perspective, Contact has endeavoured to embrace both the letter and the spirit of the Environment Court's direction that more research is required into subsidence. The budget for the proposed programme is in excess of \$10 million and Contact's objective is that the results from that programme will guide the review and reformulation of the draft system management plan which was submitted with the Te Mihi consent applications.
23. Contact has taken longer than had been hoped to get the work underway on the ground, but as at the date of finalising this evidence, it is intended that a specially adapted drill rig will be on site in June, and final site preparations are presently underway for commencing drilling as soon as possible thereafter.

Poihipi Property Issues

24. In the submission of AS McLachlan, AM McLachlan and MacPower Limited an issue is raised regarding the land areas associated with the Poihipi Power Station. It is asserted (paragraph 6(b)) that Poihipi is currently

discharging to land without all necessary landowner approvals. The submitters seek that extensions of the land utilised for the purposes of the Poihipi Station be demonstrated as being warranted and “*consistent with existing Court decisions relating to the activity areas for that power station*”. The relief sought in respect of that submission is that:

“Conditions of consent should specify the uses to which particular land areas may be put, consistent with past Court decisions and demonstrated needs for any expansion of activity areas”.

25. As I have already noted, I have some prior involvement with the litigation that has followed Contact’s purchase of the Poihipi Power Station, in which Mr and Mrs McLachlan and interests associated with them, have played a prominent role. It appears to me that the submitters may be attempting to use the present process as a means by which they might advance property-related litigation objectives. To understand the point, it is necessary for me to describe, in summary, the ownership arrangements for the Poihipi Power Station prior to its purchase by Contact. The Poihipi Power Station was constructed and originally operated by Mercury Geotherm Limited, a joint venture company in which Mercury Network Limited (a subsidiary of the company now known as Vector Limited) and Mr and Mrs McLachlan and interests associated with them held shares.
26. Mercury Geotherm Limited owned (through an associated company) substantial parcels of land at and beyond the western margin of the Wairakei Geothermal Field that were contributed to the project by the McLachlan interests. Not all of that land was required for the purposes of the Poihipi Power Station. The land not immediately required for Power Station purposes was leased to the McLachlan interests in order that they might continue their historic farming use of that land. The leased land is however subject to a provision enabling land which might be required for power station purposes in the future to be carved out of the McLachlan leasehold interest, reflecting an acknowledgement in the lease that the predominant use of the land is the construction and operation of the Power Station.
27. It is publicly documented that the joint venture was dissolved, amid considerable acrimony (and litigation), and the joint venture company Mercury Geotherm Limited placed in receivership.

28. Contact purchased the power station and power station land from the Receivers of Mercury Geotherm Limited in January 2000. As part of that sale, Contact acquired the right to request the receivers to give notice under the relevant provisions of the McLachlan lease (clause 10.1) to take out of the lease, any land which might be required for the operation of the power station in future.
29. The McLachlan interests challenged the sale of the power station land to Contact, arguing that a first right of refusal in the McLachlan lease had been triggered.
30. The Privy Council finally determined that the first right of refusal had not been triggered in a decision released 23 May 2006.
31. The process for identifying the area of land not subject to the McLachlan lease (defined as “The Power Station Site” in the documents) has similarly been somewhat fraught in nature having given rise to multiple decisions of the High Court and the Court of Appeal. The final decision of Justice Potter determining how the boundary of the Power Station Site should be drawn was released on 13 December 2004¹ although the formal separation of the land from the balance and settlement of its sale to Contact has still yet to be finalised.
32. The logic of the High Court was that the Power Station Site was defined in a way that included land presently² required for power station purposes. In Justice Potter’s first decision on this matter, she stated³:

“Clause 10.1 provides to the lessors (Geotherm and Poihipi) the power to exclude from the leased land on notice, further areas which the lessors require for any purpose or if they “reasonably believe” the use of those areas conflicts with that purpose. Because clause 10.1 provides the right to access such areas, the definition of Power Station Site did not need to include, and does not include, land for future development. This was taken care of by clause 10.1 so that no more of land A was excluded for [sic] the Power Station Site than was reasonably necessary for present purposes.”
33. That decision was appealed to the Court of Appeal. While Justice Potter’s decision was reversed on some points of detail, and referred back to her on an unrelated matter, the Court of Appeal upheld her conclusion that clause

¹ Mercury Geotherm Limited (In receivership) and Another v AS McLachlan and AM McLachlan and Others CIV2000-404-2161 (Auckland Registry).

² Defined in the December 2004 decision as being as at 14 June 2002

10.1 continued to be available to expand the Power Station Site as and when necessary. Thus, in relation to one item of plant, which the Court of Appeal held (differing from Justice Potter in this regard) to be outside the Power Station Site, the Court observed⁴:

“We do not understand there to be any difficulty should access to this conductor be required. Indeed, should difficulties be presented, the lessor’s powers under clause 10.1 could be invoked.”

34. In short, the past decisions referred to in the McLachlan submission recognise that the needs of the Poihipi Power Station will change over time and that clause 10.1 is available to be used to ensure that if additional land is required for its operation, there is a mechanism to enable that to occur.
35. Contact is in fact in the process of requesting the receivers to exercise the clause 10.1 rights in respect of a small block of land required for drilling of an additional reinjection well to service the Poihipi Power Station. The terms of the McLachlan lease, assuming the High Court holds it still to be valid and in force⁵, will determine whether or not the exercise of clause 10.1 in this instance, or indeed in any future instances where expansion of the Power Station Land might be required, is valid. The relief sought by the submitters in this process, if granted, would overlay an additional limitation on the effective expansion on the Power Station Site, over and above the requirements of clause 10.1 of the lease, for reasons which are currently unclear to me.
36. Having made inquiries of relevant Contact personnel, I have been unable to ascertain what the submitters are referring to when they point to discharges from Poihipi onto land without proper landowner approval. I would observe, however, that if there is a discharge onto the McLachlan leased land as part of the operation of the Power Station, which is of concern to the McLachlans, the obvious solution is that the matter be regularised by the exercise of clause 10.1 of the lease, essentially on the basis identified by the Court of Appeal in the passage I have quoted above.

E J KILTY

³ Mercury Geotherm Limited (In Receivership) v AS and AM McLachlan M129-IM00 at paragraph 94(a)
⁴ CA 142/02 at paragraph 63

⁵ The current status of the McLachlan lease is the subject of yet further litigation in the High Court at Auckland as a result of the apparent triggering of the right of the termination of that lease. I understand that those proceedings are set down to be heard in October of this land.

EXHIBIT EJK 1

Contact Energy Profile

