

Template

Proposal Content Document

Table 1: General proposal content description

Proposal title	Twin Hills Wind Farm
Proponent name	Twin Hills Wind Farm Pty Ltd
Short description	Development and operation of a renewable energy facility comprising up to 93 wind turbine generators (total capacity of up to 750 MW of installed capacity), a battery energy storage system (up to 500 MW / 4,000 MWh), and associated supporting infrastructure such as access tracks, roads, substations, electrical reticulation and transmission infrastructure. The project will be connected to the South West Interconnected System (SWIS). The Project is located on predominantly cleared agricultural land approximately 30 km north-east of Eneabba, WA. Please see Appendix A Figure A 1 for the Regional Location of the project.

Table 2: Proposal content elements

Proposal element	Location / description	Maximum extent, capacity or range
Physical elements		
Renewable energy infrastructure including:	Within the Proposed Development Envelope (see Appendix A – Figure A 5)	- Development Envelope: 6,326.33 ha - Proposed Development Footprint: 543.6 ha - Native Vegetation Clearing: Up to 17.14 ha
Wind turbine generators (WTGs), including associated foundations and hardstands		Up to 93
On-site substation		Up to 10 ha
Battery Energy Storage System		Up to 24 ha
Terminal Station		Up to 10 ha
Distribution infrastructure (nominally 33 kV)		Approximately 18 km overhead ~33 kV powerlines

		Approximately 80 km underground cabling (trenched distance)
Transmission infrastructure (330 kV)		Approximately 15 km
Construction elements		
Construction period	Within the Proposed Development Envelope	Approximately 2 – 3 years.
Water supply		Groundwater abstraction: Up to 95 ML/annum.
Concrete batching plants		Concrete for the foundations will be mixed at concrete batching plants which are proposed to be part of the laydown areas within the Proposed Development Envelope. Concrete batching material may be sourced from off-site locations.
Transport of turbines and associated infrastructure along existing road network	AMC Henderson to Project Area	No clearing required outside of Proposed Development Envelope.
Operational elements		
- Wind energy production and battery energy storage - Transmission connection and substation - Operations and Maintenance buildings	See Infrastructure Layout in ERD Appendix A (Figure A 3)	- Up to 93 wind turbines with a combined generation capacity of up to approximately 750 MW - BESS capacity up to 500 MW / 4,000 MWh
Proposal elements with greenhouse gas emissions		
Construction elements:		
Scope 1	Clearing of vegetation	~ 1,889.61 tCO ₂ e
	On-site power generation	~ 4,682.00 tCO ₂ e
Scope 2	Vehicle movements on-site	~4,696.40 tCO ₂ e
	Not applicable	
Scope 3	- Manufacture and supply of equipment and materials – approx. 20,850.00 t CO₂e - Off-site employee vehicle movements – approx. 2,595 t CO₂e Turbine lifecycle emissions are covered under operational elements	

Operation elements:	
Scope 1	Not applicable
Scope 2	Not applicable
Scope 3	22,159 tCO ₂ e per annum
It is estimated that the Project would result in emissions of up to ~554,000 t CO₂e over its lifecycle. Most (~80 – 90%) of the emissions from the Project are likely to be associated with the materials extraction for materials processing and manufacturing of wind turbine components and other equipment. The remaining emissions are likely to be associated with diesel used for generating onsite power and operating vehicles, vegetation clearing, and any electricity purchased from the grid with a fossil fuel component. Total greenhouse gas emissions for the Project would be significantly lower than those for coal-fired or gas-fired power plants of a similar generation capacity, and the Project would reduce overall emissions from power generating assets in WA significantly.	
Rehabilitation	
<i>Land used for temporary infrastructure during the construction phase will be restored to its pre-construction-state during the operations phase, as far as reasonably practicable, and in accordance with land use agreements with landowners.</i> <i>Upon decommissioning, disturbed land will be rehabilitated in accordance with a decommissioning management plan, relevant approval conditions and landowner agreements.</i>	
Commissioning	
<i>There are no environmental impacts specific to commissioning.</i>	
Decommissioning	
<i>Near to the end of the operational life of the Project, the Proponent may decommission the Project and rehabilitate the land in accordance with a decommissioning management plan and relevant approval conditions. Alternatively, the Proponent may instead re-power the Project by installing new equipment (subject to future planning approvals, environmental approvals, and land agreements, as required).</i> <i>Decommissioning would include the following:</i> <i>De-energising plant and equipment</i> <i>Dismantling and removal of turbines, BESS, ancillary electrical infrastructure and transmission lines, as well as other aboveground buildings, foundations and equipment, as far as practicable</i> <i>Rehabilitation of disturbed land</i> <i>Recycling of recyclable materials (including batteries)</i> <i>Removal of concrete foundations, unless otherwise agreed with landowners.</i> <i>Decommissioning of some elements may be subject to the landowner's discretion (such as access tracks).</i>	
Other elements which affect extent of effects on the environment	

Proposal time	Maximum project life	25-30 years (subject to future approvals for repowering)
	Construction phase	Estimated to be 2 – 3 years.
	Operations phase	Estimated to be 25 – 30 years.
	Decommissioning phase	Estimated to be up to 2 years.

** Proponents should only provide realistic timeframes to avoid unnecessary change to proposal applications at referral (section 38C), assessment (section 43A) or post assessment (section 45C).*