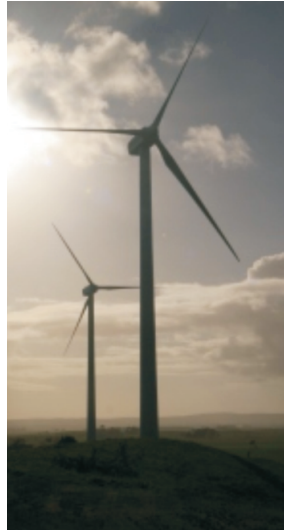


Woodlawn Wind Farm



Project Justification

16

16. Project Justification

16.1 Introduction

This chapter of the SEE provides a review of information that provides the basis for justification of the proposed variations to the approved Woodlawn Wind Farm and the amended form of the project.

The amended project will be of similar form and purpose as for the approved project. It will involve a 42 MW wind farm comprising 20 wind turbines located on the same section of the ridgeline where the approved 50 MW project was to be located. The lesser number of turbines than the 25 for the existing consent has meant that the turbines are slightly more spaced along the ridge and at a lower density. Despite the lesser number of turbines, the output capacity of each turbine has increased slightly and with the increase in hub height to 80 metres for all turbines the annual generation output will be very similar to that of the approved project.

Instead of grid connection to the existing 66 kV line to the north-west of the site, the power will be exported by a double circuit 33 kV transmission line between the Woodlawn Wind Farm and the Capital Wind Farm substation. In many respects the project can be regarded as essentially the same as originally proposed with relatively minor variants in respect of turbine layout and grid connection. The variations to the project are proposed by Woodlawn Wind Pty Ltd to achieve a more practical and cost effective project.

16.2 Key aspects for project justification

In summary, the development is justified for the following reasons:

- It utilises renewable energy to produce 42 MW of electrical power when operating at full capacity. Although less than the approved 50 MW output, the increase in height of the structures will mean the power output of the amended wind farm is similar to that of the 25 turbine array.
- The wind farm also provides additional generating plant to assist the National Electricity Market (NEM) to be able to meet forecast demands using a renewable energy resource.
- The renewable energy generation assists the diversification of electricity supply sources and can in some cases increase the security of supply to some locations
- By displacing generation from fossil fuels the wind farm can help reduce the carbon intensity of electricity generation and provide savings of greenhouse gas emissions of 146,000 tonnes per year compared to generation by coal fired plant
- The project's implementation in accordance with the consent conditions, the mitigation measures identified in the 2004 EIS and the additional mitigation measures proposed in Chapter 15 does not compromise ecological or heritage values, soil integrity or water quality in the region and does not place undue stress on local resources
- It assists achievement of the Federal Government's Expanded Renewable Energy Target Scheme (ERET).
- It provides additional income to the land owners of the properties on which the wind farm will be located
- The development is located on mostly cleared grazing land and is able to operate compatibly with the existing grazing operations
- It is a commercially viable development that will assist Woodlawn Wind Pty Ltd and its parent company Infigen Energy to meet their business objectives
- The project is likely to provide a small but significant boost to the local economy
- There appears to be general support from the local community for the project with some limited opposition
- The project has been designed to limit impacts on the local community
- The project complies with the requirements for inter-generational equity



While the project has a range of positive features, impacts that could be considered by some stakeholders, as adverse, include changes to the landscape of the wind farm locality and increased traffic on local roads during the construction period. Construction impacts are manageable and will only occur for short term periods.

The Department of Planning's review of the 2004 development application acknowledged that the development of the wind farm will introduce a highly visible element into the predominately rural vistas and change the broader landscape. However, the conclusion was that the extent of the adverse impacts is likely to be tempered by the changes that have already taken place within the view catchment of the proposal. These changes include the open cut mine void converted into a waste landfill site for the production of biogas, the clearing of the land for agricultural production, and road and track construction that has taken place over many years (Department of Planning, August 2005). The operational impacts will mostly be minor and outweighed by the positive environmental benefits of the project.

The option of not developing this renewable energy project reduces the State of NSW's progress toward an increased level of sustainable generation and forgoes a significant opportunity for abatement of greenhouse gas emissions.

Some of the above aspects are outlined below and further described in other sections of the SEE and its appendices.

16.3 Acceptability of environmental impacts

The project takes account of the biophysical aspects of the environment including flora and fauna, soil, water and air aspects. Comprehensive assessments of relevant issues were undertaken for the 2004 EIS. Additional studies were undertaken recently to take into account the proposed amendments to the wind farm layout and grid connection arrangement. These studies are appended to the SEE.

The mitigation measures proposed by the 2004 EIS are generally still relevant. However, where the project has been varied the measures have been updated in respect of the amended project as indicated in Section 15 of this SEE.

The key environmental aspects addressed in the SEE are outlined below:

Greenhouse Gas Emissions – The project will deliver net savings in greenhouse gas emissions (Chapter 13).

Visual Aspects – The project will be visible from parts of the local area which may be regarded by some members of the community as an adverse impact. However, overall there is expected to be broad community acceptance of the project. The favourable association with renewable energy, lack of greenhouse gas emissions and the integration with existing rural activities are considered by many people to be positive attributes of the proposed wind farm (Chapter 6).

Noise Aspects – There are no relevant receivers located within 2.5 kilometres of a wind turbine. Where noise criteria are predicted to be exceeded at residences on the properties on which the wind farm is located, then suitable agreements can be reached with the affected landowners.

The amended wind farm layout results in marginally lower noise levels at neighbouring residences relative to the 2004 assessment and existing consent and will comply with the noise criteria for the Woodlawn Wind Farm project (Chapter 7).

Land Use – The turbines will be located on parts of the Pylara and Woodlawn properties now owned by Veolia Environmental Services. The proposed 33 kV overhead transmission line traverses a number of other privately owned properties. The area is generally characterised by rural land holdings with scattered rural residential settlement. Other developments at the locality include the Woodlawn Bioreactor and associated recycling facilities, the former mine site features such as a large revegetated out of pit spoil pile and tailings dams and some derelict structures (Chapter 5).



Planning – The proposed development is consistent with the zoning objectives of the Goulburn-Mulwaree (2009), Mulwaree (1995) and Yarrowlumla (2002) LEPs (Chapter 4). At the end of the wind farm's useful life, the turbines can be decommissioned and removed from site.

Flora and Fauna Aspects – The development requires minimal clearing of vegetation and will avoid impacts on areas of sensitive vegetation or vegetation with important habitat potential as proposed by the mitigation measures (Chapter 8).

Aboriginal Heritage – Salvage and care of surface artefact items at the wind farm site will be undertaken prior to commencement of construction and in accordance with the Permit/Consents # 2288 and 2289. The proponent is currently planning for this work to be undertaken prior to commencement of construction activities (Chapter 9).

Traffic and Transport – A number of measures will be incorporated for the construction and operation of the wind farm to ensure that transport and traffic impacts arising out of the development are minimised. These measures will be incorporated into a Traffic Management Plan (TMP) for the project and will be developed in consultation with Goulburn Mulwaree and Palerang Councils. The TMP will form part of the CEMP to be approved by the Department of Planning. The operational wind farm will require low levels of vehicle access to the site from local roads and accordingly will have little impact on local traffic (Chapter 10).

Electromagnetic Interference - Potential for interference has been assessed and indicated some areas where interference to television reception could occur. Mitigation options have been identified and can be applied following commissioning if required (Chapter 11).

Soil Aspects – The extent of ground surface disturbance affects only a small part of the overall site. Erosion and sediment controls will be implemented during all earthworks (Chapter 5).

Water Aspects – There will be no off-site discharges. Controls to avoid spillage of oil or erosion and sediment loss from the site will be supported by Emergency Response procedures, where required (chapter 5).

Air Aspects - The development will result in low project life-cycle air emissions allowing for manufacture, transport, erections and operation of the plant. The emissions from the project will be significantly less than those of most other electricity generating stations. Potential for dust from the construction earthworks will be controlled (Chapter 5).

Socio-Economic - The project will require a modest workforce during the construction stage. It is likely that some services will be drawn from the local area and that some employment opportunities may arise for the local community. The services required during construction are not expected to place undue stress on local resources and will provide a small but significant boost to the local economy. The operational project will provide a worthwhile contribution to the local economy over its lifetime (Chapter 5).

Safety Risks and Hazards – A Bushfire Management Plan will be prepared to mitigate the risks of bushfires starting as a result of construction, operation, maintenance and decommissioning activities of the wind farm. The Bushfire Management Plan would be prepared in consultation with the NSW Rural Fire Service as part of the Environmental Management Plan. Aircraft safety, Potential health risks associated with electro-magnetic fields and shadow-flicker, Safety of site personnel, particularly during construction and road safety have been assessed in Chapter 12 and were considered to be low.



16.4 Overall benefits of the amended project

The overall benefits of the amended Woodlawn Wind Farm are summarised below:

- It can provide net greenhouse gas emission savings of 146,000 tonnes CO₂-eq/year.
- It assists Woodlawn Wind Pty Ltd fulfilment of its business objectives
- It assists the Federal Government to achieve the Expanded Renewable Energy Target (ERET)
- It provides an income to the landowners of properties on which it is located
- It can provide a small but significant economic boost to the local community and provide employment opportunities

16.5 Project justification/Conclusion

As a moderate scale wind farm development, the project is a significant environmental initiative and represents an important consolidation of renewable energy generation in New South Wales and for the locality.

This SEE has identified and addressed the environmental issues for the amended project that is substantially the same as the approved wind farm but where the mitigation measures have needed to be updated to address the current form of the project and the potential impacts.

An assessment of all the potential environmental impacts of the proposed modification has been undertaken with reference to the relevant matters in Section 79C of the EP&A Act. This SEE has identified and addressed the environmental issues likely to be associated with the proposed variations to the approved Woodlawn Wind Farm. Having regard to the material in the foregoing sections and the significant environmental advantages of the project, it is concluded that the overall environmental impact will be acceptable.