Turbines in Turitea. Tipping-points and trade-offs in a renewable electricity generation resource consent process

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Abstract:

Current policy settings promote increased renewable electricity generation and the escalation of investment in, and fast-tracking of, infrastructure. These priorities present fundamental challenges for New Zealand’s resource management framework. This paper analyses the process of decision-making in relation to Mighty River Power’s proposed wind farm in Palmerston North City Council’s Turitea water reserve in the Manawatu region of New Zealand. On the grounds of national interest, the resource consent was called-in by the Minister for the Environment. The implications of the Board of Inquiry process for public participation, integrated assessment of matters of national importance, and balancing of regional and national interests are discussed. Tensions and potential deficiencies within the decision-making framework of the Resource Management Act 1991 (RMA) exposed in the Turitea wind farm resource consent process highlight the need for more effective guidelines and processes to ensure the contemporary ‘renewables rush’ does not result in a proliferation of unsustainable infrastructure. Tools, institutions and approaches that may assist with achieving sustainable outcomes are identified.

Introduction

The Palmerston North City Council-owned Turitea water reserve is one of a few small remnants of indigenous forest in the Manawatu. Its location in the foothills of the Tararua Ranges also has important landscape values encompassing as it does a bush-clad skyline ridge widely visible from the extensive Manawatu lowlands and floodplain including Palmerston North city. The vision of the Department of Conservation’s Wanganui Conservancy Conservation Management Strategy (1997: 61) is

The significance of the remaining small remnant indigenous forests is accepted by residents and visitors. All significant remnants are formally protected and threats from weeks, possums and grazing are under control. Riparian areas are managed to retain or restore natural cover and help reduce pollution to rivers and streams. Areas of indigenous forest and wetland are created to replace some areas lost in the past

Horizons Regional Council’s Regional Policy Statement (Horizons Regional Council, 1998: 102) recognises the importance of the skyline of the Tararua Ranges in Policy 8.3 as follows:

Policy 8.3
To protect, from inappropriate subdivision, use and development, the specified values associated with the following features which are both outstanding and regionally significant:
... p. The skyline of the Tararua Ranges, specifically:
 i. its scenic qualities provided by its prominence throughout much of the Region...

In 2006, a development-friendly city council under chief executive Paul Wylie reviewed the Turitea water reserve’s management plan and added electricity generation as a new purpose of the reserve electricity generation. This was in response to the possibility then being explored by the council of the development of a wind farm in the reserve. Subsequently a resource application was lodged by Mighty River Power. Soon after the resource consent application was lodged, the Minister for the Environment called in the application and a Board of Inquiry was established.

This paper considers events around the Turitea water reserve wind farm and the tensions between on the one hand, conservation, landscape and biodiversity values and, on the other, the national goal of increasing New Zealand’s use of renewable energy.
Wind farm developments in the Manawatu

The Manawatu in the vicinity of the Manawatu Gorge is considered to have one of the world’s best wind resources. In the space of a decade, from 1999 to 2008, three major wind farms had been developed and fourth had been consented. The first wind farm, Trustpower’s Tararua wind farm, initially began generating power in 1999 with 48 turbines. A second stage of development of the Trustpower wind farm resulted in an additional 55 turbines.

Meridian Energy’s Te Apiti wind farm first installed 55 turbines that were 105 metres tall and dwarfed the original Trustpower turbines. A major extension to the Trustpower Tararua wind farm was completed in 2009, adding more turbines than the Te Apiti wind farm and taking its generation capacity to 162 MW. A third wind farm, NZ Windfarms’ Te Rere Hau development received consent for 97 turbines (down from an initial application for 104) on the western (Manawatu) side of the Tararua Ranges and later sought consent for another 56 turbines to be added on the eastern side of the Ranges. This further extension is likely to proceed soon.

In late 2008 consent was also given for a fourth wind farm, Motorimu (80 turbines), to be developed by Mighty River Power, a few kilometres south along the Tararua Ranges from the proposed Turitea wind farm. The initial application had been for 127 turbines and it was argued by legal counsel for Mighty River Power that the smaller number of turbines consented put into doubt the economic viability of the project. Hence, Mighty River’s legal counsel argued that the Motorimu wind farm should not be taken into account by the Board of Inquiry when considering the environmental impact of the Turitea wind farm for which Mighty River subsequently sought resource consent.

The Turitea wind farm, the fifth in the area, proposed by Mighty River Power originally encompassed 121 turbines on a possible 126 sites. The proposed turbines would be a maximum of 125m tall. The wind farm site is 10km southeast of Palmerston North’s CBD with the turbines located along a 14km ridge in the northern Tararua Ranges. Almost half the turbines would be in the Turitea water reserve with the remainder on private land.

A matter of national interest?

On 17 December 2008 the new Minister for the Environment, the Hon Dr Nick Smith, decided to exercise his powers of intervention in relation to Mighty River Power’s proposed Turitea wind farm. He deemed that the matters in the proposal were of national significance and the resource consent should be called-in under section 141B of the RMA rather than heard by commissioners appointed by Palmerston North City Council (PNCC). Reasons for the call-in are set out in the Board of Inquiry’s Terms of reference. The reasons (to which the Board must have regard) are:

- The proposal affects who is likely to affect or is relevant to New Zealand’s international obligations to the global environment.
- The proposal affects or is likely to affect more than one region or district.
- The proposal will contribute to the achievement of the national target of 90% of electricity generation from renewable energy sources by 2025.
- The proposal will have national benefits deriving from the use and development of renewable energy in accordance with section 7(j) of the RMA.

In fact, the proposed wind farm met only two of the eight national significance criteria: that it is in more than one district, and it is likely to affect or is relevant to New Zealand’s international obligations to the global environment. At the time of the decision to call-in the Turitea wind farm application, the Minister said that projects such as the Turitea wind farm were needed to meet New
Zealand Kyoto Protocol commitment of 90 per cent renewable energy by 2025 and indicated that large renewable energy projects would be called-in by the government. By ‘large’ he means project over 100 megawatts. The proposed Turitea wind farm is expected to produce nearly 340 MW. The Project Central Wind farm has an estimated generating capacity of 120-130 MW.

The minister also indicated that perceived bias on the part of Palmerston North City Council was a reason for calling in the proposal. In response, PNCC called for national guidelines and gathered support from nine other local authorities (Rangitikei District Council, Franklin District Council, Whakatane District Council, Central Hawkes Bay District Council, Grey District Council, Kaipara District Council, Gore District Council, Chatham Island Council and Porirua City Council) for a national policy statement on wind farms.

Cumulative wind farm developments: reaching a tipping point?

Just over seven hundred submissions were received by the Ministry for the Environment, of which two-thirds were opposed and one-fifth in support. Submitters’ concerns related to noise, landscape effects, impact on water catchment, and biodiversity. It is interesting to note the growing volume of submissions opposed to wind farm development. When the first Te Rere Hau wind farm resource consent was sought in 2004 71 submissions were made. Consent was given in February 2005 at the time when an application had been submitted for an extension to Trustpower’s existing 40 turbine Tararua wind farm. The T3 extension was for another 40 turbines and divided the community. Two hundred and thirty submissions opposed to the extension, all coming from the PN side. (Just over one hundred submissions were in favour, from both sides of the ranges.) Most of the opposition centred on the visual effect of the extra turbines. The Tararua-Aokautere Guardians (set up by residents wanting to protect the area from wind farm development) has more than 180 members. Its president has asked “at what point we might be making a conscious decision to give up on this landscape”. Noise is also a concern with over 250 noise complaints having been made to Palmerston North City Council about the existing Te Here Rau wind farm.

While the cumulative effects of successive wind farm developments and extensions have clearly had an impact (actual and perceived) on residents that is reflected in growing numbers of submissions from those uneasy about the expansion of number and size of wind turbines, the cumulative effects are only weakly considered, if at all, in resource consent processes to date. There was some acknowledgement of cumulative effects in the Motorimu decision (with consent given for fewer turbines than initially proposed). However, the timing of hearings meant that neither the Turitea wind farm’s effects nor Te Rere Hau’s effects are considered in the decision-making about the other.¹

Hearings by the Turitea wind farm Board of Inquiry commenced in July 2009. On 4 September 2009 MRP advised that it was reconsidering the layout of the turbines to see how the layout could be better redesigned to fit with the landscape and reducing the number of turbines from 121 to 104 (60 of which will be in the Turitea water reserve). On 12 October 2009, Judge Shonagh Kenderdine signalled the board would probably have not supported the original application without significant changes. The hearing was subsequently adjourned on 14 October 2009 for Mighty River Power to reconsider the turbine layout. On 1 February 2010 MRP circulated the details of the redesign to those submitters who had indicated they wished to be heard. The parties had to 22 February 2010 to respond to the redesign. The hearing was scheduled to resume on 15 March.

¹ The proposed extension of Te Rere Hau wind farm was going through resource consent hearing in second week of November 2009.
During the adjournment of the Turitea wind farm Board of Inquiry hearings, in November 2009 the Environment Court declined consent for Meridian Energy’s Project Hayes wind farm) on the Lammermoor Range in Central Otago which would have been New Zealand’s biggest wind farm with 176 turbines 160m tall producing more than 630 megawatts of power. Opposition to the development from submitters, and the Environment Court’s decision (which has been appealed) focused mainly on visual effects. The Project Hayes proposal is however just one of many large wind farm developments proposed. The scale and pace of wind farm development in the Manawatu is not confined to that area of the country. Yet the cumulative effect is scarcely glimpsed, if at all, as a result of the fragmented state of energy planning and absence of national guidelines. The proposed national policy statement on renewable electricity generation has still not been adopted. As a result of the vacuum in central government policy leadership (a vacuum not filled by frequent ministerial call-ins of large projects) district councils and communities are pitted against energy companies who, probably rightly, question whether the Environment Court should be the power planner for New Zealand. Until the vacuum is replaced by strong policy, millions of dollars will be spent by councils and energy companies in statutory planning processes, including development of council policies on wind farm developments and council plan changes.

It may be claimed that a call-in process with a Board of Inquiry is not unlike a resource consent hearing. However, this understates the differences between the two democratic processes. With a call-in process central government is able to require, as it did, for example, with Meridian Energy’s Project Central Wind farm application, an all-of-government Crown submission.

New mechanisms and guidelines for energy planning

The government’s goal of 90 per cent renewable energy generation by 2025 has elevated the priority given to wind energy and hastened the pace of development noted above. The trend in New Zealand is similar to that internationally with economic fluctuations impacting on the exchange rate being one of few differences between New Zealand and other countries seeking to exploit their wind resource and promote renewable. Guidelines and new approaches to managing competing goals for managing development of this resource are required given that the winds of public support for wind farm developments may now be changing direction.

Numerous wind farm developments are being considered, and in some cases resource consent applications have been submitted, throughout New Zealand. In the lower half of the North Island, for example, wind farms have been proposed in Hawkes Bay, the central North Island, Taranaki, Manawatu, the Wairarapa and Wellington. In Wellington City although the controversial West Wind development, with 62 turbines, is now complete there are on-going noise complaints and engineering adjustments required. It is anticipated that resource consent will be sought for the Puketiro wind farm in Porirua City. With possible and actual wind farm developments widespread throughout New Zealand, national guidelines addressing the minimum distance turbines can be

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2 A conservative estimate is that PNCC has spent over $1 million on its submission and related involvement in the proposed Turitea wind farm development. In December 2009 Greater Wellington Regional Council embarked on a review of the region’s outstanding landscapes with a view to designating them in district plans to afford them new protection. Recently Porirua City Council notified Plan Change 7 – Wind Farms which is possibly the first such district plan provisions.

3 This wind farm sets a precedent for wind farms in the Central North Island volcanic plateau and was opposed by some submitters (including the Taranaki-Whanganui Conservation Board) on the grounds that it had adverse effects on visual amenity of the iconic landscape. A sponsorship deal was negotiated between Meridian and the Department of Conservation that will provide for enhanced protection of the Hihitahi Forest Sanctuary adjacent to the wind farm which is located between Taihape and Waiouru. Agreed works include fencing, pest control and public awareness though signage and interpretation.
placed from homes, the allowable maximum saturation of an area’s skyline, and iconic areas on which turbines cannot be built, could reasonably be expected to assist councils and developers.\textsuperscript{4}

Having an overview of the pattern of development nationally and regionally is vital to understanding public acceptance or opposition to wind farm developments. A cross-department central agency – possibly led by EECA\textsuperscript{5} – should be given responsibility for monitoring the ‘big picture’ and collating information on proposed wind farm developments (through returns submitted by territorial authorities and energy companies).

Guidelines for community engagement in energy developments should be part of the forthcoming national policy statement. New Zealand studies (see, for example, Graham et al., 2009; Pearce, 2008; Berg, 2003) reinforce overseas research (see, for example, Ivner et al., 2010; Aitken et al., 2008; Haggen & Toke, 2006; Burningham et al., 2006; Bell et al. 2005; Devine-Wright, 2005b; Devlin, 2002, van der Horst, 2007; Wolskink, 2007 & 2000) that highlights the need for a more nuanced understanding of opposition to wind farm developments than the conventional understanding which rely on NIMBY explanations and hence treat opposition as ‘wrong’ and something that must be overcome. As Ellis et al. (2007: 521) note, it is important to address the competing values related to “inter alia governance, technology, landscape aesthetics, issues of participation and power inequalities”. A number of studies (see for example, Devine-Wright, 2005a; Ellis et al, 2007 & 2010; Loring, 2007; Toke, 2005 & 2002) highlight the importance of local involvement in planning – something that remains significantly underdeveloped in New Zealand wind farm proposals with community engagement being primarily for providing information rather than harnessing community input.

Finally, greater clarity about the criteria that apply to use of call-in processes (and the governance arrangements in such situations is needed. Conservation and tourism goals must be considered (with proper weighting of the long-term economic benefits of conservation of indigenous biodiversity, ecosystem services, and protection of unmodified landscapes) and the as well as energy/climate change goals.

**Conclusion: Encouraging sustainable infrastructure**

The Turitea wind farm resource consent application highlights considerable tensions between national and local interests and also between different national goals in particular protection of natural heritage (including both biodiversity and landscape values) on the one hand, and, on the other renewable electricity generation. There is little scope for contestable advice to be provided from within government with call-in processes that result in whole-of-government submissions in which the Department of Conservation’s voice is one of many government agency inputs and often submerged to a majority viewpoint.

An improved balance between different national goals is required in contrast with the current dominance of one goal, a target of renewable energy. More rigorous assessment of the environmental effects of the pursuit of this goal is also warranted. Priority should be given to the publication of a National Policy Statement on Renewable Electricity Generation that gives adequate weighting to conservation and biodiversity values recognising the ecosystem services and long-term

\textsuperscript{4} In a number of overseas jurisdictions, for example, there is a mandated set-back distance of 2kms from residential dwellings. The proposed Turitea wind farm will result in turbines being constructed less than 2kms from several dozen actual or consented homes.

\textsuperscript{5} While EECA has an energy focus and may lack expertise in other important policy areas such as biodiversity it may be able to ensure energy investments are oriented towards energy conservation as opposed to simply building new capacity.
economic, social and environmental benefits of protected, enhanced and restored indigenous biodiversity.

A burgeoning number of proposals for large-scale wind farms is the result of the relative ease, low cost and speed with which this form of energy infrastructure can be built. It is also a result of New Zealand short-term or non-existent energy planning and reactive development, rather long-term and planned approaches. The latter will be ultimately more sustainable and have less deleterious consequences for landscapes of regional and national importance. A planned approach with a long-term perspective would place emphasis on energy conservation and efficiency, give preference to small-scale wind farms and/or alternative renewable sources such as solar power, recognise the wider impacts on the economy such as the effects on New Zealand’s tourism industry from further loss of wilderness values and unmodified landscapes, and provide incentives for households to incorporate technologies that allow buildings to generate their own energy and possibly contribute surplus energy to the grid.

References


