## SIEMENS

# > Premier flicks the switch on Australia's newest wind farm

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270 MW Snowtown II wind farm online

Clean, green power for 180,000 homes

\$439 million project delivered on time, on budget

Australia's newest wind farm is online after the official opening of the Snowtown II wind farm.

The power plant was built by global technology powerhouse Siemens, as part of a joint project with Trustpower, the South Australian Government and Snowtown residents.

South Australian Premier, Mr Jay Weatherill, said the Snowtown II plant came on-line at a critical juncture for the Australian renewable energy industry.

"This plant confirms South Australia's commitment to being the nation's leader when it comes to providing efficient renewable wind energy programs. It is a key platform in our plan for renewable energy to supply 50 per cent of the state's annual power by 2025," Mr Weatherill said.

Siemens Australia CEO Jeff Connolly said the plan epitomised a program that benefitted all stakeholders.

"It's good for the economy, good for the environment and, importantly, good for the local community," Mr Connolly said.

"Snowtown II demonstrates what can be achieved when combining Siemens' global technology with South Australian know-how and New Zealand financing."

Trustpower CEO Vince Hawksworth said he was proud to join with the Snowtown community at the opening of the company's largest single asset.

"This project is another great step in the transformation to a sustainable electricity generation environment. Special thanks have to go to the local community and land owners for their unwavering support, to Siemens for delivering the project ahead of time, and to all of the other contractors and stakeholders who have played their part in making this happen," Mr Hawksworth said.

Siemens ambassador Cadel Evans joined the official party at Snowtown to lead a community bike ride as part of the commemorations.

"As an athlete I know I play a role in creating awareness around important issues like sustainability. That's why I became an ambassador for Siemens," Evans said.

Construction on the \$439 million project began in August 2012 and involved about 500,000 man hours. Siemens provided a full turn-key project solution for the wind farm including the associated 275kv high voltage substation.

The 90 turbines at Snowtown II represent the largest installation of Siemens' innovative "Direct Drive" technology commissioned to date. The Direct Drive technology uses half the moving parts of a conventional geared turbine, resulting in reduced complexity and increased reliability.

It delivers a wind farm that ranks among the most technically advanced and economically efficient in the world. The wind farm will produce 989 gigawatt hours (GWh) annually, enough to provide clean, emission-free power for 180,000 homes.

Each turbine is driven by three blades, ranging in length from 49 to 53 metres. They are of a single piece construction, made from fibreglassreinforced epoxy resin. As a result, all glue joints – the potential weak points that could expose the structure to cracking, water ingress, ice formation and lightning – are eliminated.

Weighing in at 10 tonnes, each turbine rotor spins at up to 16 rpm, resulting in a tip speed of over 300 km/hr, similar to the top speed of a Formula 1 race car and a Siemens high speed train. In total, the swept area would cover a site more than eight times the size of the Adelaide Zoo.

Transporting the blades was one of many logistical issue Siemens' engineers had to overcome. Laid end to end, the 270 blades would result in a road train more than 14 kilometres long.

Over the course of several months, each of the 950 pieces constructed off site were transported, with about 500 requiring a police escort. The size of the project site required construction of 50 kilometres of new roads, providing an added community benefit with increased access for Country Fire Service volunteers.

Siemens extensively utilised South Australian businesses to help deliver the project. Local supply and services contracts in excess of \$75 million were awarded, including fabrication of 20 towers by Whyalla engineering firm E&A Contractors and civil and electrical installation works by a consortium of Civil and Technical Constructions and Consolidated Power Projects, both of Adelaide.



It is the latest in a long line of Siemens technology making things that matter for South Australians. Siemens can trace its local roots back to 1872 and construction of the Adelaide-Darwin telegraph line. Since then, Siemens technology has helped South Australians enjoy some of the best beers, maintained Adelaide's drinking water, was responsible for the electrification and signally upgrade of Adelaide's rail network and supplied state-of-the-art medical equipment for its hospitals.

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