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Environmental Impact Assessments

Public Health Services comments

Proponent: Westcoast Renewable Energy Pty Ltd
Proposal/Application: Major Project Proposal
Document title: Whaleback Ridge Renewable Energy Project
Date: 6 March 2024
Agency/Division/Branch: Department of Health, Public Health Services

Project overview

The Whaleback Ridge Renewable Energy Project (the project) has been declared a major project by the Minister for Planning (the Minister) and as such is subject to an assessment co-ordinated by the Tasmanian Planning Commission (the Commission).

The project is described as of significant scale and complexity as it will be the largest wind farm in Tasmania and larger than any existing wind farm in Australia. It will extend across multiple land tenures and require multiple assessments and approvals.

The Minister has notified the EPA under section 60Y of the *Land Use Planning and Approvals Act (LUPAA 1993)* of the declaration as a major project. The Commission has referred the project to the EPA requiring either: an assessment requirement notice, a notice of no assessment requirements, or a notice recommending revocation. In turn, the EPA has referred the proposal to Public Health Services for comment, due by 28 March 2024.

Located within what is described as the Northwest Tasmanian Renewable Energy Zone (REZ) by the Australian Energy Market Operator (AEMO), the proposed site covers 40 500 hectares in the central west coast region of the state, between Granville Harbor and Zeehan. The expected operational footprint within the project site is expected to be less than 500 hectares.

The project site has been selected based on the proponent's experience, research and the development and operation of the neighbouring Granville Harbour Wind Farm (commissioned in 2020). The wind resource at the project site has been noted as at higher elevation and is expected to be equal or better than at Granville Harbour.

The project proposes the generation of up to 3 000 megawatts of renewable electricity from up to 500 wind turbine generators (WTGs). Indicative WTG component parameters include an estimated blade length of 84m, diameter of rotor swept area of 170m and height of 250m. Development will include hardstand areas, turbine exclusion zones, internal access roads, underground and overhead cables and collector stations, workshop and office facilities and temporary facilities for construction.

The first stage of the project will involve the construction of between 30–50 WTGs together with transmission and site management infrastructure, over an estimated 2 year period. When operational this will generate 288 megawatts (representing two separate 144 megawatt connections into the Tasmanian transmission network).

The project represents an approximate \$5 billion investment in the northwest region and is expected to create up to 170 FTE employment opportunities during construction of the first stage, and ongoing employment opportunities during operation and construction of subsequent project stages.

The timing and size of subsequent stages of the project are currently in development and will be influenced by market demand. The project aims to deliver large-scale and cost-competitive renewable energy to attract hydrogen and future industries into the state.

Significant key stakeholder consultation has been undertaken from 2019 to date. Further community and stakeholder engagement has been identified to continue throughout the impact assessment phase. Public Health Services recommends the proponent engage with the neighbouring communities prior to the impact assessment phase of the Project. In particular, the communities of Granville Harbour, Trial Harbour and Zeehan.

Summary of Key Issues

The project site

- The entire project site sits within the West Coast local government area (LGA). The population of this LGA was recorded as 4,263 people in the 2021 census. Population density is described as low, with a combined population of 1,698 people in the towns of Granville Harbour, Trial Harbour, Zeehan, Rosebery, and Tullah.
- The project site lies to the east of the existing Granville Harbour Wind Farm, around 8 km north-west of Zeehan and 35 km north-west of Queenstown. The closest townships are Trial Harbour to the south (approximately 3 km), Zeehan to the east (approximately 3.5 km), Rosebery to the east (approximately 14 km) and Granville Harbour to the west (approximately 2.5 km).
- The existing Granville Harbour Wind Farm is located immediately west of the Project Site.
- The project site is largely undeveloped and is covered by a range of native vegetation groups. It is located approximately 25 km west of the Tasmanian Wilderness World Heritage Area, separated from it by the West Coast Range and the townships of Queenstown, Zeehan and Rosebery.
- There are no shacks or dwellings within the project site.
- There are several rivers, creeks and drainage lines within the project site, the most substantive being Lake Pieman, which bisects the Project Site from north-west to east.
- Elevation ranges from almost sea level along the western coastline, to over 700 m above sea level at Mount Heemskerk in the south.
- Heemskerk and Pieman Roads run through the project site, as well as many existing access tracks used for mineral exploration, recreational four wheel driving and mountain biking.

- The Farrell-Reece 220 kV transmission line runs through the northern part of the project site, connecting to the Reece Power Station.

Key issues:

Noise

- Noise will be generated during construction and operation phases of the project:
 - Construction phase noise will be associated with quarrying activities, civil works, concrete batching, construction, assembly of project components and traffic, over many years.
 - Wind farm construction will be dispersed across a large area (as various parts of the project site will be subject to noise at different times).
 - Operational phase noise will be generated from the WTGs and traffic accessing the project site. It is anticipated that traffic noise will be limited, noting operational site access requirements will be small, with traffic generally limited to light vehicles.
 - Although not expected to have significant impact beyond the project site, no information has been provided on potential noise generated by the operation of WTGs and/or potential impacts on recreational users/other activities across the project site.
- While there are no residences within the project site, potential impacts of noise on sensitive receptors beyond the project site will be addressed through site selection and the application of turbine exclusion zones. Turbine exclusion zones have been proposed as follows:
 - 3km buffer zone from dwellings at Trial Harbour and Zeehan,
 - 1 km buffer zone from dwellings near Granville Harbour,
 - 250 from existing transmission lines,
 - 110m from Heemskerk Road and Pieman Road,
 - 100 from project site boundaries, and
 - 3 km from local towns and a minimum setback of 1 km from isolated residences outside local towns.

The closest dwellings to the project site are located approximately 70 m west of the project site boundary near Granville Harbour. The 1 km buffer is proposed for this location as a starting point based on experience of the distance of the nearest residence to operational turbines at the Granville Harbour Wind Farm. Noise monitoring for the Granville Harbour Wind Farm has been compliant with the Environment Protection Policy (Noise) 2009 and there have been no noise complaints reported during operation of that wind farm.

- PHS advises that current national advice provided by the National Health and Medical Research Council Statement: *Evidence on wind farms and human health, 2015* is that significant health effects from wind turbines are unlikely beyond 1500m from a wind farm. PHS notes that the turbine exclusion zone for the community of Granville Harbour is less than that recommended to minimise health impacts. PHS recommends that the proponent re-consider the Granville Harbour exclusion zone and/or engage with the community of Granville Harbour prior to the assessment phase of the project.
- The project site is used for recreational pursuits including four-wheel driving, mountain bike riding, camping, bushwalking, and firewood collection, which could be impacted by construction and operational noise.
- Public Health Services supports the proposed noise assessment. Further refinement of proposed exclusion zones should be included in the impact assessment phase through noise

assessment addressing construction and operational stages and the existing noise environment.

Air emissions and dust

- Localised air emissions as dust and vehicle emissions will be generated during construction phases, diminishing once operational. While these will be largely contained within the project site, impact beyond the boundary is possible as a result of traffic movements. Public Health Services supports the further consideration of air emissions and mitigation measures should be included in the impact assessment phase, with particular reference to impacts on recreational use of the area and along access routes.

Shadow flicker and blade glint

- Wind farms have the potential to cause shadow flicker effects, which can occur when the sun passes behind the rotating blades of the WTGs and casts a moving shadow over surrounding areas. Shadow flicker effects are most noticeable inside buildings where the flicker occurs through a window. The occurrence and duration of effects depends on a variety of factors, including the direction of the building relative to the WTG, distance to the WTG, WTG parameters (height, rotor diameter), wind direction and environmental conditions (weather conditions and time of day and year). Although the potential impact of shadow flicker is expected to be low, Public Health Services supports further consideration in the assessment phase of the project.
- Blade glint, caused by the regular reflection of the sun off rotating turbine blades can cause nuisance to nearby sensitive receptors. Impacts are generally avoided through coating the turbine blades with a non-reflective paint and as such are considered unlikely to occur.

Summary

DoH has reviewed the document: Whaleback Ridge Renewable Energy Project - Major Project Proposal, October 2023 and supports the further considerations identified for assessment, in particular:

- noise generated by specific WTGs that have been selected or are representative of the type that might be selected for this project, total combined operational wind farm noise, the contribution of any neighbouring wind farm developments and potential impacts of that noise on residences, other sensitive uses and recreational users/other activities conducted across the project site,
- refinement of proposed exclusion zones as determined through:
 - noise modelling/assessment addressing construction and operational stages, and the existing noise environment,
 - shadow flicker modelling/assessment addressing potential impacts on residences, including those located approximately 70m west of the project boundary at Granville Harbour, and
 - engagement with the Granville Harbour community, as the proposed turbine exclusion zone for the community of Granville Harbour of 1 000m is less than that in the advice provided by the National Health and Medical Research Council Statement: *Evidence on wind farms and human health, 2015* of 1500m to minimise health impacts. PHS recommends that the proponent re-consider the Granville Harbour exclusion zone and/or engage with the community of Granville Harbour prior to the assessment phase of the project.
- potential impacts from air emissions and dust from during construction and operational phases on recreational users/other activities conducted across the project site and along access routes, and proposed mitigating measures.

In conclusion, the scale and complexity of the public health impacts of this project proposal warrant the Director of Public Health requiring an assessment of the proposed project's impact on public health. This is required in accordance with section 74(5) of the *Environmental Management and Pollution Control Act 1994*.

Approved: Stewart Quinn, Acting Director Environmental Health Services

Date: 25 March 2024.