

CAPITAL WIND FARM

PROJECT PROFILE

In October 2007, Suzlon Energy Australia Pty Ltd was awarded the Turnkey Contract for delivery of the Capital Wind Farm near Bungendore, NSW. The wind farm was officially opened by Prime Minister Kevin Rudd in November 2009.

Our Client

Infigen Energy Limited

Turbine Type

SS88_2.1MW with 88m rotor diameter

Project Location

60km North East of Canberra, near Bungendore, NSW, Australia

Project Description

The Capital Wind Farm comprises 67 Suzlon S88_2.1MW wind turbines with a total installed capacity of 140.7 MW. The Capital Wind Farm site covers more than 35km². It is located on the Hammonds, Ellenden and Grose Hill ridgelines, which posed many technical and logistical challenges to construct one of Australia's largest wind farms.

Suzlon was the turnkey contractor responsible for the Engineering, Procurement & Construction (EPC) delivery of the entire project and is now undertaking service and maintenance of the wind farm.



Overall responsibilities included:

- Design and manufacture of the wind turbines
- Detailed in-house wind turbine micro-siting
- Grid dynamic studies
- Design, construction and maintenance of more than 30km 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 a new 330kV substation, including two 330/33kV main transformers
- Long term service and maintenance of the commissioned wind farm

CAPITAL WIND FARM

PROJECT PROFILE

Key Statistics

The green energy produced by Capital Wind Farm will power Sydney Water's new desalination plant, due to come on line in the summer of 2009/10. Renewable energy generated from the wind farm – which will avoid the emission of approximately 390,000 tonnes of greenhouse gases each year - will be put into the existing supply grid from where the desalination plant will draw its power.

- Installed capacity: 140.7 megawatts (MW)
- Annual Production: 450,000MWh/yr +
- Hub Height: 80m
- Maximum Blade Tip Height: 124m
- Swept area of each WTG: 6250m²
- Total swept area for the wind farm: 39ha
- High tension cables for rock-anchor footings: 240km
- Steel for towers: 11,300T
- Underground cable: 60km
- Overhead cable: 10km

