

# WOODLAWN WIND FARM

## PROJECT PROFILE

In June 2010, Infigen Energy awarded Suzlon Energy Australia Pty Ltd the turnkey contract for delivery of the 48.3 MW Woodlawn Wind Farm, near Tarago in New South Wales.

### Our Client

Infigen Energy is Australia's leading specialist renewable energy business. Including Woodlawn, Infigen Energy has six wind farms in Australia with a total capacity of 550MW.

### Turbine Type

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

### Project Location

The Woodlawn Wind Farm is near Tarago in New South Wales, adjacent to Infigen's Capital Wind Farm which became operational in late 2009.

### Project Description

The wind farm will comprise 23 x S88-2.1MW wind turbines with a total output capacity of 48.3 MW.

Suzlon is the turnkey contractor responsible for the Engineering, Procurement & Construction (EPC) delivery of the entire project. The wind farm will be completed in the second half 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 10.8 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 a 33kV electrical feeder system comprising 6.2 km of underground and 14 km 33kV overhead linking the turbines to the existing 330/33 kV sub-station at the adjacent Capital Wind Farm
- 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 32,000 average Australian households per year, with emissions savings of over 138,000 tonnes of greenhouse gases per annum.
- The capacity will be integrated into Infigen's merchant energy portfolio which contracts directly with electricity retailers and major industrial consumers of electricity and wholesale energy market participants.
- Wind turbines convert the energy in moving air into electrical energy. The moving air that will pass through the 23 S88 wind turbines in one hour, at full production, will weigh over 3,875,000 tonnes.
- The payback period of "embodied energy" of the whole wind farm is approximately 5 months.
- Wind farm output capacity: 48.3 MW
- Hub Height: 80 m
- Maximum Blade Tip Height: 124 m
- Swept area of each turbine: 0.607 hectares (1.5 acres)
- Total swept area for the wind farm: 12.15 hectares (30 acres)
- Rock trenching for 33kV underground reticulation: 6.2 km
- Concrete: 5,300 m<sup>3</sup>
- Steel for towers: 3,680 tonnes
- Underground cable: 6.2 km
- Overhead cable: 14 km
- Total weight of cargo to be transported to site: > 17,000 tonnes

