

Strzelecki Sustainable Futures



DELBURN WIND FARM UPDATE

Renewable energy is a clean, healthy way to produce electricity that is popular around Australia, and a crucial solution to climate change. There are always a range of views about technology, and you might have heard some questionable claims about wind farms in the media, online or in the community. In the interest of community awareness, we have produced this document in response to some of these claims.

1 PROFITS

- a The neighbourhood benefits program will provide financial benefits to all landholders within 2 km of a turbine annually for the life of the project.
- b A community development fund is proposed that will share out \$150,000 annually to local community groups for the life of the project. The final structure of these funds and their management will be developed in consultation with the community.
- c The Community investment plan will allow local investors to buy a share in the project, thus keeping at least some of the profits from the project in the community.
- d The project will be paying Rates in Lieu to the neighbouring shires enhancing their capacity to provide services and programs to the community.
- e OSMI is a 100% Australian owned company.
- f Cubico Sustainable Investments (Cubico) has been announced as the principal project investor in the Delburn Wind Farm. Cubico is a leader and global investor in renewable energy with investments in 13 countries and an installed capacity of around 4 GW. Cubico has joined OSMI Australia as joint development partner in the Delburn Wind Farm and will purchase 100% of the project prior to the commencement of construction.
- g The business case for this project does not rely on any government subsidies.
- h Up to \$340 million is to be spent developing this project, bringing wealth and jobs to the local community. 150 construction jobs and 10-12 full-time operational jobs are expected.
- i It is important that OSMI receive feedback on proposals for local investment in the project. This process has begun with the Delburn Windfarm Consultative Committee.

2 PLANNING

- a The community engagement process started during the design of the project early in 2019 has been Industry best practice. OSMI Australia submitted its application for approval to the Planning Minister in December 2020. The Department of Environment Land Water and Planning (DELWP) is now accepting public submissions relating to the proposal. The closing date for submissions is 18th August 2021.
- b Information about different aspects of the project has been released on the project website as it became available from the technical investigations needed to develop the final proposal.

- c The Delburn Wind Farm will be compliant with all state and national standards, rules and regulations. No special deals have been done with local or state government.
- d The number of turbines has been reduced from 53 to 33 in response to technical issues and local concerns.
- e OSMI has worked hard to receive feedback from all stakeholders regarding any issues with the project so they can be considered and as far as possible resolved in the final development plan.

3 SIZE

- a The turbines that Delburn Wind Farm will use will be the most modern designs available with a maximum tip height of 250m and a blade length of around 90m. Bigger turbines turn more slowly so the blade passes the tower at a much lower frequency.
- b Larger turbines are more efficient at harvesting wind energy because they are in a more consistent wind stream that is not so affected by the surrounding landforms
- c The turbines will use a number of technologies to make them more efficient and quieter than older designs. These include trailing edges of the blades to mimic owl's wings to reduce wind noise, using modern blade profiles to improve efficiency and feathering of the blades as they pass the tower to reduce stress.
- d A wind turbine that is twice as tall does not have a tower and blades that are twice as wide. A turbine that is twice as tall but twice as far away looks the same height but is much slimmer so has less visual impact.
- e Bigger turbines are much further apart so the "forest of turbines" effect is much reduced. Even from a distance the turbines will appear spaced out.
- f Many German towns own their own power systems. Some towns have had wind farms for 20 years that are now approaching end of life and need replacing. They have almost unanimously chosen to have fewer, bigger turbines than replace like for like.
- g Turbines are or will be fully recyclable with companies already developing technologies to recycle existing blades and develop new blade designs and materials that are even more recyclable.

4 INFRASOUND

- a) The results of various studies suggests:-
 - i) That Infrasound from wind farms does not cause ill-health directly but that people who expect and fear ill effects may experience them regardless of the presence of infrasound. These are real symptoms but are not "caused" by infrasound as such.
 - ii) That the nocebo effect driven by a fear campaign and the confirmation bias can be a powerful factor in influencing people's experience of symptoms without any physical cause.
- b) References
 - i) <https://www.ncbi.nlm.nih.gov/pubmed/23477573> Summary findings of Nocebo Effect, Crichton et al, April 2014. Published in *Health Psychol.* 2014 Apr;33(4):360-4. doi: 10.1037/a0031760. Epub 2013 Mar11.
 - ii) <https://www.fmhs.auckland.ac.nz/assets/fmhs/som/psychmed/petrie/docs/2015%20Explain%20the%20nocebo%20response.pdf>
 - iii) <https://www.bing.com/search?q=Nocebo%20Effect&form=SWAUA2>
 - iv) <https://reneweconomy.com.au/the-nocebo-effect-and-why-its-much-more-dangerous-thanwind-turbines-80849/>
 - v) <https://reneweconomy.com.au/whats-next-a-senate-inquiry-into-infrasound-from-trees-waves-or-air-conditioners-14558/>
- c) Hepburn has two wind turbines that are owned by the community. There are 25 homes within 1 km of these turbines and 69 homes within 2 km. None of the people in these homes experiences any ill health related to the proximity of the turbines and all approve of the turbines.

5 PROPERTY VALUES

- a The largest study in Australia on wind farms and house prices found that wind farms had no impact on house prices. “The findings from our review of case studies in NSW and Victoria did not identify any conclusive trends that would indicate that wind farms have negatively impacted on property values”. Ref -
<https://www.environment.nsw.gov.au/resources/communities/windfarm-value-impacts-report.pdf>
- b In the construction phase where there are extra-large trucks and construction equipment, property values can dip by a very small amount until the work finishes.
- c The Delburn Wind Farm Project is one of the first to offer “Neighbourhood benefits” payments to nearby properties where residents may experience loss of amenity. This payment will be permanently attached to the property for the life of the wind farm and should make these properties more attractive to potential buyers as they are getting the country lifestyle with an annual income from the project. Ref - <https://www.ramblingsdc.net/WindValues.html>

6 FIRE

- a Wind farms do not increase bushfire frequency. Climate heating with increasing temperatures and reduced rainfall will increase bushfire frequency and severity.
- b The Delburn Wind farm will enable bush fires to be fought more effectively in the HPV Plantation land by:
 - Maintaining better access tracks, water supplies and fire breaks,
 - the clearing of pine plantation at the base of each tower,
 - introducing a trained fire fighters into the forest in the form of the wind farm workforce.
 - Stopping the rotors and turning them so that they are all lined up in the same direction in the event of fire.
- c The towers will be at least 1 km apart north-south and 600 metres east-west so there are wide flight lanes for fire-fighting aircraft and helicopters to use even in smoky conditions. Because the aircraft will have access to accurate GPS and precise sensing information fire-fighting pilots will know exactly where the towers are.
- d Lightning is one of the main causes of fire in plantations. Each tower has its own lightning rod and conductor to earth and being higher than the surrounding trees will attract lightning and deal with it safely reducing the likelihood of ignition.
- e Another cause of forest fires is arson. The presence of fire trained windfarm workers and HVP foresters in the district will both deter would be arsonists and provide early warning of any fires that do start.

7 VEGETATION

- a) 14 hectares of native vegetation will be cleared or impacted. This figures includes vegetation impacts within root zone or by aerial trimming which may have no permanent effects as distinct from clearing. Approximately 6 Ha and 20 large trees will be removed, the majority of of which is lineal, low significance road side vegetation along the plantation edge. Some native vegetation will need to be removed during construction, mainly along roads, to allow for the transport of large turbine components. The turbines themselves will all be located within plantation.
- b) A number of koala habitat trees will need to be removed to build the project. This loss will be offset by the protection of mature trees and other native vegetation that will enhance the wildlife corridor connections in the district.

8 CLIMATE CHANGE

- a Objectors to this wind farm say that they believe in fighting climate change, but that it should be left to someone else to do somewhere else. The 200 MW generating capacity will be a significant contributor of emissions-free energy into our National Grid replacing one of the generator units (1 chimney stack) of the now closed Hazelwood power station and this is a significant contribution to the fight against climate change.
- b The wind farm will save about 620,000 tonnes CO₂e per year being added to the atmosphere while powering about 125,000 average sized Victorian homes. About the size of Latrobe Valley. The CSIRO has found that solar and wind power will soon produce electricity more cheaply than existing coal fired power stations even with firming to cover gaps. The Free Market has dictated that wind and solar are now the accepted way forward.
- c This location provides direct access to the Victorian electricity grid as the transmission lines from the Latrobe Valley pass over the site. This avoids the problems experienced by other renewable power stations where distances or the capacity of existing transmission lines limit the amount of power that can be delivered to the grid.
- d This location has different wind patterns to the west of Victoria where most of the new wind farms are being developed. So, the output will complement much of the existing wind power and improve the stability and reliability of the grid
- e Total emissions throughout the manufacturing, transport, installation, maintenance, and end of life of a wind turbine have been studied and quantified. The studies show that the time it takes to recoup the emissions it took to make and construct a turbine is from a few months to less than a year. So wind power significantly reduces overall emissions of CO₂
Ref: <http://www.ourenergypolicy.org/wp-content/uploads/2014/06/turbines.pdf>
- f In the fight against climate change, we as a community need to do our bit and embrace positive local solutions to assist with the transition away from polluting greenhouse emissions that are driving the climate crisis.

9 WHATEVER AUSTRALIA DOES, IT WILL NOT AFFECT CLIMATE CHANGE

- a Australia is the 13th highest gross emitter of greenhouse gases in the world and has the HIGHEST per capita emissions of any developed country in the world. We can help reduce global warming by embracing renewable technologies that provide clean energy.
- b Australians make up only 0.34% of global population but produce 1.4% of global emissions. This is four times our fair share of the global emissions budget. We have a responsibility as a large contributor to global emissions, to make the shift to renewables and show leadership.

10 SHADOW FLICKER

- a There are maps showing the areas affected by flicker from the current tower locations on the OSMI website. All houses will be too far away to be affected by flicker shadows but there is one shed that will be affected for about 10 hours a year.
- b The surfaces of the turbine blades are coated in non-reflective material to minimise glare and reflection.

11 BIRDS

- a According to a study conducted in the USA just 3 % of eagle deaths were due to wind turbines. Other causes were road deaths, habitat loss, power line collisions, shooting and poisoning
<https://www.livescience.com/41644-wind-energy-threat-to-birds-overblown.html>

- b Comparing Australian bird mortality with the rest of the world also mentions historical political interference in planning processes around wind farms due to lobbying from fossil fuel interests <https://phys.org/news/2017-06-farms-bird-slayers-theyre-behere.html>
- c Some of the recorded bird fatalities associated with other windfarms are caused by power lines. All the internal cabling of Delburn will be underground so these deaths will not be a factor here.
- d Experience at Bald Hills indicates that local bird populations quickly adapted to the presence of wind turbines and adjusted their flight paths to suit – bird strikes are now rare and eagles breed in the area.
- e The turbine blades have a lower tip sweep of not less than 40m above foundation level and are above the flight paths of most local birds except the raptors.

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