TrustPower is investigating the possibility of developing the Palmer Wind Farm in the Mid Murray Council area located on the ranges between Palmer, Tungkillo and Sanderston.

In many parts of the world governments are introducing policies to address the potential effects of climate change. Currently wind energy is the cheapest form of renewable energy available on the market.

This project responds to the Federal Government’s Large Scale Renewable Energy Target introduced on January 1, 2011 which requires all electricity retailers to increase the amount of energy they purchase to 20% from large-scale renewable sources.

This booklet provides information on some of the most frequently asked questions regarding wind farms. More information can be found on the Palmer Wind Farm website: www.trustpower.co.nz/palmerwindfarm or by calling 1800 648 690 or email: palmerwindfarm@trustpower.com.au

Why was this location Chosen?

This site was chosen for three reasons:

- Its close proximity to the electrical grid and the ease of connection into this grid;
- The wind recourse; and
- Its proximity to the Adelaide demand centre.

Is it certain that the wind farm will go ahead?

Before the wind farm can be constructed, TrustPower requires planning consent from the Mid Murray Council. The planning consent process gives the public and any other stakeholders the opportunity to make submissions regarding the proposal. TrustPower is focused on gaining planning consents for development projects with a view to construct and operate these projects. The consent lapsing period requested will be 10 years, and TrustPower would look to build within this period.

What research and studies have been undertaken?

A number of different studies are currently being undertaken to determine the feasibility of the Palmer Wind Farm, and to assist in ensuring the construction and operation of the wind farm is undertaken with as little adverse impact on the environment possible. These studies consider effects relating to:

- Planning;
- Noise;
- Visual Assessment;

- Civil and Geotechnical;
- Aviation Assessment;
- EMI and Telecommunications Assessment;
- Ecology;
- Traffic and Transport;
- Archaeology (Indigenous culture); and
- Hydrology and Geology.

Maintaining Local Amenity

TrustPower are committed to minimising impact to the local amenity of the area surrounding the Palmer Wind Farm. Currently TrustPower are undertaking investigations on potential amenity impacts with regards to noise, visual and traffic impacts.

Noise

The 2009 South Australian EPA “Wind Farms: Environmental Noise Guidelines” are considered to be amongst the most contemporary and onerous of any jurisdiction in the world.

TrustPower are currently conducting extensive acoustic assessments to quantify any potential noise impacts, and ensure that the final turbine layout proposed for the Palmer Wind Farm will comply with the high regulatory standards, set out by the South Australian Environment Protection Authority (EPA).

Do the turbines create any noise?

Wind turbines do create sound across the range of the frequency spectrum, including infrasound. Infrasound represents the lowest frequencies of the sound spectrum. Infrasound, as with other sound, is all around us. It is generated by natural sources including wind, waves and thunder and engineered sources such as traffic, industry and aircraft.
Will people hear the turbines?
Most wind farm sites are located within or next to areas where low ambient noise levels are a significant component of that area’s amenity.

The criteria in the EPA guidelines have been established to address these scenarios and developed in accordance with the objectives of the Environment Protection Act’. However, the EPA Guidelines are not established to ensure inaudibility, so there will be times at which a wind farm will be audible. Depending on the proximity to the wind farm, wind direction and background sound levels, those living very close by may hear the turbines from time to time.

The EPA Guideline’s criteria are established to ensure any audible noise is low enough in level so that it does not adversely impact on health or amenity. Modern turbines have been subject to years of advancement in technology to enable them to operate within these guidelines.

The Palmer Wind Farm will be designed so that it meets these strict guidelines and be built using the best technology of the time.

Visual Impact
A landscape character and visual impact assessment is currently being undertaken to identify the potential impact of the Palmer Wind Farm. The assessment will aim to evaluate the existing landscape character and the degree of visual change that will be produced by the wind farm and associated infrastructure. The potential visual impact will be assessed through a detailed methodology which includes on-site assessments, consultation with the community regarding landscape values, and the preparation of photo montages anticipating the visual effect of the Palmer Wind Farm.

What will the wind farm look like and what will be the effect on landscape and the visual amenity of the area?
The nature and size of wind turbines mean that some visual impacts will be unavoidable. However every effort will be made through location and orientation of the turbines to minimise the adverse visual effect of them on major public vantage points. The typical off-white / grey turbine colours will assist in minimising visual impacts against the sky backdrop.

Will the turbines cause glare?
The sun’s rays reflecting off the turbine can result in glare. To mitigate this issue, the turbines will be painted in a specific non-reflective paint to prevent glare.

What is Shadow Flicker?
Shadow Flicker is a visual phenomenon that can be caused by wind turbines. However experience shows us this can easily be predicted and resolved. There are also strict standards protecting landowners near the proposed wind farm from experiencing shadow flicker as a result of the turbines. TrustPower will ensure the Palmer Wind Farm complies with these standards.

Traffic Impact
TrustPower are currently undertaking a Traffic and Transport Assessment to determine the exact impact on the road network from construction and operation traffic for the Palmer Wind Farm.

What impact will there be on the road network from construction traffic?
A large portion of construction traffic will include over sized vehicles. Depending on the recommendations of the study there may need to be some degree of local road upgrades and widening.

The condition of local roads used during and following construction will be at least as good as their current state, or potentially improved. After construction, there will be only smaller vehicles used by staff for maintenance. However heavy vehicles will be required at times for maintenance of the wind turbines.

A full Traffic Management Plan will be implemented during the construction phase of the project and will be developed in consultation with Council and the local community.

Protecting the Environment
When designing a wind farm TrustPower regards protecting the local environment critical to its decision making.

What effects will there be on the ecology of the area?
Preliminary assessments of the ecology have been undertaken and have indicated that the wind farm would not adversely affect the ecology of the area. However, further extensive terrestrial, aquatic and avifaunal investigations to determine potential effects of the wind farm on these areas are currently being undertaken as a component of the overall planning approval process. Appropriate buffers or mitigation measures for significant ecological areas will be put in place to minimise any impacts of the construction and operation of the wind farm on the local ecology.
Will there be any impact on Aboriginal archaeological sites of the area?

Preliminary assessments of aboriginal heritage / archaeology have indicated that the wind farm will not cause significant adverse impacts. Further detailed assessments are currently underway to identify any sites of significance.

Will livestock be affected by the wind farm?

Wind farms integrate very well into the rural landscape and farming activity. History has shown that wind farms and livestock co-exist effectively without any adverse impacts.

Do wind farms harm birds?

South Australian planning conditions require extensive research on local bird life before and after construction of the wind farm. Buffers for certain bird nests are provided to minimise the potential for birds to come into contact with turbines and also minimise any disturbance during breeding. Bird deaths as a result of wind farms do occasionally occur, however research demonstrates the effects are minor, especially when compared to bird deaths from collisions with buildings, cars, pesticides and communication towers.

A Safe Wind Farm

TrustPower views safety as the number one priority during the construction and operation of the Palmer Wind Farm. Wind energy has an excellent health track record.

Are there any health-related risks linked to wind farms?

Despite claims that wind turbines and in particular the non-audible perception of infrasound can make people sick, there is no peer-reviewed scientific evidence to substantiate these claims. A number of recent International and Australian scientific studies have concluded that there is no evidence linking risks to health as a result of a wind farm development. The studies show that it is not possible to physically experience infrasound below the established threshold of hearing.

Do wind turbines cause fires?

The risk of fire caused by wind farms is extremely low. Each turbine is fitted with a comprehensive lightning protection system that safely transfers any high voltages or currents directly to the earth without affecting turbine performance avoiding the risk of fire. Australia’s country fire authorities are consulted during the Development Application and construction and operational stage to ensure there is adequate access to the site via road in case of emergency.

In many instances wind farm access roads provide significant fire fighting benefits by allowing access to previously inaccessible areas and providing natural fire breaks for grass fires.

Who is TrustPower?

TrustPower Australia Holdings Pty Ltd. is a wholly owned subsidiary of TrustPower Limited a publicly owned company, operating in Australia and New Zealand. It is the fifth largest generator and retailer of electricity in New Zealand.

TrustPower’s head office is in Tauranga, with offices throughout New Zealand and Australia, including Adelaide. TrustPower has 200,000 New Zealand customers and owns and operates 36 small to medium hydro generation stations and four wind farms in New Zealand, with a further two wind farms in South Australia, including the Snowtown Wind Farm Stage 2 currently under construction. TrustPower’s culture is one of strong community focus. TrustPower holds a very active presence within the communities within which it operates through a number of community support programmes.

TrustPower in Australia

TrustPower began investigating wind farm sites in Australia in 2001. Initial efforts focused on the South Australia region, due to its strong wind resource and proximity to transmission and load centres. TrustPower owns and operates the Snowtown Wind Farm Stage 1 (98MW), and is currently constructing Stage 2 (270MW). TrustPower is also investigating wind generation opportunities in four other Australian states.

TrustPower’s generation assets are primarily from sustainable resources (wind and water), with minimal environmental impact and greenhouse gas emissions.

www.trustpower.co.nz/palmerwindfarm
Australia is entirely renewables. This is important as Australia moves towards meeting its international climate change obligations, and is in line with the Australian Government’s long-term Energy Strategy.

How can I buy wind energy for my home?

You can purchase green energy through GreenPower, a voluntary government accredited program that enables your energy provider to purchase renewable energy on your behalf. A joint initiative of the ACT, NSW, SA, QLD, and VIC governments, GreenPower guarantees that the renewable electricity you buy from energy suppliers meets stringent environmental standards. Green Power independently audits the renewable energy sector to ensure that when you buy GreenPower, the energy you are buying is helping to develop new infrastructure in the renewable energy sector.

For more information visit www.greenpower.gov.au

Other Information on the Palmer Wind Farm

Will my property de-value?

Research from the Clean Energy Council suggests that there is no evidence that wind turbines cause property values to drop. However for more information on this question please refer to the Clean Energy Council fact sheet “Wind Energy the Facts - Wind Farms and Property Prices”.

How long will it take to construct the wind farm?

If planning approval is received, it is expected to take 24 months to construct the wind farm following the final decision to go ahead with the project.

What happens next?

TrustPower is currently embarking on community engagement with key stakeholders, the local community and adjacent land owners to help shape the final design. A Development Application will be lodged for Development Approval with the Mid Murray Council for consideration.

TrustPower will be consulting directly with immediate neighbours and hosting public information sessions for the wider community. These sessions are proposed to occur in November and December.

However, should you wish to talk to someone about the proposal sooner, see the details below.

Who can I talk to about the wind farm?

TrustPower staff are happy to meet with you if you would like to discuss the Palmer Wind Farm in further detail. Alternatively you can put your queries in writing or talk to someone on the telephone.

Other Links

These websites also offer information about wind energy and wind farm development

Clean Energy Council of Australia
www.cleanenergycouncil.org.au

New Zealand Wind Energy Association
www.windenergy.org.nz

American Wind Energy Association
www.awea.org/learnabout

Danish Wind Power
windpower.org/en/knowledge/windpower_wiki.html

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www.trustpower.co.nz/palmerwindfarm

www.facebook.com/palmerwindfarm