

# OAKLANDS HILL WIND FARM

## PROJECT PROFILE

In September 2009, AGL Energy Limited awarded Suzlon Energy Australia Pty Ltd the turnkey contract for delivery of the Oaklands Hill Wind Farm, near Glenthompson in Victoria.

### Our Client

AGL Energy Limited - Australia's leading renewable energy company and largest private owner, operator and developer of renewable generation assets. AGL is taking action towards creating a sustainable energy future for its investors, communities and customers.

### Turbine Type

SS88\_2.1MW with 88m rotor diameter.

### Project Location

5km south of Glenthompson, in the shire of Southern Grampians, VIC, Australia.

### Project Description

The Oaklands Hill Wind Farm site spreads more than 2,300 hectares over undulating agricultural farmland. The wind farm will comprise 32 x S88-2.1MW wind turbines with a total output capacity of 63 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 August 2011.

Suzlon's 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 25km 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 underground linking the turbines to Powercor's 66kV overhead transmission line
- Design and installation of a 66kV/33kV substation including a 66kV/33kV transformer and bay
- 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 35,000 average Australian households per year, with emissions savings of over 185,000 tonnes of greenhouse gases per annum.

Wind turbines convert the energy in moving air into electrical energy. The moving air that will pass through the 32 S88 wind turbines in one hour, at full production, will weigh over 5,394,000 tonnes.

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

- Wind farm output capacity: 63MW
- Hub Height: 80m
- Maximum Blade Tip Height: 124m
- Swept area of each WTG: 1.5 acres;
- Total swept area for the wind farm: 48 acres
- Number of truck journeys during construction: 1400
- Rock trenching for 33kV reticulation: 26km
- Concrete: 10,240 m3
- Steel for towers: 5,460T
- Underground cable: 26km
- Overhead cable: Nil
- Total weight of cargo to be transported to site: 9,750T

