Wind farms, the RMA and climate change

Paul Majurey *examines the recent Awhitu wind-farm decision and the role of the RMA in reducing GHG emissions*

The Genesis Energy Awhitu wind farm was the first to secure resource consent from the Environment Court (*Genesis Power Limited v Franklin District Council* [2005] NZRMA 541 (*Awhitu*)).

This case:

- Represents the first substantive implementation of Parliament's 2004 (RMA) climate change measures (*Resource Management (Energy and Climate Change) Amendment Act* 2004).
- Establishes several 'precedents' for an impending series of wind-farm projects.
- Is the Environment Court's latest word on the relationship between infrastructure projects having national benefits and their local effects.

Awhitu wind farm

In April 2004, Genesis Energy lodged its resource consent application with the Franklin District Council for its (then) 19 (subsequently changed to 18) wind turbine project on the Awhitu Peninsula, south west of the Auckland Isthmus.

At the Council level, there were 262 submissions made in respect of the project. Following a nine-day hearing, Council-appointed Commissioners refused consent in September 2004 as they considered there would be unacceptable effects on:

- Landscape and natural character values.
- Equestrian activities.
- Tangata whenua.

Genesis Energy and the Energy Efficiency & Conservation Authority appealed the Council decision to the Environment Court.

An important feature of the case was the positive effects of the wind farm as a source of non-fossil fuel renewable energy and its compatibility with New Zealand's climate change policies.

Climate change

Kyoto Protocol

Before the Environment Court hearing, the parties to the appeal prepared an Agreed Statement of Facts which addressed, among other things, the positive effects of wind generation, especially in the context of climate change.

Climate change is one of the potential effects of increased greenhouse emissions, and is defined in the *Resource Management Act* 1991 (RMA) as "… a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods".

New Zealand is an Annex 1 party to the United Nations Framework Convention on Climate Change (Framework Convention). The Framework Convention established a series of voluntary measures to promote the adoption of policies and initiatives to limit greenhouse gas (GHG) emissions, and to protect and enhance carbon sinks, with the aim of reducing emissions to 1990 levels by 2012.

In the mid-1990s, it became clear the voluntary emissions targets agreed under the Framework Convention were not going to be met. The Conference of the parties to the Framework Convention agreed, via the Berlin Mandate, to advance the commitment of Annex 1 parties. This was achieved through the adoption of the Kyoto Protocol.

The Kyoto Protocol is an international treaty requiring industrialised countries to reduce human-induced GHG emissions. New Zealand has ratified the Kyoto Protocol, which entered into force on 16 February 2005. Under the Protocol, New Zealand is required to reduce GHG emissions to 1990 levels, over the period 2008 - 2012.

New Zealand's 'Kyoto policies'

In 2002, the New Zealand Government adopted a series of policies to reduce GHGs. The 'new' policies designed to reduce CO_2 included:

- Projects – specific activities aimed at delivering defined emission reductions in return for an allocation of emissions units. The projects that have been awarded emission units (or 'carbon credits') have tended to be renewable energy projects which lower CO_2 emissions by reducing reliance on fossil fuels which cause CO_2 emissions. Wind farms have, unsurprisingly, been successful in the tender rounds.
- Negotiated Greenhouse Agreements – agreements which shelter competitiveness-at-risk companies from the carbon tax in return for meeting world's best practice in emissions management. These agreements are designed to lower CO_2 emissions by providing binding energy-efficiency targets limiting the use of fossil fuels.
- Carbon tax – the imposition of tax on carbon emissions from fossil fuels capped at $25 per tonne of CO_2 equivalent.

The institutional structures required to implement these policies, and to enable compliance with reporting requirements/trading mechanisms under the Kyoto Protocol, were provided for in the *Climate Change Response Act* 2002.

The detailed Projects policy was confirmed by Cabinet on 27 August 2003 (POL Min (03) 21/7). The first Project tender round was held in November 2003, with the first Projects being awarded early in 2004. This was the platform from which the Awhitu wind farm was successful in receiving carbon credits.

Under the Government review of New Zealand's climate change objectives and policy, the 3 March 2006 Ministry for the Environment report will include advice on how to achieve greater assurance that the emissions reduction resulting from projects will be greater than the emission units given to project owners under the programme.

The RMA approach
Aspects of New Zealand's obligations under the Kyoto Protocol were also reflected in the *Resource Management (Energy and Climate Change) Amendment Act* 2004.

This Act amended s 7 of the RMA to require decision makers to have particular regard to the efficient use of energy, the effects of climate change, and the benefits associated with the use and development of renewable sources of energy (such as wind energy).

All these various climate-change policies and legislative initiatives converged to underpin the judicial approval of the Awhitu wind farm. As the Court observed:

> "[65] … climate change and renewable electricity generation are key issues for New Zealand. This project, if approved, would provide clean and renewable energy to provide essential electricity and to prevent CO^2 emissions that would have been created by generating electricity through the burning of coal or gas."
> "[222] …
> Paragraph (i and j) - *the effects of climate change and the benefits to be derived from the use and development of renewable energy*
> The Resource Management Act was amended as from 2 March 2004 to explicitly include these matters. This is a clear recognition by Parliament of both the importance of the use and development of renewable energy and the need to address climate change, both of which are key elements in the proposed wind farm."

Wind farm road maps
Positive Effects
The Statement of Agreed Facts identified the positive effects of the Awhitu wind farm, including:

(a) The proposed Awhitu wind farm (18 turbines) with a capacity of 18 MW, will generate 63 gigawatt hours annually, which is enough electricity to supply approximately 7,500 households per annum. That is equivalent to approximately 37 per cent of the homes in the Franklin district. It will also contribute up to 0.16 per cent towards New Zealand's annual electricity consumption.

(b) The Awhitu wind farm will avoid approximately 38,000 tonnes of CO_2 per annum that would have otherwise been produced by a coal-fire power plant. To put this into context, approximately 56,000 trees would need to be planted to displace 38,000 tonnes of CO_2 or approximately 8,700 petrol cars would have to be taken off the road for one year.

(c) A significant benefit of wind-energy farms is that they may be installed relatively close to the source of electricity demand, thereby minimising

load on the national grid and delaying the need for transmission upgrades. The location of the Awhitu wind farm makes this benefit particularly relevant, being located close to New Zealand's major load centre, Auckland.

(d) The proposed Awhitu wind farm will reduce supply requirements from more distant resources, thereby materially reducing transmission losses which are effectively wasted supply.

(e) It is estimated the Awhitu wind farm will contribute about 0.23 PJ per year or about 0.8 per cent of the New Zealand Renewable Energy Target.

(The figures mentioned here have been updated to provide for the reduction in wind turbines from 19 to 18.)

The Court effectively endorsed the Statement of Agreed Facts in its decision (*Awhitu*, paragraph [64]). While Environment Court cases are not strict legal precedents, the above findings should provide a firm basis for establishing the positive benefits of wind farms in applications.

Noise

Noise effects are a common issue in wind-farm cases. For example, in *Awhitu*, local opponents called evidence from an Ashurst resident living in the area of the Te Apiti wind farm in relation to his adverse noise experiences.

In order to address the specific noise characteristics of wind farms, a bespoke noise standard was created to provide a specific assessment methodology and an appropriate noise level.

In expressly endorsing the wind-farm noise standard, the Court noted:

> "[127] We agree … that NZS6808:
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> - is a New Zealand Standard.
> - was prepared by committees of people well qualified on noise and with consultation with interested sections of the community.
> - the "plus 5dBA" component is a scientific and careful formula that recognises that an essential ingredient of wind turbine operation is wind. Given wind's inherent noise, a specific practical noise methodology is required."

This finding should avoid future debate over the appropriate noise regime applying to wind farms.

Landscape-related matters

Given the dimensions of modern wind turbines (often over 90 - 100 metres in height), there is often concern with potential effects on landscape and natural character values.

Genesis Energy acknowledged that the Awhitu wind farm would cause adverse effects to aspects of natural character and landscape. However, it emphasised that the RMA is

concerned with protecting the environment from 'inappropriate' development, and that the Awhitu wind farm is appropriate.

Moreover, Genesis Energy said that declining consent on grounds of natural character/outstanding landscape at Awhitu would have a negative effect on subsequent wind-farm projects, bearing in mind that 'high wind areas' are mostly located in the coastal environment or areas with moderate to high natural character.

The Court determined the wind farm would have a significant adverse effect on the natural character and landscape of the coastal environment.

However, in balancing the adverse natural character/landscape effects with the national benefits, the Court noted with approval the expert evidence given on behalf of Genesis Energy, which stated:

> "A decision to decline this wind farm on the grounds of adverse effects on natural character would have very serious implications for the wind farm industry as the majority of wind resource sites have similar or greater character issues to address." (*Awhitu*, paragraph [219]).

The Court also noted, with approval, the evidence that more modified areas with lesser natural character usually occur where there are concentrations of people, which raises other landscape and amenity issues. 'Better' places for the location of wind farms were likely to be extremely limited (*Awhitu*, paragraph [220]).

National vs local

A common feature of large or strategically important projects is the balancing of interests as between the nation and a local community.

In *Awhitu*, the national interest weighed heavy with the Court in the outcome:

> "[212] … We find that granting the proposal will have numerous positive effects which are underlain by the national interest. It will also reflect the recent legislative changes encouraging renewable energy and the benefits which would accrue from what was described by one witness as a benign source of energy."

In granting consent to Genesis Energy, the Court concluded:

> "[230] …We find that the proposal meets the sustainable management purpose of the Resource Management Act. Notwithstanding the effects on the coastal environment we consider the proposal to be appropriate in the circumstances of this case. We find that the benefits of the wind farm proposal, when seen in a national context, outweigh the site-specific effects, and the effects on the local surrounding area. To grant consent would reflect the purpose of the Act as set out in Section 5."

The RMA often takes centre stage when large scale/strategically important cases encounter local opposition. *Awhitu* is a recent example of how the Environment Court approached its challenging task in striking the appropriate balance under the RMA.

While *Awhitu* will not be the last word on this issue, it should clarify some of the parameters in the increasing number of wind-farm cases due to proceed to the Environment Court.

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