



Report 05.128
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Committee Policy, Finance and Strategy Committee
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Wind Energy Feasibility Study

1. Purpose

For the Committee:

- (1) to review the wind energy feasibility studies for two areas of Council land, and
- (2) if appropriate, to seek approval to proceed with public consultation on the desirability of a wind farm at the Puketiro site.

2. Significance of the decision

The matters in this report do not trigger the significance policy of the Council or otherwise trigger section 76 (3)(b) of the Local Government Act 2002.

However, the Parliamentary Select Committee when considering the Local Bill related to Wellington Regional Council water collection land was given an assurance that the Council would consult with the community about any development.

3. Background

Over the last two years, investigation work into the feasibility of establishing a wind energy generation on three areas of Council land has been carried out. Studies for two of these sites, (Puketiro and Mt Climie ridge) have now been completed. Work on the Belmont site is continuing. The sites are shown on Attachment 1.

4. Feasibility studies

Attachment 2 is the feasibility studies for the Puketiro and Mt Climie ridge sites, with brief comments on the Belmont site and additional background material.

5. Discussion

Of the other two sites where the feasibility studies are complete, the Mt Climie ridge is able to offer the opportunity to generate a lot more renewable energy than the Puketiro site. This is because of the higher average wind speed and the size of any development. The wind resource at Puketiro is adequate but not outstanding.

While the quality of the wind resource is a key issue in determining the feasibility of a wind generation facility, it is not the only factor. Matters such as the potential effects of the development on the landscape, ecology and local citizens (e.g. through noise) also need to be considered. Although Mt Climie ridge has an outstanding wind resource, when adverse effects are considered the site becomes less attractive for a wind farm. In comparison, Puketiro has adequate wind and the potential adverse effects of a wind farm are considerably less.

A brief summary of the two sites is set out below:

Puketiro

Landforms at Puketiro have already been modified. The original vegetation was cleared for farming before the site was bought for water supply purposes. Subsequently, the land was planted in *Pinus radiata* and there has been one crop rotation on part of the site since then. Other parts of the site are ready or nearly ready for harvesting. Three of Transpower's high voltage transmission lines cross the site and forestry roads have been built for tree harvesting purposes.

No native vegetation would need to be cleared to create a wind farm. From a noise perspective, the nearest residential areas are many kilometres away and on the adjacent properties houses would be some distance from the turbines.

As with any wind farm, there would be some effects during construction, mainly from roading and preparing the sites for wind turbines.

For the Puketiro site, the balance is in favour of proceeding to the next step in the process of determining whether the land should be made available for a wind farm. The wind resource is adequate and the adverse effects seem to be able to be addressed. Hence, we have recommended that the process of developing the site should continue.

Mt Climie

Mt Climie is a different site from Puketiro. It is much higher and the turbines would be visible over a wider area. The height (approximately 800m above sea level on the ridge line) creates a relatively unique set of ecological values. Parts of the sites have not been modified and remain in their original pre-European state. Modified areas are largely in the vicinity of the communication towers over a distance of about 1.5 kilometres. Placing wind

turbines close to the communications towers leads to some conflict so there would only be room for one or possibly two turbines in that part of the site.

As the area is in large part native vegetation, it has been judged that the effect on the ecology from a wind farm development will be significant. While the Resource Management Act 1991 makes provision for mitigating any adverse effects on the native vegetation, the harsh climate would result in slow and very difficult mitigation.

Distances between turbines and the site boundaries means that turbine noise is most unlikely to be an issue. Construction effects, while significant, could be minimised by accessing the site from State Highway 2.

As noted above, the wind resource at the Mt Climie ridge is outstanding and the site is potentially one of the world's most productive sites for wind turbines that is relatively close to a population centre.

In comparison to Puketiro, the decision on whether to proceed to the next stage of a possible wind farm development is much harder. Development of a considerable wind energy resource is possible but only with significant effects on the important ecology of the site. Consequently, we consider that the balance here favours not proceeding further with the Mt Climie ridge site.

6. Wellington Regional Council (Water Board Functions) Act 2005

Both sites are on land held under the Wellington Regional Water Board Act 1972 and the Wellington Regional Council (Water Board Functions) Act 2005. The 2005 Act is very clear that before any energy development is undertaken at any site, the Council has to satisfy itself that the work will not impede the prime purpose of holding the land. For these sites, the purposes are public water supply and/or plantation forestry purposes.

Nothing in the studies to date has indicated that the above condition would be compromised.

If development proceeds at the Puketiro site, then the Council will need to consider the matter further in order to be fully satisfied that the development will be in full compliance with the Act (as well as other legislation such as the Resource Management Act 1991). In order to provide that assurance, any developer will have to comply with a number of conditions prior to obtaining approval from the Council to develop the land as a wind farm.

This issue will be considered further at a later date.

7. Financial

One of the issues for the Council to decide is whether or not it wishes to take only landowner interests from a project or invest equity into a development if it proceeds. The form any Council investment may take in a wind farm was canvassed in the March 2003 report to the Council but no decisions were made. At that stage, the balance appeared to be in favour of the Council taking a role as a “passive investor”. That is, provided a wind farm was feasible from a financial and environmental perspective, Council would make land available to a developer and collect a ground rental in order to at least recover the costs of the feasibility study.

As noted in Attachment 2, the development cost of Puketiro is substantial. Fortunately, there is no shortage of well resourced energy companies that have expressed an interest in being the developer.

Given the requirements on Council’s core expenditure, for example transport, over the next few years, it would seem that the most appropriate role for the Council is to act as landowner and receive royalties from a development. This enables the Council’s objective of fostering sustainable energy development to be achieved at minimal risk to the Council.

8. Community consultation

Given the controversy surrounding many wind farms, it would be prudent to proceed to public consultation prior to any further work proceeding in relation to the Puketiro site. Although just over half the turbines would be within Upper Hutt City’s boundary, they will hardly be visible to Upper Hutt City residents because of the landforms.

With Porirua City the situation is different. Turbines will be visible from parts of Whitby, Paremata and some other suburbs. Access to the site is likely to be through Porirua City.

For these reasons, the consultation emphasis, with regard to local effects, should be more on Porirua City than Upper Hutt City.

If the Committee wishes to proceed to consultation over the Puketiro site, then a proposed consultation programme is:

- A public notice calling for submissions
- Consult with various stakeholders
- Two pages in the June edition of *Elements*, including a post back form
- A similar production in the *Kapi Mana News* to the *Elements* production
- A telephone survey of Porirua residents
- An offer to Porirua and Upper Hutt City Councils to make a presentation about the proposals
- An information page set up on the Council’s website.

The costs for this have been allowed for in the renewable energy budget.

This process is closely aligned to the special consultative procedure set on in the Local Government Act 2002 even though there is no requirement in this case to adopt that procedure.

9. Next steps

Assuming approval is obtained for each step of the process, then the sequence of events could be:

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| (1) | Public consultation | June 2005 |
| (2) | Public submissions close
(at least one month after the public notice) | July |
| (3) | Hearings on submissions | July/August |
| (4) | Recommendations to Council | August |
| (5) | Development proposals sought | September |
| (6) | Developer selected | December |

Steps 5 and 6 would not occur if the Council determined not to proceed with the project following public consultation.

This project is unusual from a Regional Council regulatory perspective in that the Council would be a beneficiary of any development. Therefore, having selected a developer it would not be appropriate for the Council to object to the proposal at the consenting stage. The Council needs to maintain a balance between various factors and these can be expressed in the request for proposal document and ultimately the contract signed with a developer.

10. Recommendations

It is recommended that the Committee:

1. *receives the report and notes its contents.*

Recommends to Council that:

2. *it consults with the public on the desirability of making land available at Puketiro for a wind energy development.*
3. *should the Council ultimately choose to proceed with a wind energy development at the Puketiro site, not invest in any wind energy development but restricts its role to making land available to an appropriate wind energy developer.*
4. *the development of wind energy generation at the Mt Climie ridgeline site not proceed.*
5. *it notes that before Council approves any development, it will need to satisfy itself that the development does not contravene legislation such as the Wellington Regional Council (Water Board Functions) Act 2005 and the Resource Management Act 1991.*

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