



# Titiokura/Te Waka Wind Farm

Overview - August 2008

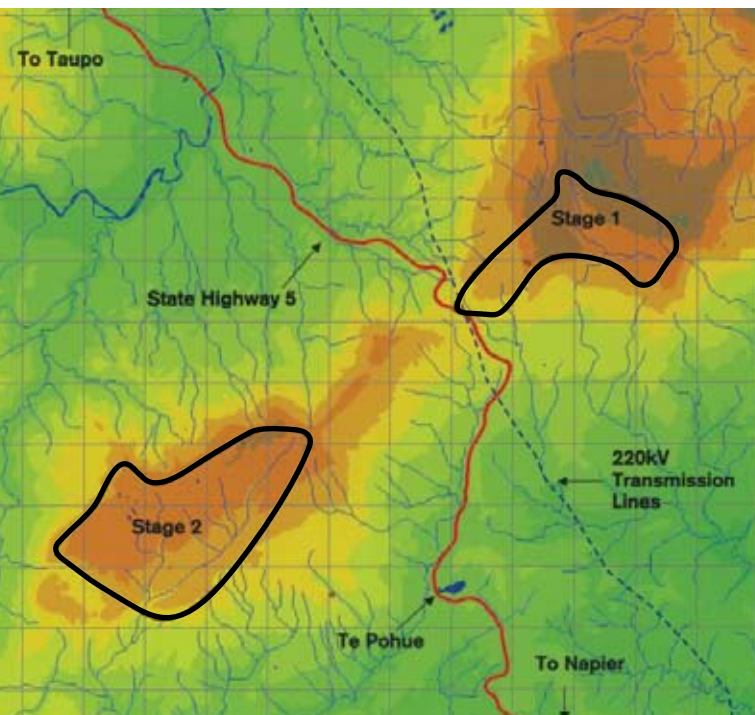


**The Titiokura/Te Waka wind farm is a 50:50 joint venture project between Unison Networks Limited and Roaring 40s Renewable Energy Pty Ltd.**

**Unison Networks is the fourth largest electricity lines company in New Zealand. Its core business is the design, development, operation and maintenance of the electricity network in Hawke's Bay, Taupo and Rotorua.**

**Roaring 40s is a Tasmanian based renewable energy developer with a large portfolio of wind farm developments and operations in Australia, New Zealand, China and India. Roaring 40s' vision is to install 1000 megawatts (MW) of new renewable energy by 2010.**





## LOCATION

The Titiokura/Te Waka wind farm is located on the saddle of the Maungaharuru Range near Te Pohue, approximately 35km north-west of Napier.

The geographical location of the site and the proximity to Napier provides several key advantages making the area ideally suited for wind farm development.

Attributes which make the locale favourable include:

- Close proximity to transmission lines
- Conveniently located to the local seaport and arterial roading providing good site access
- Good wind resource (high and consistent wind speeds with limited turbulence)
- Open and sparsely populated land with an existing use that is compatible with wind farming
- Relatively limited ecological impact (with the opportunity for enhancement through protection mechanisms)

## PROJECT APPROVALS AND SCOPE

Unison Networks commenced preliminary wind readings in 1995 and in 2001 purchased land at Titiokura Saddle on the Maungaharuru Range, on the eastern side of State Highway 5 between Napier and Taupo with a view of possible future development.

The wind farm project has been broken into two stages for geographical, commercial and technical reasons.

Resource Consent for Stage One known as the Titiokura site was granted following an appeal to the Environment Court in July 2006. This site comprises of fifteen wind turbines with a generating capacity of 30-45 MW.

Consent for Stage Two known as the Te Waka site is currently progressing. Resource Consent for this stage of the development was initially granted by the Hastings District Council. However this was appealed to the Environment Court which in turn declined the decision in April 2007. A revised Resource Consent Application was lodged in June 2007 and the Minister for the Environment has granted ministerial call-in so a hearing to the Environment Court is pending.

This site is located at the Southern end of the Te Waka ranges on the western side of State Highway 5 and it is envisaged to comprise of up to thirty-four wind turbines with a total generating capacity of approximately 102 MW.

## PROPOSED CONSTRUCTION

Constructing the large wind turbines and associated infrastructure is a major undertaking and involves significant civil and electrical works. The first stage is that the access roads to the site and the planned turbine locations are constructed. These roads need to be designed to allow a very large crane to travel on them and can be up to 10 metres wide.

The next stage is the construction of the wind turbine concrete foundations and the underground electrical network. The wind turbines are then freighted to the site, usually in 5 or 6 major components (tower sections, blades, and nacelle) before being erected on top of the turbine foundation.

Construction of the wind farm will probably take about 9 to 12 months, depending on the weather.

## ENVIRONMENTAL CONSIDERATIONS

During the preliminary stages of evaluating the suitability of the site for wind farm development, various studies were conducted to assess the potential impacts on flora, fauna, visual amenity, noise levels, and both Maori and European cultural heritage. Subsequently an Environmental Management plan was formulated specifically for the site.

Construction activities will be designed to minimise impacts on remnant vegetation and areas of potential fauna habitat.

## VISUAL IMPACT

The visual appeal of a wind farm is a subjective judgement. Some people find a wind farm to be aesthetically pleasing; others see such a development having a negative impact on the landscape.

An independent consultant was engaged to study and report on the potential visual impact of the wind farm. Unison Networks Limited accepts that the wind farm will have an impact on the visual amenity of the area. However, studies

have indicated that community concerns about the visual encroachment of wind farm developments decrease soon after they become operational.

Computer generated photographic representations show the possible appearance of the wind farm from selected viewing points. These photomontages have been displayed at numerous public information sessions.

## COMMUNITY BENEFITS

The development of the wind farm will create short to medium term jobs during the construction phase, with positive economic flow-on benefits within the local Te Pohue and Hawke's Bay communities. Once operational, a locally based maintenance crew will also be required.

As wind is a renewable and clean energy source, it has the potential to reduce New Zealand's greenhouse gas emissions and thereby slow global warming and reduce pollution.

The Titiokura/Te Waka wind farm will provide a sustainable electricity generation resource within Hawke's Bay, assisting both local security of supply and the wider energy needs of New Zealand.

Stage One has the potential to generate enough electricity to supply 15,300 homes and to mitigate approximately 76,500 tonnes of greenhouse gas emissions each year by offsetting the need for fossil fuel generation.

Stage Two has the potential to provide enough electricity for approximately 35,000 homes and to reduce greenhouse gas emissions by 173,500 tonnes annually.

## YOUR INVOLVEMENT

Unison Networks Limited is committed to a comprehensive public consultation program, providing key stakeholders and interested groups with suitable information on the project and its effects and has sought the views and comments about the project from local residents and the wider community.

## STAKEHOLDERS

Stakeholders involved in the consultation process include:

- Local Iwi
- Local Communities
- Forest and Bird
- Hastings District Council
- Hawke's Bay Regional Council
- Napier City Council
- Civil Aviation Authority
- Hawke's Bay Airport Authority
- Transit New Zealand
- Telecom
- Immediate Neighbours
- Port of Napier
- Department of Conservation
- Chamber of Commerce
- Federated Farmers
- Local Farming Community
- Hawke's Bay Agriculturalists, Wineries and Horticulturalists

## MORE INFORMATION

Unison Networks Limited wind energy projects team is always available to answer any questions. If you want us to clarify any issues in relation to the wind farm development please give us a call.

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