RENEWABLE ENERGY PERSPECTIVES

Trevor Daya-Winterbottom[1]

New Zealand: an overview

From the mountains to the sea, the Waikato region of New Zealand stretches from the snowcapped mountains of the North Island's volcanic plateau surrounding Lake Taupo, through the broad Waikato River valley to the Tasman Sea. The region has the "capacity to power" up to 50 per cent of New Zealand, and exports over 75 per cent of the "electricity generated … to other regions".[2] The primary sources of electricity generation in the Waikato region are hydro, geothermal, and thermal (coal and gas); and recent growth in electricity development in the region has focused on geothermal and gas-fired generation. However, with "peaking" production from the Maui gas field offshore from the Taranaki coast, and the increased emphasis on a 90 per cent renewable electricity generation target by 2025:

> … the region is likely to play an important role in the development of future renewable electricity generation nationally.[3]

For example, limited capacity for new hydro dams along the Waikato River and constraints on further "assimilating discharges" for cooling from thermal power stations due to increasing demand for freshwater underpins the continued interest in geothermal and wind power and the interest in "emerging" technologies such as "underground coal gasification" and "marine energy".[4] In particular, accessing north Waikato coal reserves (over one billion tonnes), that is currently impractical and uneconomic using "conventional" open cast or deep mining methods, could become "a real possibility" using these new technologies.[5] Against this background the Royal Society of New Zealand recommended that electricity generation should make the "transition" to renewable energy sources by 2020, including the use of less carbon intense bridging fuels, and with a "commitment to zero carbon emissions" from fossil-fuel generation through capture and storage techniques.[6]

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[1] Faculty of Law, University of Waikato, New Zealand. This paper was originally presented at the IUCN Academy of Environmental Law 12th Colloquium, Universitat Rovira i Virgili, Tarragona, 2014.

[2] Waikato Regional Council *From the Mountains to the Sea* (Supplement to the proposed Waikato Regional Policy Statement 2010) 53.

[3] ibid 53.

[4] ibid 54.

[5] ibid 54.

[6] Royal Society of New Zealand *2020: Energy Opportunities* (2006); Royal Society of New Zealand *Climate Change Statement* (2008).

Energy law and renewables

Generally, Lyster and Bradbrook identified a range of renewable energy resources, including, solar energy, wind energy, geothermal energy, biomass, hydro energy, and tidal energy. They found that hydro energy is the most mature source of renewable enery while other sources (e.g. tidal energy) are still embryonic. Notwithstanding the maturity of hydro energy, Lyster and Bradbrook also found that new development has become more difficult to consent due to increased concerns about the environmental effects of dams and related infrastructure. For example, in Australia no major hydro energy proposals have been consented since the *Tasmanian Dam* case,[7] and in New Zealand the 1,400 MW Waikato and Tongariro hydro schemes were commissioned during the period 1929-1973. From a legal perspective, they observed that the development of energy law is influenced by a range of external factors, including, research into new technologies, economic investment in the industry, and "social acceptance" of renewable energy. While the law needs to develop to keep up to date with technology, Lyster and Bradbrook noted that the regulatory framework is unlikely to impede the "ultimate" take up of new technology but concluded that it could affect the "rate" at which it is "adopted". Overall, they found that energy law plays an important role in providing investment certainty, that it has an economic dimension and can act as a "stimulatory measure" to direct investment into different types of energy development (e.g. fossil-fuels or renewable energy), and that is can have an educative role in encouraging energy efficiency and conservation.[8]

Climate change and electricity generation

Electricity generation and greenhouse gas (GHG) emissions have been controversial issues for New Zealand since the Resource Management Act 1991 (RMA) came into force. For example, the proposed Stratford power station was referred to a Board of Inquiry following the call-in of the resource consent applications by the Minister for the Environment. The Board found that the proposed 400MW combined-cycle thermal power station would increase total CO_2 emissions by five per cent. While it found that the need for further electricity generation would be a positive environment effect, it also found that there was "no immediate need for the new power station" and that alternative generation technologies "may become feasible in the future".[9] As a result, the Board gave careful consideration to methods for mitigating the CO_2 emissions, including, the removal of emissions from exhaust gases, controlling other power stations to guarantee that there would be no increase in overall emissions, and planting forest sinks. The Minister agreed with the Board's recommendation that a consent

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7 *Commonwealth v Tasmania* (1983) 46 ALR 625.

8 Rosemary Lyster and Adrian Bradbrook *Energy Law and the Environment* (Cambridge University Press 2006) 16-34.

9 Michael Sleigh "Stratford Power Station Decision" Resource Management News (February/March 1995) 25.

condition should be imposed requiring mitigation, but provided for a more flexible approach that would (inter alia) take reductions at other power stations into account. The consent holder was therefore only required to take steps to mitigate "the effects of the additional amount of CO_2 being discharged as a result of the exercise of this consent". Notwithstanding this change, the decision was criticised because the government was (at that time) developing a policy response to implement New Zealand's international obligations under the United Nations Framework Convention on Climate Change (FCCC) outside the RMA that provided for voluntary agreements and would have led to the introduction of a carbon tax in 1997 if emissions reduction targets were not being met.[10]

Subsequently, similar issues arose in relation to resource consent applications for new gas-fired thermal power stations at Otahuhu in Auckland, and Stratford in Taranaki.[11] The decisions of the respective regional councils to grant consent without including any mitigation conditions were appealed to the Environment Court by the Environmental Defence Society, who sought that forest sink conditions should be imposed in both cases. The electricity generators argued that the proposed power stations would have a "negligible" effect on global emissions, that other less efficient generation from other power stations would be "displaced", that sufficient forest sinks were already being planted by others, that no further mitigation was required, and that the government was formulating a revised policy position outside the RMA regarding climate change. However, the Society contended that climate change should be addressed under the RMA regardless of whether any adverse environmental effects would be local, national, or global; that all CO_2 emissions should be mitigated notwithstanding any action by others; and that emerging government policy outside the RMA was "irrelevant". The Court considered that the assessment of environmental effects was not limited to merely local effects and observed that:

> … it would be artificial in the overall context to confine the environment to New Zealand.[12]

While the Court made no express finding about whether forest sinks planted by other persons should be taken into account, arguably this could be "inferred" from the judgment. The Court also held that New Zealand's international obligations under the FCCC were relevant, but found that these obligations should be applied in a way that was

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[10] Paul F Majurey "Proposed Stratford Power Station CO2 Decision – Aberration or Policy-U-Turn?" Resource Management News (May/June 1995) 6, 8.

[11] *Environmental Defence Society Inc v Auckland Regional Council* [2002] NZRMA 492; *Environmental Defence Society Inc v Taranaki Regional Council* (A84/2002).

[12] Gerard van Bohemen "Climate change and resource consent decisions" Resource Management Journal (Issue 1 Volume XI March 2003) 14, 16.

consistent with the preferred policy package then being developed by the government. For example:

> It took note of the developing Governement policy on climate change, including the policy that consistency of approach was necessary to guarantee efficiency compatible with achieving best environmental, social and economic outcomes.[13]

As a result, although the Court "accepted" the scientific evidence regarding the adverse climate change effects of GHG emissions and the cumulative effect of the proposed power stations, it was reluctant to include conditions on the grant of resource consents that would be administered by the regional councils in light of the need for a national approach advocated by the developing government policy, and the appeals were dismissed. This led van Bohemen to note that:

> Since these cases each concerned the discharge of over a million tonnes of CO2 per annum, it is unlikely that the facts of other cases will dictate a different outcome. This suggests that it will rarely, if ever, be appropriate for a consent authority to require as a condition of a resource consent measures to mitigate climate change effects which manifest globally and which have no real local or even regional effect.[14]

Subsequently, the RMA was amended by inserting s 104E into the statute which requires that local authorities "must not have regard" to the effects GHG discharges on climate change when deciding discharge permit applications, except to the extent that renewable energy use or development enables a reduction of GHG discharges "in absolute terms" or "relative to … non-renewable energy" use or development.[15] The statutory amendment was intended to preclude local authorities from considering the "effects on climate change" of GHG discharges.[16] The 2004 RMA amendments also preclude local authorities from preparing regional rules that have regard to the effects of GHG discharges on climate change, while requiring local authorities to have regard to the effects of climate change and the benefits derived from renewable energy development.[17]

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[13] ibid 17.

[14] ibid 17. Additionally, van Bohemen also noted that three gas fired power stations had been granted resource consent in the period 1995-2002 without any obligation to mitigate GHG emissions by planting forest sinks, and that the Minister for the Environment had subsequently agreed to cancel the general mitigate condition included on the grant of resource consent for the Taranaki combined-cycle power station in 1995.

[15] RMA, s 104E; inserted by Resource Management (Energy and Climate Change) Amendment Act 2004, s 3(b)(ii).

[16] Resource Management (Energy and Climate Change) Amendment Act 2004, s 3(b)(ii).

[17] RMA, s 70A, s 7(i), and s 7(j); inserted by Resource Management (Energy and Climate Change) Amendment Act 2004, s 6 and s 5(2).

Subsequently, the interpretation of the 2004 RMA amendments came before the Court of Appeal in *Genesis Power Ltd v Greenpeace New Zealand Inc*,[18] where the decision to grant resource consent for the development of a coal-fired power station by Mighty River Power at Marsden Point, Northland, was appealed to the Environment Court by Greenpeace, who contended that the local authority should have considered the adverse effects of the proposal on climate change due:

> … to the extent that the proposal would diminish opportunities to use and develop renewable energy that would have reduced greenhouse gas emissions.[19]

Mighty River Power successfully applied for strike out of the appeal, and Greenpeace filed a further appeal in the High Court. The issue was whether s 104E of the RMA was relevant to deciding a resource consent application for energy development fueled from non-renewable sources. The High Court allowed the appeal and found that this was a "factor" that the local authority could take into account, and it rejected the proposition that s 104E of the RMA was not relevant when considering the proposed coal-fired power station. Effectively, the High Court adopted a comparative approach:

> … that permits consent authorities to balance the benefits, in terms of greenhouse gas reduction, of a hypothetical renewable energy project against the actual application concerning a non-renewable energy project.[20]

The decision was appealed to the Court of Appeal by Mighty River Power, but the appeal was abandoned when the company decided that it did not wish to proceed with the proposal. However, Genesis applied for a declaration regarding the issue, because it operated operated the 1,200 MW coal-fired Huntly power station in the Waikato region, and wished to develop a gas-fired power station at Rodney, north of Auckland. The Court granted the declartion sought by Genesis regarding s 104E of the RMA, and considered that the "response" to climate change should "be organised on a national rather than a regional basis". In particular, the Court of Appeal found that:

> The effects of GHG emissions are not of a regional character. If regions adopt different standards, this would encourage selective behaviour, with projects being set up in regions which offered the least restrictions and with no net gain to the wider environment to which climate change is relevant. Further, given New Zealand's comparatively low contribution to worldwide GHG emissions and the infinitesimal contribution which any particular project would make, there would be no demonstrable

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[18] *Genesis Power Ltd v Greenpeace New Zealand Inc* [2007] NZCA 569; [2008] 1 NZLR 803; [2008] NZRMA 125.

[19] Janette Campbell and Brandon Watts "Considering the effects of greenhouse gases on climate change" April 2008 RMJ 8, 9.

[20] Ceri Warnock "Greenhouse gases and climate change – relevance to discharge permit application" (2006) 6 BRMB 191, 192.

> linkage between GHG emissions associated with any particular project and climate change generally.[21]

Greenpeace appealed the judgment to the Supreme Court, where the Court was divided regarding the intended effect of the 2004 amendments.[22] Chief Justice Elias considered that when read in the context of their legislative history, the amendments required a comparison between renewable and non-renewable energy development, otherwise s 7(j) of the RMA would be rendered "neutral and irrelevant". The majority, however, considered that the effect of GHG discharges on climate change would only be relevant in cases involving renewable energy use or development. Spiro noted that the decision was "notable" as a result of these "starkly constrasting approaches", and because the decision "highlighted" the national response to climate change under the New Zealand emissions trading scheme (ETS).[23]

In the context of the *Genesis* cases, Bollard noted four distinct aspects of the New Zealand climate change debate, namely, the scientific basis, equitable considerations, policy design, and the role of the courts in resolving environmental conflict.[24] He drew on previous Environment Court decisions that identified various "threads" which permeate the RMA, including, intergenerational equity, and highlighted both the statutory purpose (sustainable management) in s 5 and the requirement in s 7(i) to have "particular regard" to the effects of climate change.[25] Bollard also noted the trend toward relying on strategies and regulations under other statutes to provide a national response to climate change, rather than relying on policy statements and plans prepared by local authorities under the RMA.[26] He also foresaw a "potential" increase in climate change litigation before the Environment Court concerning coastal risk management, competition for access to water resources, and the need to consent new energy generation projects.[27] Interestingly, Bollard indicated that the Court was not distracted by "the merits of scientific dissent",[28] and in contrast with some Australian decisions the scientific basis for anthropogenic climate change has not been contested in any of the

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[21] *Genesis* [2007] NZCA 569; [2008] 1 NZLR 803; [2008] NZRMA 125 at [17]-[18].

[22] *Greenpeace New Zealand Inc v Genesis Power Ltd* [2008] NZSC 112; [2009] 1 NZLR 730; (2008) 15 ELRNZ 15.

[23] Matt Spiro "Greenpeace New Zealand Incorporated v Genesis Power Ltd" (2009) 8 BRMB 11, 13.

[24] Principal Environment Judge John Bollard "Climate change issues from the perspective of the Environment Court" (2008) 7 BRMB 127.

[25] ibid 127.

[26] ibid 128.

[27] ibid 131.

[28] ibid 127.

New Zealand cases.[29] However, the Court's ongoing work in relation to consetning new energy generation projects has been dominated by contentious renewable energy projects.

Following the Court of Appeal decision in *Genesis*, the government introduced the Climate Change (Emissions Trading and Renewable Preference) Bill into Parliament, which sought inter alia to insert a preference for renewable energy projects into Part 6A of the Electricity Act 1992 by imposing:

> … a 10-year restriction on new baseload fossil-fuelled thermal electricity generation, except to the extent necessary to maintain security of New Zealand's electricity supply.[30]

However, the fossil-fuel moratorium was short-lived and was repealed later that year after the general election by the Electricity (Renewable Preference) Repeal Act 2008. The moratorium remained on the statute book for the brief period from 26 September 2008 to 22 December 2008, and the repeal of the moratorium provided the catalyst for the resource consents for the 1,200 MW coal and gas fired Huntly power station to be renewed in 2012 for an extra 25 years.

Grinlinton highlighted the connection between GHG emission reduction targets and the uptake of renewable energy, but he observed that energy policies "are generally aspirational", such as the 90% target for renewable electricity generation under the New Zealand Energy Strategy. While he considered that "resource management regulation can be a powerful tool to restrict environmentally damaging forms of energy production", his argument (which relied on s 7(j) of the RMA) has been superseded by the Supreme Court decisions in *Genesis* and *Buller Coal* which effectively remove GHG discharges from RMA regulation. As a result, the potential for s 7(j) of the RMA to have any effect on reducing fossil-fuel dependence or encouraging the transition to renewable energy has been rendered "neutral or irrelevant". Grinlinton also noted the strong New Zealand commitment to reducing GHG emissions via the ETS, and the "flexible target" of reducing emissions by 10-20 per cent below 1990 levels by 2020 which (paradoxically) is inter alia subject to:

> … major emitting countries taking action fully commensurate with their capabilities and contributions to global emissions.[31]

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[29] Trevor Daya-Winterbottom "Climate Change Litigation – the Xtrata Case" [2005] Env. Liability 62; cf. *West Coast ENT Inc v Buller Coal Ltd* [2013] NZSC 87.

[30] Helen Atkins "Climate Change Update" August 2008 RMJ 32.

[31] David Grinlinton "Achieving emissions reduction and renewable energy targets: the case for 'feed-in tariffs'" (2009) 8 BRMB 68. Subsequently, New Zealand supplemented its "flexible target" with a more modest "unconditional target" for emissions reduction of 5 per cent below 1990 levels by 2020, following the decision (9 November 2012) that New Zealand

Notwithstanding the concerns about significant increases in GHG emissions above 1990 levels by developing countries (e.g. China, India, and Brazil) or that only 85 per cent of global GHG emissions are regulated under the Kyoto Protocol,[32] the export of New Zealand coal for burning overseas is not regulated by the New Zealand ETS.[33]

Burning coal overseas

Subsequently, the consequential effects on climate change from land use activities (coal mining) came before the courts in *Buller Coal Ltd v West Coast ENT Inc*,[34] in declaratory proceedings regarding the approach to s 7(i) and s 104(1)(a) of the RMA. West Coast ENT contended that the local authority was required to have regard to effects on climate change when deciding the land use consent application. However, the Environment Court rejected this argument in light of the 2004 amendments and the previous decisions in the *Genesis* case.[35] In particular, the Environment Court found that the statutory purpose in s 5 of the RMA (sustainable management) was "qualified" by the 2004 amendments, and that there was no scope to interpret the relevant provisions in line with "international obligations"[36] - which the Court considered would only be relevant either where there was ambiguity in the legislation or some residual discretion left for the decision-maker. The Environment Court was therefore:

> … not persuaded that there is any discretion concerning interpretation, or any ambiguity or choice.[37]

Steane noted that s 104E of the RMA was limited to discharge permits and that it did not "expressly" preclude local authorities from considering any effects on climate change in the context of land use consent applications. In particular, he noted that:

> The present case may not have arisen had s 104E applied to all types of resource consent applications, particularly given the Supreme Court's decision in Genesis on the correct interpretation of s 104E.[38]

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would not sign up to a second commitment period under the Kyoto Protocol. Both targets continue to apply in tandem.

[32] Alison Arthur-Young and Rachel Boyte "Fear of commitment? NZ dumps Kyoto" Resource Management Bulletin (December 2012) 188.

[33] Warren Bangma "Case Note *Coal, Climate Change and the decision of the Supreme Court: West Coast ENT Incorporated v Buller Coal Limited*" Resource Management Bulletin (December 2013) 94, 97.

[34] *Buller Coal Ltd v West Coast ENT Inc* [2012] NZEnvC 40.

[35] *Greenpeace New Zealand Inc v Northland Regional Council* (A95/2006) unreported NZEnvC; *Greenpeace New Zealand Inc v Genesis Power Ltd* [2008] NZSC 112; [2009] 1 NZLR 730; (2008) 15 ELRNZ 15.

[36] *Buller Coal Ltd* [2012] NZEnvC 40 at [49] and [37].

[37] *Buller Coal* [2012] NZEnvC 40 at [38].

Additionally, Steane observed that the Australian courts have found that effects on climate change could appropriately be considered in relation to land use consent applications, and that consent conditions could "validy" be included on the grant of consent, e.g. to "offset" GHG emissions from the coal mining activity.[39] However, he noted that such conditions had not ultimately been imposed in Australia due to the introduction of ETS legislation. In New Zealand, the Environment Court had expressed some "disquiet" about imposing similar conditions in the *Environmental Defence Society* cases due to the government's policy preference for a national approach to GHG emissions, and while GHG discharges from the combustion of coal exported overseas would not be subject to the New Zealand ETS, Steane observed that drafting valid consent conditions to deal with such circumstances would be "challenging" and may in practice be impossible.[40]

West Coast ENT appealed the Environment Court decision in *Buller Coal* to the High Court. Similar to its position before the Environment Court, West Coast ENT contended that s 104(1)(a) of the RMA does not contain any express or implied prohibition in a land use consent context, that would preclude the local authority from considering any effects on climate change from buring coal extracted from the mine; and that such matters were not addressed either by the 2004 amendments or by Supreme Court decision in *Genesis*. These arguments were also rejected by the High Court, which found that the 2004 amendments implied that any effects on climate change from GHG discharges should be addressed nationally, unless the position under the RMA had been altered by the promulgation of a national environmental standard (NES).[41] In particular, the High Court found that the RMA does not have extra-territorial effect beyond the 12nm limits of the territorial sea, and that there was therefore no jurisdiction under the statute to regulate the effects on climate change of burning New Zealand coal overseas. For example, Whata J observed that:

> One leviathan of environmental law (i.e. the RMA) is more than enough for lawyers, experts, environmental managers, planners, local authorities and the courts of this country. The prospect of a district council assessing whether an end use of coal … is subject to sustainable environmental policy … in Cambodia … China, in Japan or Brazil, Zimbabwe or Kenya … is palpably unattractive.[42]

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[38] Edward Steane "Climate Change and Coal: Scope for Further Clarity" Resource Management Bulletin (August 2012) 145, 146-147.

[39] *Hunter Environmental Lobby Inc v Minister for Planning* [2011] NSWLEC 221; Judge Craig Thompson "Case note *Hunter Environmental Lobby Inc v Minister for Planning* [2011] NSWLEC 221" Resource Management Bulletin (March 2012) 115; Trevor Daya-Winterbottom "Climate Change Litigation – the Xtrata Case" [2005] Env. Liability 62.

[40] Steane "Climate Change and Coal: Scope for Further Clarity" (n 38) 147.

[41] RMA, ss 43-44A.

[42] *Royal Forest and Bird Protection Society of New Zealand Inc v Buller Coal Ltd* [2012] NZHC 2156 at [53].

Leave was granted for appeal to the Court of Appeal, and leave was later granted for the appeal to be heard by the Supreme Court direct, leapfrogging the Court of Appeal.[43]

Chief Justice Elias delivered a minority judgment which concluded that GHG effects on climate change were not excluded from considertation under s 104(1)(a) of the RMA, and that "reading in such conclusion" would only be justified under the rules of statutory interpretation where some ambiguity had been found regarding the meaning of the provision (which was not the case).[44] She also found that s 104E of the RMA pertaining to discharge permits was "not directly relevant",[45] and that there was no relevant NES which permitted "effects on climate change from the combustion of coal".[46] As a result, Elias CJ held that both the adverse and positive effects of the proposed activity should be considered when the application was assessed under s 5 of the RMA.[47] However, the majority in the Supreme Court held that there was no "overarching logic" to the literal interpretation of s 104(1)(a) of the RMA,[48] and that the approach taken by West Coast ENT would allow GHG effects on climate change to be taken into account in the context of land use consent applications, whereas they could not be considered in the context of any related discharge consent application by virtue of s 104E of the RMA.[49] They also found any effects on climate change from buring New Zealand mined coal overseas would give rise to difficult issues "with assessing effects offshore".[50] Overall, the majority found that precluding local authorities from considering GHG effects on climate change when deciding any resource consent applications:

> … seems to us to be justified as a matter of necessary implication, essentially on the basis that, when the amended RMA is looked at as a whole, the limitation is so obvious that it goes without saying.[51]

Rive noted that the Supreme Court decision in *Buller Coal* "affirms the proposition" that the 2004 amendments effectively prohibit local authority consideration of the effects of GHG discharges on climate change under the RMA, notwithstanding "a considered and well-analysed dissenting opinion by the Chief Justice".[52] He found that,

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[43] *West Coast ENT Inc v Buller Coal Ltd* [2013] NZSC 87 at [112].

[44] *Buller Coal* [2013] NZSC 87 at [24].

[45] *Buller Coal* [2013] NZSC 87 at [70].

[46] *Buller Coal* [2013] NZSC 87 at [73].

[47] *Buller Coal* [2013] NZSC 87 at [77].

[48] *Buller Coal* [2013] NZSC 87 at [151]-[153].

[49] *Buller Coal* [2013] NZSC 87 at [157].

[50] Bangma "Case Note *Coal, Climate Change and the decision of the Supreme Court: West Coast ENT Incorporated v Buller Coal Limited*" (n 33) 96.

[51] *Buller Coal* [2013] NZSC 87 at [173].

[52] Vernon Rive "A climate law year in review" Resource Management Bulletin (December 2013) 87.

effectively, GHG discharges are regulated nationally via the New Zealand ETS,[53] and the NES for Air Quality 2004 that regulates methane discharges from landfills.[54] This pragmatic result was not surprising, and was foreshadowed by the specialist decisions from the Environment Court in the *Environmental Defence Society* cases.[55]

Geothermal and wind energy

Grinlinton drew attention to the "public interest" debate regarding landscape protection and wind energy development. He noted the rapid increase of consented wind farms in New Zealand since 2004, and the apparent bias in some Environment Court decisions where the benefits of renewable energy were given added weight.[56] For example, in *Genesis Power Ltd v Franklin District Council*, regarding a 19 turbine wind farm located on the Awhitu Peninsula, south of Auckland, the Court found that:

> Notwithstanding the effects on the coastal environment we consider the proposal to be appropriate … We find that the benefits of the proposal, when seen in the national context, outweigh site-specific effects, and the effects on the local surrounding area.[57]

However, when allowing wind farm proposals in Hawke's Bay, the Court introduced a note of caution, and stated that renewable energy projects would not "always be favoured in the balancing exercise", and that there may be locations where other factors (e.g. iconic landscapes or the proximity to more densely populated areas) could result in a different outcome.[58] Subsequently, when considering an extension to an existing wind farm at Hastings on the east coast of the North Island, the Court found that adverse effects on amenity values (natural ridgelines) and Maori cultural and spiritual values outweighed the renewable energy benefits of the proposed activity, and stated that:

> Important as the issues of climate change and the use of reneewable sources of energy unquestionably are, they cannot dominate all other values. The adverse effects of the proposal on what is undoubtedly an outstanding landscape, and its adverse effects on the relationship of Maori with both this land and the values it has for them, clearly brings

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53 Climate Change Response Act 2002.

54 Resource Management (National Environmental Standards for Air Quality) Regulations 2004.

55 Trevor Daya-Winterbottom "The Legitimacy of Climate Change Litigation: *Buller Coal* in the Supreme Court" 5 IUCNAEL EJournal 231, 238.

56 David Grinlinton "Property rights, the 'public interest' and global considerations: The case of wind energy development" (2007) 7 BRMB 62, 64; *Meridian Energy Ltd v Wellington City Council* (W31/07).

57 *Genesis Power Ltd v Franklin District Council* [2005] NZRMA 541 at [230].

58 *Unison Networks Ltd v Hastings District Council* (W58/06); Kenneth Palmer "Case note *Unison Networks Ltd v Hastings District Council* (2008) 7 BRMB 111.

> us to the conclusion that the tipping point in favour of other values has been reached.[59]

Grinlinton considered that these decisions underemphasized the cumulative effects of wind farms on outstanding landscapes, and suggested that a more principled approach to resolving environmental conflict between harnessing the benefits of renewable energy to reduce GHG effects on climate change, and addressing adverse effects from such development on outstanding landscapes, could be achieved by preparing a national policy statement (NPS) to identify "optimal wind generation areas" where such development would be acceptable.[60] Similarly, Dick drew attention to the use of national planning guidance in the United Kingdom, where Planning Policy Statement 22 on renewable energy (PPS 22) translates national renewable energy targets into subordinate statutory planning instruments to ensure that their "ambition fully reflects opportunities" in the regions, and ensures that local authorities "do not preclude development unnecessarily".[61] For example, PPS 22 provides that local landscape and nature conservation overlays or zoning provisions "should not be used … to refuse planning permission for renewable energy development",[62] and similar guidance in Scotland (SPP 6) requires local authorities to identify in plans "broad areas of search where wind farm development may be appropriate".[63] However, this approach was not fully adopted in New Zealand where the NPS for renewable electricity generation acknowledges that power stations will need to be developed in close proximity to renewable energy resources, and encourages local authorities to have regard to "offsetting measures and environmental compensation" where adverse effects cannot be avoided, and requires local authorities to include rules in plans regarding site identification and assessment, but does not require areas to be zoned for such development.[64]

Subsequently, the Environment Court adopted a more principled approach in *Maniototo Environmental Society Inc v Central Otago District Council*,[65] where the Court refused resource consent for a 176 turbine wind farm at Lammermoor in the South Island. While the Court acknowledged the renewable energy benefits of the proposed activity,

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[59] *Oustanding Landscape Protection Society Inc v Hastings District Council* (W24/07) at [116].

[60] Grinlinton "Property rights, the 'public interest' and global considerations: The case of wind energy development" (n 56) 65-66.

[61] Kate Dick "From Conflict to Consensus?" [2009] RM Theory & Practice 238, 247.

[62] Department for Communities and Local Government, Planning Policy Statement 22: Renewable Energy, para 15.

[63] Dick "From Conflict to Consensus?" (n 61) 247.

[64] National Policy Statement for Renewable Electricity Generation 2011, Policies E1-E4 and G.

[65] *Maniototo Environmental Society Inc v Central Otago District Council* (C103/09).

it was concerned about the potential adverse effects of the activity on the surrounding outstanding landscape area. As a result, the Court found that a "comprehensive" cost benefit analyis was required based on s 7(b) of the RMA which obliges decision-makers to have regard to the "efficient use and development of natural and physical resources". In particular, the decision required Meridian Energy to quantify the benefits and costs of the proposal, and to provide a comparative analysis of alternative methods and locations for securing the benefits that could be derived from the activity. This was influenced, partly, by the Court's finding that there were a number of wind energy projects "under active consideration" that could satisfy future energy needs "over the next 10-plus years". However, Hassan and McIndoe criticised the decision on the basis that it was outside the Court's appeal jurisdiction regarding resource consent applications to require such a wide ranging assessment, and because it would impose siginificant compliance costs on applicants. They also considered that the decision could establish an undesirable precedent for other infrastructure projects, and result in the consenting of notified infrastructure projects becoming more contentious through the intervention of other infrastructure providers joining the proceedings via the submission process (arguably) to advance trade compitition arguments which the RMA generally seeks to prohibit. For example, Hassan and McIndoe considered that applicants:

> … would be expected to demonstrate not only that the project represents the most efficient use that could be made of the resources, but that this benefit is greater than could be achieved by any other provider using a different set of resources.[66]

Meridian Energy appealed the decision to the High Court on questions of law – challenging, in particular, the Environment Court's requirement for "comprehensive" cost benefit analysis. After considering the statutory scheme of the RMA, the High Court found that this approach was not justified in the context of resource consent applications and that, effectively, by implicitly asserting a role for the local authority or the Environment Court on appeal in deciding what may be the "best use" of resources it asserted "a planning function beyond the scope of the RMA".[67] Additionally, Rive noted that "perversely" the Environment Court decision "would arguably have imposed a more stringent obligation on resource consent applicants concerning alternatives than currently exists for major public works under the designations regime of the RMA".[68] Notwithstanding the High Court decision, Meridian Energy later announced on 20 January 2012 that it would not be proceeding with the project for commercial reasons.

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[66] John Hassan and Nicky McIndoe "Project Hayes: sand in the gearbox for consenting infrastructure?" (2010) 8 BRMB 108, 109.

[67] *Meridian Energy Ltd v Central Otago District Council* HC Dunedin CIV 2009 412 980, 16 August 2010, at [120].

[68] Vernon Rive "Second wind: Project Hayes in the High Court" (2010) 8 BRMB 153, 157.

Despite the interest in wind generation, there has been no interest to date in zoning areas of the New Zealand exclusive economic zone for offshore wind energy development. However, Plant noted in the context of such development in United Kingdom waters that the coordination of maritime safety zones, and providing safe aviation clearance above offshore turbines, were specific policy and practice issues that required attention.[69] But it is likely that these issues could be resolved via the assessment process under the Exclusive Economic Zone and Continental Shelf (Assessment of Effects) Act 2012 regarding offshore wind energy proposals in New Zealand waters.

Schofield examined geothermal and wind energy development and found that notwithstanding environment constraints geothermal energy development has maintained "accelerated growth" since 1998 with new geothermal power stations (with a combined capacity of 650 MW) being developed in the Waikato region at Nga Awa Purua, Ngatamariki, Te Huka, and Tauhara; together with Te Mihi which replaces the pioneering geothermal power station at Wairakei.[70] In particular, Heffernan observed that commissioning the Ngatamariki power station in 2013 increased the geothermal electricity generation of Mighty River Power to 40 per cent of the company's output, and increased its overall generation from renewable sources to 90 per cent of its output. He also noted that geothermal energy provided "steady base-load" supply.[71] Similarly, Schofield found that while wind energy proposals are frequently "scaled back" during the resource consent process, few developments are refused consent, and that in addition to 600 MW of installed wind energy development a further 3,000 MW has been "consented or proposed but not yet constructed".[72]

Tidal energy

While the Environment Court adopted a precautionary approach in *Crest Energy Kaipara Ltd v Northland Regional Council*,[73] regarding the proposal by Crest Energy to harness tidal energy from 200 marine turbines located in the Kaipara Harbour it did not require comprehensive cost benefit analysis of the proposed activity. Instead, the Court focused on the adaptive management "regime" proposed by Crest Energy for the staged development of the tidal energy project and the need to ensure that a robust environmental management plan would be in place under the consent conditions. In particular, the adaptive management regime required "robust" baseline monitoring followed by regular periodic monitoring to ensure that the

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[69] Glen Plant "UK offshore wind energy development to burgeon despite uncertain international safety and environmental impacts" [2003] Env. Liability 140, 147-150.

[70] Simon Schofield "Geothermal and Wind Energy in New Zealand" (2013) 17 NZJEL 155, 162.

[71] Doug Heffernan *Mighty River Power* (Macquarie Conference 2014).

[72] Schofield "Geothermal and Wind Energy in New Zealand" (n 70) 175 and 192.

[73] *Crest Energy Kaipara Ltd v Northland Regional Council*" (A132/09).

environmental effects of the tidal energy project would be within the parameters envisaged by the application before proceeding with subsequent stages of the project. For example, the Court was concerned about the effects on commercial fisheries, potential noise effects on marine fauna, effects on endangered marine mammals (Maui's dolphins), and effects on Maori cultural issues. As a result, the Court issued an interim decision to allow further evidence to be prepared on these matters, and for consultation with the parties to the appeals and expert witness conferencing. Overall, the Court was persuaded about the economic efficiency of the project and its renewable energy benefits under ss 7(b) and (j) of the RMA. For example, Bain observed that:

> The Court … made positive findings under s 7(b) … and 7(j) of the RMA. With respect to economic efficiency, the Court concluded that the benefits to be obtained from the proposal were clear, and the production of electricity by harnessing the tidal flows of the Kaipara was a particularly efficient use of tidal energy … In addition, the proposal would assist in avoidong power shortages in Northland, minimising transmission losses by locating the plant close to energy demand, and reducing carbon emissions.[74]

Subsequently, the Court granted consent for the proposed tidal energy project. The final decision held that a three year monitoring period would be sufficient for the first stage of the project, and that it was appropriate to require that Crest Energy should demonstrate that the environmental effects of the project were "less than minor" before proceeding to implement stage two, while a less onerous standard was imposed for subsequent monitoring whereby Crest Energy must demonstrate that environmental effects continue to be "no more than minor" before proceeding with further stages. Initially, 3 turbines were approved for stage one. Subject to satisfactory monitoring, the proposed 200 turbines can, cumulatively, be installed by stage five. This approach to consenting by the Court led Wright to comment that:

> With growing interest in wave and tidal energy projects in New Zealand, the question of how such novel resource consent applications are likely to be dealt with by the Environment Court will become an issue of importance for this fledgling industry. In this regard, the Crest Energy case provides an optimistic indication of the willingness of the Court to facilitate the granting of consents for marine energy projects and some insights for marine energy companies into how best to approach the resource consent process.[75]

Loomb examined the comparative experience regarding marine energy planning, and found that the limited availability of suitable sites and competion for space in the coastal marine area and exclusive economic

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[74] Jo Bain "Case Notes *Crest Energy Kaipara Ltd v Northland Regional Council*" (2010) 8 BRMB 123.

[75] Glen Wright "Crest Energy's Tidal Power Project Decision in Environment Court leads way for marine energy projects" (2011) Resource Management Bulletin 66, 69.

zone were major constraints on future development.[76] However, she noted that marine spatial planning and the government-led approach to strategic environmental assessment in the United Kingdom could provide useful examples of the way forward for New Zealand.[77] Despite the long debate about oceans policy (2001-2007) and subsequent enactment of the Exclusive Economic Zone and Continental Shelf (Assessment of Effects) Act 2012, marine spatial planning remains embryonic with the first non-statutory marine spatial plan currently being prepared for the Hauraki Gulf offshore from the Auckland-Waikato coast.[78]

Carbon capture and storage

Most recently, reducing GHG emissions has been focused on the legal and regulatory issues regarding carbon capture and storage.[79] While previous Royal Society reports highlighted the potential for carbon capture and storage, Australian state governments have developed legislative and policy solutions which indicate that existing legal frameworks may not be adequate to address the regulatory issues regarding carbon capture and storage,[80] and a recent report commissioned by the Ministry of Business, Innovation and Employment has also reached a similar conclusion that a new regulatory framework outside the RMA will be required to progress New Zealand carbon capture and storage projects.[81]

Renewable preferences?

New Zealand has mature sources of hydro energy and geothermal energy, but has found it difficult to provide for a renewable preference. This has resulted in an inability to adopt a comparative approach to assessing the effects of GHG emissions on climate change, and continued fossil-fuel development at home and export of coal for buring overseas. Notwithstanding this, new geothermal and wind

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[76] Cushla Loomb "Blue Energy: marine energy planning perspectives" [2009] RM Theory & Practice 218, 226-229.

[77] ibid 232-236.

[78] *Sea Change – Tai Timu Tai Pari*: Hauraki Gulf Marine Spatial Plan: www.seachange.org.nz: accessed 24 September 2014.

[79] Ian Havercroft, Richard Macrory, and Richard B Stewart (eds) *Carbon Capture and Storage: Emerging Legal and Regulatory Issues* (Hart Publishing 2011); Mark Rowe "Going underground" *Geographical* (January 2014) 30.

[80] Brad Wylenko and Jessica Smith "Developing a regulatory regime for carbon geosequestration in Australia" in Wayne Gumley and Trevor Daya-Winterbottom (eds) *Climate Change Law: Comparative, Contractual & Regulatory Considerations* (Thomson Reuters Lawbook Co 2009) 120-121.

[81] Barry Barton, and others *Carbon Capture and Storage: Designing the Legal and Regulatory Framework for New Zealand* (Centre for Environmental, Resources and Energy Law (CEREL) for the Ministry of Business, Innovation and Employment and the New Zealand Carbon Capture and Storage Partnership 2013).

energy development has been consented, despite considerable litigation in the case of wind energy. The prospects for tidal energy development appear to be optimistic, while the legal regime for carbon capture and storage remains to be developed.

Overall, Upton observed that renewable energy resources provide a "valuable" alternative to fossil-fuel energy resources if countries are commited to reducing GHG emissions, but they are unlikely to provide a "complete answer" within the next 30 years. As a result, the transition to a low-carbon economy will also rely on less carbon-intense bridging fuels (e.g. natural gas). While he noted that there are "formidable technical barriers" involved in the transition to a low-carbon economy, Upton noted that "electricity generation offers a wider variety of implementable options in the short to medium term" compared with other sectors (e.g. transport). Beyond that, Upton also noted that reducing GHG emissions would also require additional investment in research and development for renewable energy generation, together with an increased "emphasis" on energy efficiency and conservation measures.[82] More generally, Ottinger emphasised that successful renewable energy development requires "leadership", "careful planning", and "full disclosure of costs and benefits".[83]

While some authors have asserted a moral right to energy,[84] providing for renewable energy for a fair society on a safe planet appears to be some time away.

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[82] Simon Upton "A few facts about Renewable Energy" Resource Management Journal (Issue 3 Volume XII November 2004) 23, 31-32.

[83] Richard L Ottinger (ed) *Renewable Energy Law and Development* (Edward Elgar 2013) 200.

[84] Marc Clemson "Human Rights and the Environment: Access to Energy" (2012) 16 NZJEL 39; Shol Blustein "Towards a right to sustainable energy" [2012] Env. Liability 173.

References

Arthur-Young A and Boyte R, "Fear of commitment? NZ dumps Kyoto" Resource Management Bulletin (December 2012) 188

Atkins H, "Climate Change Update" August 2008 RMJ 32

Bain J, "Case Notes *Crest Energy Kaipara Ltd v Northland Regional Council*" (2010) 8 BRMB 123

Bangma W, "Case Note *Coal, Climate Change and the decision of the Supreme Court: West Coast ENT Incorporated v Buller Coal Limited*" Resource Management Bulletin (December 2013) 94

Barton B and others, *Carbon Capture and Storage: Designing the Legal and Regulatory Framework for New Zealand* (Centre for Environmental, Resources and Energy Law (CEREL) for the Ministry of Business, Innovation and Employment and the New Zealand Carbon Capture and Storage Partnership 2013)

Blustein S, "Towards a right to sustainable energy" [2012] Env. Liability 173

van Bohemen G, "Climate change and resource consent decisions" Resource Management Journal (Issue 1 Volume XI March 2003) 14

Bollard J, "Climate change issues from the perspective of the Environment Court" (2008) 7 BRMB 127

Campbell C and Watts B, "Considering the effects of greenhouse gases on climate change" April 2008 RMJ 8

Clemson M, "Human Rights and the Environment: Access to Energy" (2012) 16 NZJEL 39

Daya-Winterbottom T, "Climate Change Litigation – the Xtrata Case" [2005] Env. Liability 62

Dick K, "From Conflict to Consensus?" [2009] RM Theory & Practice 238

Grinlinton D, "Property rights, the 'public interest' and global considerations: The case of wind energy development" (2007) 7 BRMB 62

Grinlinton D, "Achieving emissions reduction and renewable energy targets: the case for 'feed-in tariffs'" (2009) 8 BRMB 68

Hassan J and McIndoe N, "Project Hayes: sand in the gearbox for consenting infrastructure?" (2010) 8 BRMB 108

Havercroft I, Macrory R, and Stewart RB, (eds) *Carbon Capture and Storage: Emerging Legal and Regulatory Issues* (Hart Publishing 2011)

Loomb C, "Blue Energy: marine energy planning perspectives" [2009] RM Theory & Practice 218

Lyster R and Bradbrook A, *Energy Law and the Environment* (Cambridge University Press 2006)

Majurey PF, "Proposed Stratford Power Station CO2 Decision – Aberration or Policy-U-Turn?" Resource Management News (May/June 1995) 6

Ottinger RL, (ed) *Renewable Energy Law and Development* (Edward Elgar 2013)

Palmer K, "Case note *Unison Networks Ltd v Hastings District Council* (2008) 7 BRMB 111

Plant G, "UK offshore wind energy development to burgeon despite uncertain international safety and environmental impacts" [2003] Env. Liability 140

Rive V, "Second wind: Project Hayes in the High Court" (2010) 8 BRMB 153

Rive V, "A climate law year in review" Resource Management Bulletin (December 2013) 87

Rowe R, "Going underground" *Geographical* (January 2014) 30

Schofield S, "Geothermal and Wind Energy in New Zealand" (2013) 17 NZJEL 155

Sleigh M, "Stratford Power Station Decision" Resource Management News (February/March 1995) 25

Steane E, "Climate Change and Coal: Scope for Further Clarity" Resource Management Bulletin (August 2012) 145

Spiro M, "Greenpeace New Zealand Incorporated v Genesis Power Ltd" (2009) 8 BRMB 11

Thompson C, "Case note *Hunter Environmental Lobby Inc v Minister for Planning* [2011] NSWLEC 221" Resource Management Bulletin (March 2012) 115

Upton S, "A few facts about Renewable Energy" Resource Management Journal (Issue 3 Volume XII November 2004) 23

Warnock C, "Greenhouse gases and climate change – relevance to discharge permit application" (2006) 6 BRMB 191

Wright G, "Crest Energy's Tidal Power Project Decision in Environment Court leads way for marine energy projects" (2011) Resource Management Bulletin 66

Wylenko B and Smith J, "Developing a regulatory regime for carbon geosequestration in Australia" in Gumley W and Daya-Winterbottom T, (eds) *Climate Change Law: Comparative, Contractual & Regulatory Considerations* (Thomson Reuters Lawbook Co 2009)