AGL HALLETT 4 WIND FARM

PROJECT PROFILE

In March 2009, AGL Energy Limited awarded Suzlon Energy Australia Pty Ltd the turnkey contract for delivery of the Hallett 4 Wind Farm at North Brown Hill in South Australia.

Our Client

AGL Energy Limited - Australia's largest integrated renewable energy company. Drawing on over 170 years experience, AGL is 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 4 site is located near Jamestown, 220km north of Adelaide, immediately north of the Hallett 1 wind farm that was commissioned in June 2008. The wind farm site spreads more than 13 kilometres over the Brown Hill ranges.

Project Description

The wind farm will comprise 63 x S88-2.1MW wind turbines with a total installed capacity of 132.3 MW.

Suzlon is the turnkey contractor responsible for the Engineering, Procurement & Construction (EPC) delivery of the entire project. The wind farm will be commissioned and operating by the end of 2010.

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 44km 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 electrical feeder systems 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 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 80,000 average Australian households per year, with emission savings of over 355,000 tonnes of greenhouse gases per annum.
- Installed capacity: 132.3MW
- Hub Height: 80m
- Maximum Blade Tip Height: 124m
- Swept area of each WTG: 1.5 acres;
- Total swept area for the wind farm: 94.5 acres
- High tension cables for rock-anchor footings:5 kms
- Trenching for 33kV reticulation: 66 kms
- Steel for towers: 12000 tonnes
- Underground cable: 66 kms

Wind turbines convert the energy in moving air into electrical energy. The moving air that will pass through the 63 S88 wind turbines in one hour, at full production, will weigh over 22,000,000 tonnes.

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

Construction of the Hallett 4 wind farm will create approximately 120 jobs with a further 10 permanent roles created to operate, maintain and service the wind farm for the long term.