GEOTHERMAL RESOURCES AND THE LAW

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INTRODUCTION

The legal framework relating to the geothermal resource in New Zealand is not easy to describe. The principal reason for this difficulty is the uncertain consequences of a number of current developments. These include current Maori claims to the resource, the changing framework of environmental and resource management law, and the precise direction and likely effects of changes or proposed changes to the electricity industry. Before these matters will be discussed it is necessary to briefly describe the existing legal and regulatory structure.

THE EXISTING FRAMEWORK

The principal statute is the Geothermal Energy Act 1953, enacted at a time when facilitating energy development was a paramount objective of government. The Act, therefore, has virtually no reference to conservation of the resource. It bypasses the puzzling question of who owns the resource at common law by simply vesting the complete right to manage the resource in the Crown. The Act is described in the long title as "an Act to make provision for the control of the tapping and use of geothermal energy and for vesting all such energy in the Crown". Section 3 of the Act is the operative provision putting this aspiration into effect, but it vests not ownership, but management, of the resource in the Crown by vesting in it the sole right to take, tap, use and apply geothermal energy. Maori claimants to the Waitangi Tribunal have taken the position that the Crown's management powers under the Act are, however, equivalent to expropriation of the resource as the effect of the legislation is to render rights of ownership in the resource virtually nugatory.

Section 4 of the Act allows the Governor-General to proclaim geothermal energy areas. Within such areas the Minister is exempt from the requirement of needing to obtain a licence to exploit geothermal energy[1]. Only one such area has ever been so proclaimed (Wairakei)[2]. In addition and subject to the licensing regime, the Minister has a general power under Section 11(6) to develop and manage bores for the purpose of selling geothermal energy to industrial and other users. Sections 6 and 9 of the Act establishes a general licensing regime for regulation of the resource providing for the grant of authorisations by the Minister to enable the search for geothermal energy and licences to enable the exploitation of geothermal energy. The Act is currently administered by the Energy and Resources Division of the Ministry of Commerce. The Act is widely perceived as establishing an inadequate framework for geothermal management[3].

The other principal management statute is the Water and Soil Conservation Act 1967. Although there had been some doubt on the point[4] it was settled by the Court of Appeal in 1982 that applicants seeking to develop geothermal resources needed not only a licence under the Geothermal Energy Act 1953 but also a water right from the regional water board under the Water and Soil Conservation Act 1967[5]. In practice the regional water (i.e. catchment) boards became the principal regulatory authorities, and the Ministry's invariable policy in granting a licence is to make it conditional on obtaining a water right. The two relevant authorities are now the Waikato and Bay of Plenty Regional Councils; these entities being formed from a merger of the former catchment boards and regional planning authorities. Both organisations employ a considerable staff of capable professionals with experience in geothermal resource management. The Waikato Regional Council, the successor to the Waikato Valley Authority and Waikato Catchment Board, is the larger organisation and it appears to have developed the more sophisticated management framework.

Although the resource is thus principally under the control of regional authorities, an attempt to provide a coordinated national policy is provided by the Geothermal Resources Policy and Management Framework released by the Ministry of Energy in 1986. This document ranks the main fields according to a hierarchy first devised by Professor Keam and others in 1980[6]. The 1986 policy accords priority for energy development to the Mokai, Rotokawa, Ngatamariki and Ngawha (Bay of Islands) fields. A similar ranking is employed by the regional authorities. The Waikato Catchment Board decided in 1988, for example, that for its "Category Two" fields (Waimangu, Waiotapu, Orakeikorako and Ketetahi) the objective should be preservation and consequently developments within such fields should be declined[7].

The regional authorities have embarked on a programme of preparation of water management plans. The Waikato Regional Council's programme is the furthest advanced but is still far from complete. Such plans lack a statutory basis and can only operate as guidelines in the water right approval process. At present it is not possible for a Water

Conservation Order under the Water and Soil Conservation Act to apply to geothermal water to facilitate its conservation or protection. These defects were to be rectified by the Resource Management Bill, and now constitute aspects of the uncertainties engendered by the failure of the Bill to be enacted as expected in the 1990 parliamentary session.

It needs to be said that management of theresource from a conservation standpoint has been poor. Significant geyser activity exists now only at Whakarewarewa. The Wairakei and Spa geyser fields were eliminated as a consequence of the Wairakei power station and much of Orakeikorakao disappeared under an artificial lake in 1961[8]. Artificial river flow control at Aratiatia dam submerges about 30-40 hot springs at Ngaawapurua. The quality of management of the resource within Rotorua by the Rotorua District Council is evidenced by the fact that when the District Council was given responsibility for management of the field in 1967 there were 16 active geysers at Whakarewarewa; by 1984 this had reduced to four. In October 1986, following reports fiom DSIR, Cabinet took firm action, revoking the RDC's powers to manage the field and announcing its intention to close all bores within a radius of 1.5 kilometres of Whakarewarewa. New regulations establishing a new licensing and royalty regime came into effect in April 1987.

THE 1987 REGULATIONS AND THE USERS ASSOCIATION CHALLENGE

The principal steps taken by government in 1987-88 relating to Rotorua were:-

(a) A Ministerial decision exercised pursuant to s.9 of the Geothermal Energy Act to revoke all licences with a 1.5 kilometre radius of Whakarewarewa; and
(b) The promulgation of the *Geothermal* Energy Regulations 1961 Amendment No. 2 (1987)[9].

The Minister's decision and the regulations were challenged in the High Court by the Rotorua Geothermal Users Association in 1987. Heron J. rejected the Association's claim that the Minister had exercised his powers unlawfully. Nor was he persuaded by the argument that the formula used in the regulations for calculating resource rentals was repugnant *to* the overall scheme of the Geothermal Energy Act[10]. The Association also took its concerns to Parliament. The Geothermal Energy Regulations were scrutinised by the Regulations Review Committee, a Parliamentary Select Committee which has powers pursuant to Standing Orders to conduct inquiries into regulations following complaints from members of the public (in this instance, the Association).

The Regulations Review Committee's report drew attention to the unsatisfactory state of geothermal licensing procedures. It stated:-

"The Minister has been given complete discretion regarding the issue of licences and the conditions attached to those licences. These decisions are made in secret. The applicant has little idea in advance what criteria are relevant in granting the licence - or what conditions are likely to be imposed. There are no rights of appeal against the Minister's decision, save for judicial review which is expensive and only considers the legality of a decision rather *than* its merits. The Committee considers this to be very unsatisfactory. It is of opinion that licences for geothermal energy usage to be important rights, of a *similar* nature to water rights. Such applications should be heard in public, there should be clear criteria regarding the issue of licences and the conditions attached to them, there should be rights of appeal, and licences should be for a predetermined period with criteria for extension."[11]

The Geothermal Users Association, therefore, fared rather better in parliament that it did in court. Despite the Committee's strictures the geothermal energy licensing system remains as it was in 1987, although changes are likely.

WATER RIGHTS ASPECTS: THE GEOTHERM CASE

An application by Geotherm Energy Limited of Taupo for water rights for a proposed power station development at Taupo usefully illustrates the complexities of the water rights procedures in the geothermal context. The applicant company sought to take 44,000 tonnes of geothermal fluid and to re-inject 40,000 tonnes of separated geothermal water per day. The matter has passed through the following stages:-

(a) 6 July 1988: Applications lodged with the Waikato catchment Board (WCB)
(b) Jul-Nov 1988: Objections received from the Electricity Corporation of New W a n d (Electricorp), the Minister of Conservation, the Ngai Tahu Tribal Trust and the New Zealand Tourist and Publicity Department
(c) Dec 1988: First hearing by WCB
(d) Jan 1989: WCB lodges a case stated appeal with the High Court concerning the legality of Electricorp's existing bores at Wairakei
(e) Mar 1989: The matter is transferred to the Court of Appeal which hears the matter on 14 March
(f) Apr 19, 1989: Court of Appeal judgment (Re. Geotherm Energy [1989] 2 *NZLR* 22)
(g) Jul 1989: WCB resumes hearing the matter
(h) Aug 24, 1989: Standing Tribunal of the WCB issues its report and recommendations
(i) Sep 15, 1989: Geotherm lodges an appeal to the Planning Tribunal against the WCB decision
(j) Sep 15,1989: Electricorp lodges its cross-appeal
(k) Mar 13, 1990: The Planning Tribunal holds its fist judicial conference relating to the appeal. At this hearing Judge Sheppard rules that "it is not intended that the appeal be listed for hearing until the Ngati Tahu claim in respect of the hydrothermal field has been resolved"
(l) Apr 12, 1990: Planning Tribunal gives judgment on procedural matters relating to production of a confidential DSIR report
(m) Aug 14, 1990 Planning Tribunal's second judicial conference. The Tribunal decides that the appeals should proceed on the basis that the Ngati Tahu Waitangi Tribunal claim relates to the Tauhara but not the Wairakei field

The Planning Tribunal is expected to hear the appeals this November.

The principal substantive decision, that of the WCB of 24 August 1989, makes it clear that Electricorp's position is merely one user of the resource, whose use is open to challenge by those who see themselves as able to use the resource more effectively and efficiently. The Tribunal pointed out that the Wairakei resource "is a single entity, declining due to exploitation by, at present, a single user"[12] (i.e. Electricorp itself). The Tribunal, in applying the "benefit/detriment" test, by which the benefits of granting the right are weighed against the possible detriments, took into account the more efficient technology proposed to be used by Geotherm. Although Electricorp up till now "has been virtually the sole user of the Wairakei geothermal field", the situation before the Tribunal was one of "competing use of a limited and diminishing resource" making it very much to the point to consider the relative efficiency of Geotherm's more up-to-date technology[13]. Also relevant was the fact that while Electricorp ran its spent fluid as waste into the Waikato river, Geotherm intended to re-inject its spent fluid. This meant that in energy conservation terms the Geotherm proposal was sounder than Electricorp's, and it was also more acceptable in externality terms as well. The rights were granted, but on a scale much less than what Geotherm wanted (10,000 tonnes of fluid combined with a restriction of not more than 3,000 tonnes of steam from the steam zone of the reservoir as opposed to 44,000 tonnes).

MAORI CLAIMS AND THE WAITANGI TRIBUNAL

Some Maori tribal groups have strong links with this resource, especially (but not limited to) Te Arawa, Ngati Tahu (of Tauhara and Reporoa) and Tuwharetoa. In recognition of this, Cabinet decided in July 1990 to establish a consultation process with Maori groups relating to ownership and management of geothermal resources. This consultation exercise was seen by government as a continuation of the consultation process begun by the Resource Management Law Reform process (RMLR). It was decided, however, that the "consultation" would be via. the runanganui or runanga set up under the Runanga Iwi Act 1990 - an Act which the incoming National Government apparently intends to repeal.

Independently of this process a number of Maori landowning entities (that is s.438 Trusts and Incorporations) have lodged claims to the resource with the Waitangi Tribunal. The claimants include the Whakarewarewa Lands Trust, the Mourea Paehinahina Trust, the Rotoiti 15 Trust (which owns 26,000 acres at the base of Mt Tarawera), the Ngati Tahu Tribal Trust and the Waiariki Ngawha Trustees (Northland). Together, these form a major claim. At present the Waitangi Tribunal has conducted only two preliminary hearings; it is possible that the substantive hearings will commence next year. It is at present envisaged that the geothermal resource will be dealt with generally at one hearing followed by a sequence of hearings dealing with particular places and groups (e.g. Ngawha, Orakeikorako/Wairakei/ Ohaaki, Rotorua). Clearly, the process will be a lengthy one.

The primary concern of Maori claimants was the damage done in the past to particularly treasured places where there was surface geothermal activity (for example, Orakeikorako or Rotokawa). This remains important, and some groups have no interest in commercial exploitation but are principally concerned with conservation. Others, however, certainly are interested in commercial utilisation. The Rotoaira Forest Trust, representing Ngati Tuwharetoa owners, has responsibility for some 40,500 hectares of pine forests at the southern end of Lake Taupo. On 4 April this year John Asher, secretary-general of the Trust, announced a proposal to generate electricity from the Tokaanu field on Trust land. It was stated that the Trust was seeking expressions of interest from companies interested in forming joint ventures, and there has been an expression of guarded but nevertheless real interest from Electricorp[14].

The issues posed by Maori claims to the resource are complex, and it will be interesting to see how the Tribunal handles them. Is there, for example, a Maori interest in the resource as a whole, or is this limited to particular places of surface geothermal activity which have demonstrable connexions with specific groups? It is certainly arguable that the Ngatoro-i-rangi story indicates a pre-European conception of the resource as an interconnected whole. Given that there is a Maori interest in the resource, how should this be given practical effect at the present day? Does the provision in the Resource Management Bill permitting Maori communities to use the resource "in accordance with tikanga Maori" go far enough, or deal with the situation satisfactorily?[15] What should the relationship be between Maori authorities, regional councils, and central government? None of these matters have even begun to be resolved. A useful starting point, however, might be the Waitangi Tribunal's Muriwhenua Fishing Report, where the Tribunal concluded that there is a hierarchy of interests in resources, the hierarchy being the Crowns duty to make conservation laws, followed by those with a Treaty-based interest, followed in turn by those with commercial privileges[16].

An illustration is conveniently afforded by the decision of the Minister of Energy on 23 March 1990 to exempt Ngati Whakaue from having to pay a resource rental for geothermal energy used at Ohinemutu. The exemption applies only to Ngati Whakaue living within the limits of the village and does not extend to commercial users. A total of 11 geothermal bores will be affected. The Rotorua Geothermal Users Association, already smarting from their failure to successfully challenge the 1987 Regulations, were far from pleased. According to the Rotorua Post:-

"The [Ngati Whakaue] exemption has disappointed the Rotorua Geothermal Users Association. The chairman, Mr Roger Brewster, said today it would be seen as discrimination against the bore users who had been denied continued *use* of the resource without compensation."[17]

But it may well be that the interests of Ngati Whakaue in the resource, if not paramount in all circumstances, are certainty of a different character to those of the Association.

ELECTRICITY GENERATION AND TRANSMISSION: THE CHANGING REGULATORY FRAMEWORK

Geothermal energy has a number of possible domestic commercial applications. Probably the most significant of these is the generation of electricity. But, if a developer intends to supply electricity to a range of potential purchasers in competition with existing suppliers it will obviously be necessary to obtain access to the electricity reticulation system. Because of the high capital costs such reticulation systems frequently become natural monopolies where duplication is unlikely.

The existing high voltage national grid distribution system is owned by Electricorp and is operated by Trans Power New Zealand Limited, a wholly-owned subsidiary company of Electricorp. There are no industry specific regulations which require Electricorp to allow other producers of electricity to have access to this grid. The only controls are under Section 36 of the Commerce Act 1986 which would prohibit the abuse by Electricorp of its dominant position and natural monopoly of the transmission of energy for the purpose of restricting competition. This could conceivably apply to, for instance, persistent refusal by Trans Power to allow access to unused carrying capacity in the grid to an Electricorp competitor for the purpose of reducing competition. But reliance solely on the provisions of the Commerce Act 1986 can impose an unfair burden on a potential competitor to establish the "purpose" of the exclusion was to prevent competition.

"Concerns" over Electricorp's near complete monopoly of generation and complete monopoly over high voltage distribution lines led in May 1988 to the establishment of the Electricity Task Force which reported to government in September 1989[18]. In short, it recommended that the ownership of the generation and transmission assets of Electricorp be formally separated, and that the grid be owned by a "club" of generators and distributors. The recommendation was that there should be no large-scale break-up of generation assets, but that changes should be made to facilitate competition in electricity generation. This could be done by either what was described as "light handed regulation" or, alternatively, that Electricorp be broken up into two or three competing entities. The eventual outcome would be that Electricorp could be privatised.

At the end of November 1989 the Ministers of Commerce and Energy announced that the Task Force proposals regarding the separation and transmission and generation assets and the separation of Trans Power into a separate company would be implemented[19]. The Ministers announced that, in addition to generators and distributors, "market investors" would have the opportunity to purchase shareholdings in the new company. The separation was expected to be completed by 1 July 1991; but, at that time decisions on the future ownership and possible division of Electricorp's generation assets were deferred. But on 25 September of this year the Minister of Energy announced that at least two generation companies would be formed. Alan Jenkins of the Electricity Supply Association stated it was likely that "each company would be allotted a mix of hydro and thermal stations across the islands"[20]. All indications are that National will continue with this process, as shown by its electricity policy released in September 1990[21].

The intention of these changes is to encourage competition in the energy industry and to make it easier for privately-owned generators to obtain access to markets. A possible consequence will be an increase in interest in developing the geothermal resource - not only from established participants in the energy sector, but also from new companies, Maori groups, MEDs and EPBs. Existing users of the resource will have no special privileges as the Geotherm decision indicates.

SALE OF CROWN ASSETS

On May 17 of this year The Dominion [Wellington] reported that the government was considering a sale of all Crown interests in the geothermal resource[22]. The purpose of such a sale would be to raise revenue ($11-$30 million), but more importantly to save costs and to stimulate private sector development. The suggestion that the Crown was considering this raised Maori fears that the Crown was about to facilitate the transfer of a significant share of the resource to the private sector.

It should be emphasised that no official announcement regarding the Crown's intentions in this respect has been made. If the Crown in fact intends to sell anything it would most likely be contemplating the sale of the residuary assets of Gas and Geothermal Trading (GGT), the successor to the energy trading division of the Ministry of Energy. The principal former assets of this division were sold in July 1990, these being the Crown's interests in the Synfuel's plant at Motunui and the Crown's rights under the Maui Gas Contracts. The geothermal assets of GGT are a diverse collection in several fields. They include the Kawerau steam field, for which there exists contracts for the sale of steam to Tasman Pulp and Paper; a joint venture in respect of the same field with the Bay of Plenty EPB to supply the Board with waste hot water; ownership of Geothermal Developments and Investments Limited, which in turn owns a 50% share of Tauhara Development Limited (currently investigating the Tauhara field with a view to electricity generation); and exploration wells at Mokai, Ngawha, Rotokawa, Ngatamariki, Mangakino and Kaweraua[23]. Some of these wells are on Maori land.

Gas and Geothermal is at present managed by a residuary unit of the virtually defunct Ministry of Energy.

The sale of these assets is relatively insignificant when set against the possible privatisation of Electricorp - in whatever way that is eventually done. The possibility that separate generating units might be sold cannot be ruled out. Sale of Ohaaki would be complicated by the fact that the borefield is located on Maori land and is governed by leases negotiated between the Maori owners and the Crown. In addition, water rights and geothermal licences for Electricorp's operations have yet to be completely formalised.

THE RESOURCE MANAGEMENT BILL

The Resource Management Bill made the following changes regarding geothermal energy:-

(a) Licensing

The Resource Management Bill repeals the principal licensing provisions of the Geothermal Energy Act 1953

and so eliminates the separate licensing procedure formerly administered by the Ministry of Energy and transferred to the Ministry of Commerce. In effect, geothermal resources would be wholly regulated by the resource consent procedures relating to water permits administered by the regional councils. Consistent with this is that clause 11 of the Bill relating to a resource consent for water refers specifically to geothermal water;

(b) Maori Use of Geothermal Energy

A water permit will not be required, however, for certain Maori customary uses. The reported back text of the Bill considerably broadens the scope of this exemption by deleting the words "for the communal benefit of the tangata whenua of the area and does not have an adverse effect on the environment". The use and taking of water is now permitted if:-

"In the case of geothermal water, the water, heat or energy is taken or used in accordance with tikanga Maori."

"Tikanga Maori" means Maori customary values and practices. The scope and meaning of this term is vague and uncertain. It would be consistent with findings of the Waitangi Tribunal that development of a geothermal resource in accordance with Tikanga Maori would not be limited to non-commercial traditional use of the resource. Under the present wording of the Bill, it now appears open to Maori to argue for their use of geothermal water for commercial purposes without the necessity of a permit.

(c) Water Conservation Orders

"Water" is specifically defined to include "geothermal water". As a consequence Water Conservation Orders under Part VIIA of the Bill will extend to geothermal water, thus remedying a significant shortcoming to the Water and Soil Conservation Act 1967 highlighted previously, and enabling specific action to be taken to conserve and protect a geothermal water resource.

Although the Labour Government had consistently maintained an intention to pass the Bill prior to the election, through mismanagement of the parliamentary schedule debate the Bill was not passed and was finally abandoned. The National spokesman on the environment has stated that National supported the principles of the Bill but due to the dissatisfaction with its mechanisms and procedures planned to set up a "peer study group" consisting of environmentalists, local government and planning specialists to advise on the Bill before Christmas. It is intended that the views of the group would go to a select committee in February. It is, however, still National's intention that an "improved" Bill would be ready for implementation by July 1, 1991[24]. It will hopefully be the case that the final Bill as enacted will at last provide a basis for a clear and adequate management of the geothermal resource.

REFERENCES

[1] Geothermal Energy Act 1953, s.11(1)(a)

[2] See Re. Geotherm Energy Ltd [1989] 2 NZLR 22, 24

[3] See M. Davenport et al, Geothermal Management Planning: An Overview, Waikato Valley Authority Technical Publication No. 48 (Hamilton: 1987), 63; R.P. Boast, Geothermal Energy: Maori and Related Issues, Resource Management Law Reform Working Paper No. 26 (Wellington: 1989), 20

[4] See D.A.R. Williams, Environmental Law (Wellington: 1980), 151

[5] Keam v Minister of Works and Development [1982] 1 NZLR 319,322 (Court of *Appeal*). See also New Zealand Maori Arts and Crafts Institute v National Water and Soil Conservation Authority (1980) 7 NZTPA 365,368

[6] See B.F. Houghton, E.F. Lloyd and R.F. Keam, The Preservation of Hydrothermal System Features of Scientific and other interest. Report of the Nature Conservation Council, (Wellington: 1980)

[7] R. Curtis, P. Dell, B. Huser; Strategy Policy and Guidelines for Geothermal Management, (Waikato Catchment Board) (Hamilton: 1988)

[8] See Davenport *et* al (above, n.3), 49; Boast (above n.3) 67; E.F. Lloyd, Geology and Hot Springs of Orakeikorako, New Zealand Geological Survey Bulletin No. 85 (Wellington: 1972)

[9] SR 1987/73

[10] Rotorua Geothermal Users Association Incorporated v Attorney-General, unreported, High Court, Wellington, 13 May 1987 (CP 543/86)

[11] Regulations Review Committee 1987 (Chairman: Mr D.L. Kidd), Report on the Committee's Inquiry into the Geothermal Energy Regulations 1961, Wellington: 1987, p.9

[12] In the matter of an application by Geotherm Energy Limited: Report and Recommendations of *the* Special Tribunal, Waikato Catchment Board, 24 August 1989, p.10

[13] Ibid, p. 7

[14] "Tribe explores geothermal power options", (The Dominion, April 4, 1990, p.21)

[15] Resource Management Bill 1990, cl.11(33(d)

[16] For an exploration of this approach, see R.P. Boast, "The Treaty of Waitangi: A Framework for Resource Management Law" (1989) Victoria University of Wellington Law Review

[17] Rotorua Post, 23 March 1990, p.1

[18] Structure Regulation and Ownership of the Electricity Industry: Report of the Electricity Task Force (Wellington: 1989)

[19] Media Release, Ministers of Commerce and Energy, 9 November 1989

[20] "Power Monopoly to be Broken Up", National Business Review September 26, 1990

[21] "Parties spell out energy policies", The Dominion September 5, 1990

[22] "State geothermal assets may be sold off", The Dominion, 17 May 1990, p.1

[23] Report of the Ministry of Energy for the year ended 31 March 1989; "Joint Venture a First", The New Zealand Herald, 27 February 1990, p.3 and 10

[24] "Improved Resource Bill Promised", The Dominion, September 14, 1990 p.2