



AGL HALLETT WIND FARM

SOUTH AUSTRALIA

In December 2005, AGL awarded Suzlon Energy Australia Pty Ltd the Turnkey Contract for construction of the AGL Hallett Wind Farm in South Australia.

PROJECT BASICS

Suzlon's Client: AGL Energy Limited, one of Australia's oldest companies and largest retailer of natural gas and electricity, supplying approximately three million customers throughout Australia.

Turbine Type: S88_2.1MW with 88m rotor diameter

PROJECT DESCRIPTION

The AGL Hallett Stage I Wind Farm comprises 45 S88_2.1MW wind turbines with a total installed capacity of 94.5MW.

Suzlon is the turnkey contractor responsible for Engineering, Procurement & Construction (EPC) delivery of the entire project.

Suzlon's responsibilities include:

- Design and manufacture of the wind turbines
- Detailed in-house wind turbine micro-siting
- Grid dynamic studies
- Design, construction and maintenance of more than 24km 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 both below and above ground linking the turbines to the substation
- Design and installation of addition to the existing Hallett substation, including a 275/33kV main transformer
- Long term service and maintenance of the commissioned wind farm

The AGL Hallett Wind Range Farm site spreads more than 14km over the Brown Hill, and posed many technical and logistical challenges to construct what is one of Australia's largest wind farms.



AGL Hallett Wind Farm

Project Location: 200km north of Adelaide, South Australia.

KEY STATISTICS

The green energy produced by this wind farm is enough to power approximately 54,000 average Australian households per year.

- Installed capacity: 94.5MW
- Hub Height: 80m
- Maximum Blade Tip Height: 124m
- Swept area of each WTG: 1.5acres
Total swept area for the wind farm: 67 acres
- Number of truck journeys during construction: 1640
- High tension cables for rock-anchor footings: 170km
- Rock trenching for 33kV reticulation: 25km
- Concrete: 4,500 m³
- Steel for towers: 7,650T
- Underground cable: 56km
- Overhead cable: 64km
- Weight of 275kV transformer: 108T
- Weight of cargo to be transported to site: 13,692.15T
- The first turbine was commissioned and commenced generation in March 2007. The final turbine was erected in March 2008.

Wind turbines convert the energy in wind into electrical energy. The moving air that will pass through the 45 S88 wind turbines in one hour at full production will weigh over 16,000,000T.

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

World's 5th largest and fastest growing integrated wind turbine manufacturer | 350 kW to 2.1 MW capacity wind turbines | Workforce of 14,000 people in Australia, USA, Belgium, Brazil, Canada, China, Denmark, Greece, India, Italy, Nicaragua, Portugal, Spain and Turkey | R & D in Germany and The Netherlands | Global Management Headquarters in Amsterdam

SUZLON



PROJECT MANAGEMENT

Suzlon's in-house AGL Hallett Wind Farm Project Team was drawn from a diverse and talented group of professionals, who collectively have over 150 years of wind industry experience and more than 200 years EPC contracting experience. Specific areas of expertise cover all technical and commercial phases that bring a wind farm into operation, from initial development aspects, complex wind and site modelling, design and detailed Mechanical, Electrical and Civil engineering through to construction, installation and commissioning of the turbines, and finally service and maintenance of the wind farm.

Suzlon worked together with an experienced team of reputable Australian sub-contractors under the umbrella of our Quality, OH&S, Environmental and Management processes and procedures.

Suzlon's focus on safety, quality assurance and stakeholder management, together with stringent cost and schedule controls, ensured delivery of turnkey facilities on budget and on schedule.

SERVICE AND MAINTENANCE

Suzlon has a dedicated Service and Maintenance division and a long term commitment to maintaining its turbines. Our dedicated Hallett maintenance team, comprising 6-8 highly trained and experienced technicians who are local to the region, worked at the wind farm during the construction, installation and commissioning phases and are thus fully familiar with the equipment. Additional support will also be provided by technical experts resident in Suzlon's Melbourne head office, where 24/7 remote monitoring of the wind farm will take place.

Suzlon's regional headquarters in nearby Jamestown will provide warehousing and storage facilities for equipment and parts necessary to service and maintain the wind farm throughout its life cycle.

The key emphasis for our Service and Maintenance team is to maximize availability and efficiency in the operation of the wind farm.

THE SUZLON ADVANTAGE

- Robust, reliable technology
- Proven sub-component suppliers
- Extensive in-house wind engineering expertise
- In-house grid dynamics analysis
- Experienced EPC delivery team
- In-house high voltage electrical engineering and construction capabilities
- Long term service and maintenance
- Local warehousing and storage facilities



POWERING A GREENER TOMORROW

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