

Wind Power

Harnessing Australia's Wind Energy Resource

Cathedral Rocks Wind Farm



Above: The expected final wind farm appearance

CATHEDRAL ROCKS

Background

The Cathedral Rocks Wind Farm is a joint venture project between Hydro Tasmania and Spanish renewable energy company, EHN. The joint venture business operates as Cathedral Rocks Wind Farm Pty Ltd.

Hydro Tasmania is the largest generator of renewable energy in Australia, contributing around 60 percent of Australia's renewable energy production and has been producing clean renewable energy for nearly 100 years. Hydro Tasmania's total electricity production is equal to twice that of the Snowy Hydro Power Scheme.

EHN is the largest developer, constructor and operator of wind farms in the world. It has renewable energy facilities in Spain, France and Germany with new establishments due to come on stream shortly in both Canada and the United States.

The development of the Cathedral Rocks Wind Farm is a direct result of the Federal Government's legislated Mandatory Renewable Energy Target, which enhanced the viability of developing commercial wind farms.

Electricity generated by the Cathedral Rocks Wind Farm will help Australia meet its greenhouse gas reduction targets by supplying green energy sufficient for 25,000 homes every year.

The Location

The Cathedral Rocks site is a remote coastal area located near the southern tip of the Eyre Peninsula in South Australia, about 30km south west of Port Lincoln.

The site covers an area of about 29km², with a coastal exposure of nearly 11km and is private farming land.



Construction

The project began in July 2004 with the commencement of road construction. The wind farm will have a final installed capacity of 66 megawatts and consist of 33 two-megawatt wind turbines each with a blade diameter of 80 metres which will be erected on 60 metre tall towers. The wind turbines will be supplied by Danish wind turbine manufacturer Vestas. The total capital cost of the Cathedral Rocks Wind Farm will be over \$100 million with construction due to be completed by September 2005.

Feasibility

Hydro Tasmania began monitoring the wind resource at the Cathedral Rocks site in October 2001 using a 50m monitoring tower located at the southern end of the site. In June 2002 a second 70m tower was erected at the northern end of the site.

The data collected confirms that Cathedral Rocks has a world class wind resource.



Above: Project team at wind monitoring tower



Hydro Tasmania
the renewable energy business

Approval Process

A development application was submitted in April 2003 to the District Council of Lower Eyre Peninsula. The development application contained the findings of extensive studies into the impact of the wind farm on the surrounding environment that were carried out by Hydro Tasmania's Consulting Division. The District Council granted approval for the wind farm in August 2003.

Environmental focus

As part of the approvals process, extensive environmental and cultural studies were conducted. Surveys undertaken included the assessment of potential impacts to Aboriginal and European cultural heritage, flora, visual amenity, noise levels, birds and other animals. Construction of the wind farm is being undertaken with maximum care for the environment.

Fauna studies found that no mammal species of conservation significance are present at the site. Studies indicate that small areas of the site include suitable habitat for the endangered Southern Emu Wren. Potential impact on the species is being managed by avoiding disturbance during breeding season and by fencing off and siting roads away from habitat areas during construction.

To reduce potential collisions with birds flying around the cliff edge the turbines will be set back from coastal cliffs and are more widely spaced.

The construction of the wind farm has been designed to minimise impact on the coastal vegetation. A heritage agreement has been finalised to protect and conserve over 2300ha of vegetation at the site. The project is also contributing to the management of weeds including the 'Bridal Creeper' weed.

The Cathedral Rocks landscape is visually impressive with its rugged limestone sea cliffs. The site is, however, very remote with no facility for public access. The only views of the wind farm site including the cliffs are from Whalers Way about three kilometres to the south east and from the sea.

The turbines will be white in colour to blend as much as possible with the sky and surrounds under different weather conditions. All power cables between the turbines will be buried and the substation and transmission line will be located well away from the coast.



Site prior to construction

Transmission line

A 30km transmission line is being constructed to the Cathedral Rocks site. The line will consist of Stobie poles, as they have a smaller footprint on the environment.

Community consultation

The joint venture partners are committed to an extensive public consultation program that provides key stakeholders, interested groups and the local community with information on the project and an opportunity to provide feedback.

The Barngarla and Nauo people were the traditional inhabitants of the Cathedral Rocks Wind Farm Site and surrounding areas. The joint venture is working closely with the Aboriginal community through the Port Lincoln Aboriginal Community Council, to ensure that their interests in the area are considered and respected during the proposed wind farm development.

Tourism opportunities are also being considered.

Interested in learning more?

For more information on the progress of the Cathedral Rocks Wind Farm project, please contact the Project Manager Mr Mike Gilmore at michael.gilmore@hydro.com.au or telephone: 0419 496 201.

For more information on the joint venture partners visit the following websites:

Hydro Tasmania: www.hydro.com.au

EHN: www.ehn.es



Example of Transmission tower, the Stobie pole

