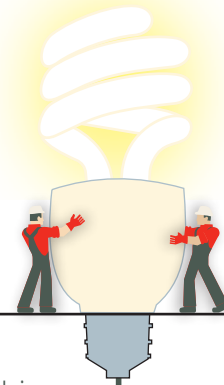


Currie Power Station

Bass Strait islands



Power Station is located 7 kilometres from the main township of Currie on King Island which is situated about 70 kilometres off the north west coast of Tasmania. Joined to the power station is the Huxley Hill Wind farm development.

The assets on King Island contains:

King Island Power Station Portfolio

- 4 x diesel generator sets (3 x 1600kW and 1 x 1200kW)
- 1 x 200kW 800kWh Vanadium Redox Battery
- 1 x 1500kW Resistor bank
- 1 x 100kW dual axis solar array

Huxley Hill Portfolio

- 3 x 250kW Nordex wind turbines
- 2 x 850kW Vestas wind turbines
- Total installed capacity of 2.45MW

The King Island Power Station and 11kv distribution network was developed in mid 1980's. Huxley Hill was the first wind farm Hydro Tasmania developed in 1997 to harness some of best wind resources in Australia. This means King Island is an ideal place for Hydro Tasmania and our research partners to develop innovative methods for integrating renewable energy and Remote Area Power Supply (RAPS) projects. The wind generation on King Island supplies around 35% of the island's power supply.

The wind and solar renewable power generation is used on the island backed by diesel generators providing firm capacity and ancillary services. The target with this system is to use all the available solar and wind power to reduce diesel usage.

The station has been designed to run unattended and operates with an advanced control system which starts, stops and loads selected equipment, optimises available wind generation whilst maintaining supply quality.

The 11kv distribution network is made up of 4 feeders covering approximately 400 kilometres in length providing 16 GWH of energy annually.



Scheme:	King Island		
Year commissioned:	Station 1985 Machines 1998/2008		
Power station structure:	Surface, 27 m long x 18 m wide including amenities and service block. Wind farm on adjacent on Huxley Hill. Vanadium Redox Battery in adjoining 25m x 10m building. Resistor in adjoining container. Solar array at station entry		
Generating set:	Three 1600 kW and one 1200 kW diesel generating sets each comprising a V16 turbocharged engine directly coupled to a 3 phase, 50 Hz, Synchronous Generator. Three 275kW directly coupled fixed pitch Nordex wind turbines. Two 850kW pitch controlled Vestas V52 wind turbines, 100kW solar array consisting of six panel arrays, connected via 440V inverters.		
Diesel manufacturer:	Caterpillar	Generator manufacturer:	Stamford
Rating:	3 x 1600 kW 1 x 1200 kW	Rated output:	3 x 2200 kVA 1 x 1850 kVA
		Power factor:	0.80
Rated speed:	1500 rev/min	Rated voltage:	3 x 11kV, 1 x 440V

