

April 2019



Community Engagement Activity

Presented by



Response to CCC Meeting 8 - Action Items

Granite Hills Wind Farm Response to Fire/Aircraft

In late 2014 a paper from the Australasian Fire and Emergency Services Council (AFAC) noted the following: “Aerial fire fighting operations will treat the turbine towers similar to other tall obstacles. Pilots and Air Operations Managers will assess these risks as part of routine procedures. Risks due to wake turbulence and the moving blades should also be considered. Wind turbines are not expected to pose unacceptable risks. Wind farms are not expected to adversely affect fire behaviour in their vicinity. Local wind speeds and direction are already highly variable across landscapes affected by turbulence from ridge lines, tall trees and buildings.”

Granite Hills Wind Farm will provide adequate access to and within the site for the Rural Fire Service (RFS) should they ever need to respond to and manage a fire on the site. Granite Hills Wind Farm has and will continue to engage with the RFS, when designing, installing and operating to ensure their response processes and guidelines are not comprised.

Providing improved access to densely vegetated areas and creating natural firebreaks will be beneficial in fighting bush fires. It is also quite likely the frequency of bushfires will be reduced by the presence of wind turbines. Lightning strikes are a very common cause of bushfires in Australia.

The studies and management plans are not yet complete, but they will be discussed with the CCC as soon as they are ready and they will also be made available to the public.

Granite Hills Wind Farm Response to Carbon Offsets Energy Payback

Multiple studies have been undertaken, analysing the life-cycle of wind farms, including production of all the components, the transportation to site, construction and installation, and decommissioning. Studies indicate the time required to pay back the energy required for all of the items mentioned for a wind farm using three-megawatt (3MW) wind turbines is about five to eight months depending on project relevant assumptions. As turbine generators increase in size, which is the case for Granite Hills Wind Farm, this time is further reduced.

Carbon Emissions and Water Use

Operationally wind-farms produce negligible emissions and use next to no water, which is very beneficial in a water scarce country like Australia. While opponents point to the emissions and water used in the manufacture and construction stages, life cycle analyses show that even when these are factored into the calculations, wind still far out-performs current energy generation technologies like coal. With coal still providing 60% of Australia's energy, an increase in the wind energy mix will lead to significantly decreased water use and decreased emissions. The lifecycle of a wind farm produces in the order of 1% of the emissions of the equivalent coal power and consumes less than 0.1% of the water.

Measure	Units	Wind	Coal	Wind as % of coal
Lifecycle CO ₂ equivalent emissions	g CO ₂ /kWh	7.6	740-910	0.8 - 1.0%
Lifecycle water use	mL/kWh	62	83000 (surface mining)- 212000 (underground mining)	0.03 - 0.075%

Sources:

http://w-wind.com.au/wp-content/uploads/2016/11/AFAC_sub78a_TFS.pdf

<https://www.vestas.com/en/about/sustainability#!>

https://www.vestas.com/~media/vestas/about/sustainability/pdfs/v1123%2045mw_mk3a_iso_lca_final_31072017.pdf

https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_annex-iii.pdf

<https://www.landmanagement.nsw.gov.au/biodiversity-offsets-scheme/>

STAY IN TOUCH

If you have any questions or would like to know more about the project, please phone 1800 961 761 or send an email to granitehills@akuoenergy.com

Response to CCC Meeting 8 - Action Items

Vegetation Clearing

The construction of Granite Hills Wind Farm will require some land clearing, however, it is being reduced as far as possible through the use of existing roads and pre-cleared areas. The project is being developed according to Office of Environment and Heritage (OEH) Biodiversity Offset Scheme principles (see description below) which first avoid impacts, then mitigate impacts and finally offset any residual impacts. Additionally, a significant proportion of any land cleared for the construction phase will be revegetated and rehabilitated during the operational phase of the wind farm. Following decommissioning, the remainder of the site will be able to be returned to its natural state.

OEH Biodiversity Offset Scheme

The Biodiversity Offsets Scheme simplifies assessment and improves biodiversity outcomes. It creates consistent biodiversity assessment requirements for development and offset (stewardship) sites. The Scheme helps to compensate for potential impact on biodiversity from development.

Under the Biodiversity Offsets Scheme, applications for development or clearing approvals must set out how impacts on biodiversity will be avoided and minimised. For example, to avoid biodiversity impacts a proponent may change the layout of their proposed development so that less native vegetation needs to be cleared. To minimise biodiversity impacts a proponent may propose limiting certain operations during the breeding season of local threatened species or reducing use of lighting at night to minimise impacts on nocturnal threatened species. The Biodiversity Assessment Method will be used to calculate an offset obligation (in biodiversity credits) for the remaining residual impacts, which the approval authority will consider if they approve the development or clearing proposal.

Under the Biodiversity Offsets Scheme offset sites must be secured using Biodiversity Stewardship Agreements. These are voluntary in-perpetuity agreements between a willing landholder and the Minister for the Environment. The Biodiversity Conservation Trust takes on this role on the Minister's behalf. Stewardship agreements generate biodiversity credits, representing the gain in biodiversity achieved by protecting and managing the land. The landholder will need to engage an accredited assessor to assess the site using the Biodiversity Assessment Method and calculate the number of credits it will generate.

The Biodiversity Conservation Regulation 2017 sets out offset rules that govern the type of biodiversity credits that can be used for offsetting. The offset rules also govern how a biodiversity certification applicant or the Biodiversity Conservation Trust can meet an offset requirement.

Under the Biodiversity Offsets Scheme, developers have the option to buy credits directly from landholders or pay into the Biodiversity Conservation Fund to meet an offset obligation. The Biodiversity Conservation Trust is then responsible for securing the offset. The Offsets Payment Calculator determines how much a proponent must pay into the Biodiversity Conservation Fund to meet an offset obligation.

For more information visit <https://www.environment.nsw.gov.au/biodiversity/offsetsscheme.htm>

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Project Update

Information on Layout Update

Various questions have been asked about updates to turbine layouts, revision of turbine number, the expected amount of land clearing required etc. As communicated at an earlier CCC meeting, wind farm layout design is based on a collection of factors including:

- Site area;
- Wind speed and direction;
- Topography;
- Existing infrastructure;
- Site constraints and opportunities.

The project team is in the process of updating the layout based on the above, pending final input on key items including the ongoing level 2 bird study. As a result, the layout update is not yet finalised. However, most of the constraints on the site layout have been updated to reflect feedback from independent specialists, project studies and the community.

Specific examples include but are not limited to:

- Turbines have been manually excluded from the far East of site which is considered more environmentally sensitive;
- Turbines have been limited to be no closer than 1km from neighbour's houses and the noise studies will further determine the final turbine layout,
- Specific setbacks have been applied to ensure blades do not sweep over neighbouring properties.
- Turbines have been specifically excluded from the National Park and State Forest with a setback to shift them further from the National Park Area;
- Other specific setbacks, as recommended by independent specialists, will apply for specific environmentally sensitive locations i.e. for select flora and fauna;
- Reduction in total number of turbines to improve the visual amenity experienced by neighbours and the community.

Project Timeline and Critical Works

The critical works timeline for the project has been updated to reflect current expectations resulting from project parameters including the level 2 bird study. An update is provided below.

Dates provided are estimates according to best current estimate and may be subject to change depending on project conditions.

Activity	Expected Date (Q = Year Quarter)
Submission of PEIA	Complete
Reception of SEARs	Complete
Submission of Comm. Referral	Complete
Finalisation of EIS Studies	Q3/Q4 2019
Submission of EIS	Q4 2019
Period for Public Comment (60 Days)	Q4 2019
EIS Approval	Q3/Q4 2020
Financial Close	Q2 2021
Start Construction (18-24 Months)	Q3 2021
Commercial Operation Date (COD)	Q3 2023

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OPF Engagement Timeline

Granite Hills Wind Farm is proactively engaged in community and stakeholder consultation, in both the Bega Valley Shire and Snowy Monaro Regional Council areas.

BEFORE OCTOBER

Community consultation commenced in the early stages of the project. It included interactions with neighbours, local councils, community organisations and the Nimmitabel Primary School. The CCC was established in 2017. Project E was appointed to undertake neighbour visits in 2018, and there were three newsletters distributed

NOVEMBER 2018

OPF is appointed as the new community liaison team for the Granite Hills Wind Farm project

Community and Stakeholder Engagement Plan published

Fourth community newsletter published and distributed online, in the mail and at community collection points

Website updated, email and hotline system reactivated

DECEMBER 2018

CCC meeting - OPF attend to explain upcoming engagement activities

OPF completes first round of engagement with neighbours within 2.5km of the project

Contact established with both Councils

Outdated materials collected and updated

Engagement with CCC members commences

FEBRUARY / MARCH 2019

Second round of engagement with neighbours between 2.5km - 4km continues

Engagement with neighbours 4km and beyond commences

Engagement with CCC members continues

Engagement with local community groups and businesses in Nimmitabel commences

Two rounds of advertising in three local papers for new CCC members

Engagement with Snowy-Monaro Regional Council continues

Fifth community newsletter is published and distributed online, via post and at community collection points

Project FAQs published and distributed

Project update on ABC Radio - South East

Outdated materials collected and updated

OPF Engagement Timeline

Granite Hills Wind Farm is proactively engaged in community and stakeholder consultation, in both the Bega Valley Shire and Snowy Monaro Regional Council areas.

APRIL 2019

Third round of engagement with neighbours beyond 4km of the project continues

Engagement with Bemboka local businesses and community groups commences

Engagement with Bega Valley Council commences

Engagement with local community groups and businesses in Nimmitabel continues

Outdated materials collected and updated

Project update published in the Nimmy News

Engagement with Nimmitabel Primary School

CCC meeting

MAY 2019

Upcoming

OPF activity to date

37

Meetings with the community and stakeholders

07

Visits to the local area

02

Community project newsletters published and distributed

57+

Project email enquiries answered