

Attachment 6 to Statement 685

Change to Proposal

Proposal: Bluewaters Power Station, Shire of Collie

Proponent: Griffin Energy Pty Ltd

Change: Increase power generating capacity from 208 megawatts to 217 megawatts.

Key Characteristics Table:

Element	Description of approved proposal	Description of approved changes to proposal (bolded)
General		
Project Purpose:	To produce electricity to supply to the SWIS grid or direct to customers	To produce electricity to supply to the SWIS grid or direct to customers
Construction Period:	Approximately 30 months to commercial operation	Approximately 30 months to commercial operation
Project Life:	Approximately 30 years	Approximately 30 years
Power Plant Type:	Subcritical coal fired power station	Subcritical coal fired power station
Power Generating Capacity:	Up to 208 megawatts	Up to 217 megawatts
Plant Thermal Efficiency:	HHV 36.4% - LHV 38.6%	HHV 36.4% - LHV 38.6%
Plant Operation:	Base load operation 24 hours per day, 365 days per year	Base load operation 24 hours per day, 365 days per year
Shutdown Time:	Plant maintenance shutdowns may be scheduled annually	Plant maintenance shutdowns may be scheduled annually
Maximum Facility Footprint (area of power generating unit):	Approximately 5.25ha (actual 1.99ha)	Approximately 5.25ha (actual 1.99ha)
Maximum Total Area (total area of power station plant):	Approximately 15ha (actual 9.83ha)	Approximately 15ha (actual 9.83ha)
Ancillary Infrastructure		
Includes roads, benching for safe foundations, plant assembly areas, car parks, conveyors and the emergency coal stockpile	Approximately 23.75ha	Approximately 23.75ha
Contingency coal stockpile	500,000 tonne capacity	500,000 tonne capacity
Water storage dams associated with the contingency coal stockpile	2	2
Construction Laydown Envelope	Approximately 18.7ha	Approximately 18.7ha
Plant facilities		
Stacks:	1	1
Height of Stack:	100m	100m
Diameter of Stack:	4.13m	4.13m
Cooling Towers:	1 set	1 set
Liquid Fuel Storage Tanks:	2 x 100,000 litres and 1 x 10,000 litres	2 x 100,000 litres and 1 x 10,000 litres
Boiler:	Balanced draft pulverised coal steam generator matched to steam turbine capacity	Balanced draft pulverised coal steam generator matched to steam turbine capacity

Element	Description of approved proposal	Description of approved changes to proposal (bolded)
Steam Turbine:	Tandem compound reheat steam turbine with synchronous alternator – 200MW _e	Tandem compound reheat steam turbine with synchronous alternator – 200MW _e
Wastewater collection:	Package treatment plant	Package treatment plant
Utilities		
Water Supply:	3.25GL/yr sourced from mine dewatering at Ewington 1	3.25GL/yr sourced from mine dewatering at Ewington 1
Transmission Line Length:	100m up to 3km depending on interconnection point as required by Western Power	100m up to 3km depending on interconnection point as required by Western Power
Emissions		
Noise:	Less than 60dB(A) at 150m from the plant. Less than 29dB(A) at nearest residence in Collie	Less than 60dB(A) at 150m from the plant. Less than 29dB(A) at nearest residence in Collie
Flue Dust:	47mg/Nm ³ ; 9.4g/s; 237tpa	47mg/Nm ³ ; 9.4g/s; 237tpa
Nitrogen Oxides:	500mg/Nm ³ ; 112.1g/s; 2828tpa	500mg/Nm ³ ; 112.1g/s; 2828tpa
Sulphur Oxides:	229.9g/s; 5800tpa*	229.9g/s; 5800tpa*
Greenhouse Gases:	1,562,000tpa CO ₂ e	1,562,000tpa CO ₂ e
Carbon Monoxide:	500mg/m ³ ; 97g/s; 2444tpa	500mg/m ³ ; 97g/s; 2444tpa
Volatile Organic Compounds:	33.3kg/yr	33.3kg/yr
PAHs:	6.0kg/yr	6.0kg/yr
Arsenic:	6.8kg/yr	6.8kg/yr
Cadmium:	8.8kg/yr	8.8kg/yr
Chromium compounds:	1.6kg/yr	1.6kg/yr
Lead compounds:	32.2kg/yr	32.2kg/yr
Mercury:	32.2kg/yr	32.2kg/yr
Fluorides:	17,680kg/yr	17,680kg/yr
POPs inc. Dioxins and Furans:	Less than 0.5 grams per year	Less than 0.5 grams per year
Waste		
Ash:	182,000tpa maximum disposed to the adjacent mines, Ewington I and Ewington II	182,000tpa maximum disposed to the adjacent mines, Ewington I and Ewington II
Septage:	Packaged treatment plant	Packaged treatment plant
Saline Water:	1.2GL/yr	1.2GL/yr
Workforce		
Construction:	Approximately 150 personnel at the peak of construction	Approximately 150 personnel at the peak of construction
Operations:	Up to 30 full time operations and maintenance personnel	Up to 30 full time operations and maintenance personnel

*For Bluewaters Power Station Phase I in isolation, emissions of sulphur oxides limited to 320.7g/s; 8091tpa. Once Bluewaters Power Station Phase II is commissioned, emissions of sulphur oxides limited to 229.9g/s; 5800tpa.

Abbreviations	kg/yr	kilograms per year	MW _e	megawatts sent out	
CO ₂ e	carbon dioxide equivalents	LHV	lower heating value	O ₂	oxygen
dB(A)	decibels A weighted	m	metres	pa	per annum
g/s	grams per second	mg/Nm ³	milligrams per standard cubic metre	PAHs	polycyclic aromatic hydrocarbons
GL/yr	gigalitres per year	mg/s	milligrams per second	POPs	persistent organic pollutants
HHV	higher heating value	Mtpa	million tonnes per annum	SWIS	South West Interconnected System
inc.	including	MW	megawatts	tpa	tonnes per annum
kg	kilograms			%	percent

Dr Paul Vogel
CHAIRMAN
Environmental Protection Authority
under delegated authority

Approval date: 23 October 2009