Uaroo Renewable Energy Hub

Proposal Content Document

Table 1: General proposal content description

Proposal title	Uaroo Renewable Energy Hub
Proponent name	Pilbara Energy (Generation) Pty Ltd (PEG)
Short description	The Proposal is to construct and operate a renewable energy generation project in the Pilbara, to power the Fortescue Metals Group mining operations. The Proposal will consist of up to 340 wind turbines and a solar farm which will have a maximum energy generation capacity of 5.4 GW. The Proposal also includes a battery energy storage system, substations, associated supporting infrastructure, a series of tracks and roads to provide access and corridors for electrical cabling. The Proposal is located approximately 120 km south of Onslow and 170 km west of the FMG operated Eliwana Mine Site in the Shire of Ashburton and in the Thalanyji Native Title Determination Area, on land used predominantly for cattle grazing.

Table 2: Proposal content elements

Proposal element	Location / description	Maximum extent, capacity or range
Physical elements		
Wind turbine generators and associated electrical infrastructure	Figure 2	Up to 186 ha of native vegetation clearing within the Development Envelope
Photo-voltaic solar panels and associated electrical infrastructure	Figure 2	Up to 6,555 ha of native vegetation clearing within the Development Envelope
Supporting electrical infrastructure	Figure 2	Up to 80 ha of native vegetation clearing within the Development Envelope
Roads, tracks and service corridors	Figure 2	Up to 1,358 ha of native vegetation clearing within the Development Envelope
Aerodrome and airstrip	Figure 2	Up to 100 ha of native vegetation clearing within the Development Envelope
Laydowns	Figure 2	Up to 316 ha of native vegetation clearing within the Development Envelope

Water infrastructure	Location to be determined following hydrogeological investigations	Up to 340 ha of native vegetation clearing within the Development Envelope
Ancillary infrastructure	Figure 2	Up to 182 ha of native vegetation clearing within the Development Envelope
Temporary infrastructure	Figure 2	Up to 675 ha of native vegetation clearing within the Development Envelope
Topsoil Storage Area	Figure 2	Up to 366 ha of native vegetation disturbance within the Development Envelope
Construction elements		
Water supply	Location to be determined following hydrogeological investigations	Total groundwater abstraction for construction of up to 6.5 GL, at a maximum rate of 1 GL per annum
Power supply	To be located on areas cleared for subsequent construction and operation stages	Up to 4 MW (instantaneous load requirement) of fossil fuel electricity generation.
Treated wastewater discharge	Located adjacent to accommodation camp Figure 2	Up to 480 m^3 per day
Operational elements		
Water supply	Location to be determined following hydrogeological investigations	Annual abstraction of up to 0.2 GL per annum of groundwater from yet to be defined borehole(s) within the Development Envelope
Wind energy generation	Figure 2	Up to 340 wind turbine generators Up to 2,040 MW in total
Solar farm energy production	Figure 2	Up to 3,333 MW
Battery storage system	Figure 2	Design capacity 9,100 MWh
Treated wastewater discharge	Located adjacent to the accommodation facilities Figure 2	Up to 200m^3 per day

Proposal elements with greenhouse gas emissions		
Construction elements:		
Scope 1	Land use change from vegetation clearing of 10,158ha: 228,152 tCO2-e in total Estimated emissions from proponent-owned and controlled resources during construction amounts to 1,188,265 tCO2-e over construction period.	
Scope 2	There will be zero indirect emissions from the generation of purchased energy from a utility provider since all electrical power will be self-generated.	
Scope 3	Estimates to be provided as part of detailed environmental impact assessment.	
Operation elements:		
Scope 1	Estimated emissions from proponent-owned and controlled resources amount to 23,376 tCO2-e per year from commencement of Hub operations.	
Scope 2	There will be zero indirect emissions from the generation of purchased energy from a utility provider since all electrical power will be self-generated.	
Scope 3	Estimates to be provided as part of detailed environmental impact assessment. Carbon embodied in the supply chains of materials required to develop the Proposal will be offset by reduced carbon emissions from FMG's operations. The Proposal will allow FMG to materially reduce and then eliminate reliance on gas and diesel-fired generation and diesel-fuelled mobile plant which currently consume hundreds of millions of litres of fuel annually.	
Rehabilitation		
Topsoil to be stored in allocated storage areas and used to rehabilitate areas disturbed for temporary facilities following construction. At the completion of the Proposal, infrastructure will be removed, and disturbed areas rehabilitated consistent with the surrounding landscape.		
Other elements which affect extent of effects on the environment		
Proposal time*	Maximum project life	42+ years
	Construction phase	Up to 7 years
	Operations phase	Operations across the proposed site will be achieved once commissioning of all stages is complete. Infrastructure to be maintained and then replaced at the end of asset life (approximately every 30 years).
	Decommissioning phase	4 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).*