

AGL HALLETT 5 WIND FARM

PROJECT PROFILE

In December 2009, AGL Energy Limited issued Suzlon Energy Australia Pty Ltd with the turnkey contract for delivery of the Hallett 5 (The Bluff) Wind Farm in the Porcupine Range in South Australia.

Our Client

AGL Energy Limited is Australia's largest integrated renewable energy company. Drawing on over 170 years experience, AGL has Australia's largest retail energy and dual fuel customer base and is looking to further expand this position by exploring a suite of low emission and renewable energy generation development opportunities.

Turbine Type

Suzlon S88-2.1MW, with 88 meter rotor diameter.

Project Location

The Hallett 5 site is located near Hallett, approx 220km north of Adelaide, immediately east of the Hallett 1 wind farm that was commissioned in June 2008. The wind farm site spreads more than 8 kilometres over the Porcupine Range.

Project Description

The wind farm will comprise 25 x S88-2.1MW wind turbines with a total installed capacity of 52.5 MW.

Suzlon is the turnkey contractor responsible for the Engineering, Procurement & Construction (EPC) delivery of the entire project. The wind farm will be complete by the end of 2011.



Suzlon's overall responsibilities includes:

- Design and manufacture of the wind turbines
- Detailed in-house wind turbine micro-siting
- Grid dynamic studies
- Design, construction and maintenance of more than 9 km of new access roads
- Design and construction of footings and hardstands for each tower
- Design, fabrication and installation of steel turbine towers
- Shipping, installation and commissioning of the turbines
- Design and installation of an electrical feeder system underground linking the turbines to ElectraNet's 275kV substation and transmission system
- Design and installation of a 275/33kV main transformer
- Design and installation of integrated SCADA system
- Long term operations, maintenance and service of the whole wind farm

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Key Statistics

- The green energy produced by the wind farm will power approximately 26,600 average South Australian households per year, with emissions savings of over 161,000 tonnes of greenhouse gases per annum.
- Installed capacity: 52.5MW
- Hub Height: 80metres
- Maximum Blade Tip Height: 124 metres
- Swept area of each turbine: 1.5 acres; total swept area for the wind farm: 37.5 acres
- High tension cables for rock-anchor footings: 2 kms
- Trenching for 33kV reticulation: 9 kms
- Steel for towers: 14,760 tonnes
- Underground cable: 9 kms

Wind turbines convert the energy in moving air into electrical energy. The moving air that will pass through the 25 S88 wind turbines in one hour, at full production, will weigh over 8,730,150 tonnes.

The payback period of “embodied energy” of the whole wind farm is approximately 5 months.

Construction of the Hallett 5 wind farm will create approximately 120 jobs with a further 4 permanent roles created to operate, maintain and service the wind farm for the long term.

