



SNOWTOWN WIND FARM

SOUTH AUSTRALIA

On 12th January 2007, TrustPower Limited awarded Suzlon Energy Australia Pty Ltd the Turnkey Contract for delivery of the Snowtown Wind Farm in South Australia.

PROJECT BASICS

Our Client: TrustPower Limited – a New Zealand based renewable power generator and retailer.

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

KEY STATISTICS

Green energy produced will provide enough power for over 70,000 average Australian households per year.

Final output is expected to be in excess of 350GWhr of electricity each year, saving more than 345,000 tonnes of greenhouse gas emissions annually.

- Installed capacity: 98.7MW
- Hub Height: 80 metres
- Maximum Blade Tip Height: 124 metres
- Swept area of each WTG: 1.5 acres;
total swept area for the wind farm: 70.5 acres
- Total number of escorted truck journeys from Adelaide during construction: 350
- 7 km of high tension cables for rock-anchor footings
- 27 km of rock trenching for 33kV reticulation
- 5000 m³ of concrete
- 8000 ton of steel for towers
- 27 km of underground cable
- 18 km overhead 33kV line
- 110 ton weight of 120MVA transformer
- Total weight of cargo to be transported to site: 15000 tonnes
- Wind turbines convert the energy in moving air into electrical energy. The moving air that will pass through the 47 S88 wind turbines in one hour, at full production, will weigh over 16,000,000 tonnes

Payback of the “embodied energy” of the whole wind farm is approximately five months.



Snowtown Wind Farm

Project Location: Near Snowtown, 170km north of Adelaide, South Australia.

PROJECT DESCRIPTION

The Snowtown Wind Farm will comprise 47 x S88_2.1MW wind turbines with a total installed capacity of 98.7MW. Construction commenced in April 2007 with final commissioning of wind turbines due at the end of the third quarter of 2008.

Suzlon is the turnkey contractor responsible for the Engineering, Procurement & Construction (EPC) delivery of the entire project. Overall 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 system, both below and above ground, linking the turbines to the substation
- Design and installation of 132/33kV main transformer
- Long term maintenance and service of the whole wind farm

The Snowtown Wind Farm site spreads more than 20 kilometres on the Hummocks and Barunga Ranges west of Snowtown, posing many technical and logistical challenges in construction.





PROJECT MANAGEMENT

Suzlon's in-house Snowtown Project Team is 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 aspects that bring a wind farm into operation, from initial development activities, complex wind and site modelling, design and detailed mechanical, electrical and civil engineering through to construction, installation and commissioning of turbines, and finally service and maintenance of the wind farm.

SERVICE AND MAINTENANCE

Suzlon has a dedicated service and maintenance division and a long term commitment to maintaining its turbines. Our dedicated Snowtown maintenance team will primarily be local resources who received training at other Suzlon facilities, prior to relocating to the region to commission and maintain the turbines.

Additional technical support will also be provided by trained electrical and commissioning engineers based in Suzlon's Central Monitoring Facility in our Melbourne head office, which operates 24 hours per day, 7 days a week.

THE SUZLON ADVANTAGE

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

Suzlon works together with an experienced team of reputable Australian subcontractors 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, ensures safe delivery of turnkey facilities, on budget and on time.

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 maximise availability and efficiency in the operation of the wind farm.



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