

GHG Reductions			
Nameplate capacity	602	MW	
Efficiency	34.9%		(2021 Clean Energy benchmarking)
Effective Generating Capacity	210	MW	
Annual electricity output	1,840	GWh/year	
Coal to produce equivalent energy	6,625,651	GJ/year	
Coal to produce equivalent energy	245,394	t	(27 GJ/t) https://www.industry.gov.au/sites/default/files/2020-10/national-greenhouse-accounts-factors-2020.pdf
GHG Reductions Annual	596,309	t CO2-e/year	(90 kg CO2 / GJ)
GHG Reductions Total	17,889,256	t CO2-e	

Greenhouse Gas Emissions Associated with Production of Materials

Project Component	Material	Each Component				Entire Project			
		Quantity of Material (t)	Energy Intensity (GJ/t)	Embodied Energy (GJ)	kg CO2-e/GJ	GHG Emissions (t CO2-e)	Number of Components	Project Embodied Energy (GJ)	Project GHG Emissions (t CO2-e)
Wind Turbine	Steel	810	85.3	69,093	90	6,218	86	5,941,998	534,780
	Composite	65	168	10,920	90	983	86	939,120	84,521
Turbine Footing	Concrete	1920	1.45	2,784	90	251	86	239,424	21,548
	Steel	100	33.7	3,370	90	303	86	289,820	26,084
Turbine Hardstand	Concrete	7750	1.45	11,238	90	1,011	86	966,425	86,978
	Steel	73	33.7	2,460	90	221	86	211,569	19,041
Substation (hardstand)	Concrete	28800	1.45	41,760	90	3,758	2	83,520	7,517
	Steel	187	33.7	6,302	90	567	2	12,604	1,134
Construction compound (hardstand)	Concrete	9000	1.45	13,050	90	1,175	4	52,200	4,698
O&M Facility	Concrete	14400	1.45	20,880	90	1,879	2	41,760	3,758
Battery Energy Storage System	Concrete	28800	1.45	41,760	90	3,758	2	83,520	7,517
	Lithium-ion Batteries*			198,000	90	17,820	2	396,000	35,640
Wind monitoring mast	Steel	35	33.7	1,180	90	106	5	5,898	531
Transmission Line (275 kV) towers	Steel	35	33.7	1,180	90	106	25	29,973	2,698
	Concrete	144	1.45	209	91	19	25	5,306	483
Overhead Powerline (33 kV) towers	Steel	11	33.7	371	89	33	52	19,276	1,716
Turbine Subtotal				99,865		8,988		8,588,356	772,952
Ancillary Infrastructure Subtotal				324,690		29,222		730,057	65,691
TOTAL				424,555		38,210		9,318,412	838,643

* Embodied energy is based on energy storage capacity rather than mass

