

WIND POWER

PW 00022

Coober Pedy has been catapulted into the 21st century with the advent of the installation of a wind generated power plant.

Clearing customs the first week of March 1991, the Danish-built Nordex 150 Wind Turbine Generator was then transported to Coober Pedy in sections.

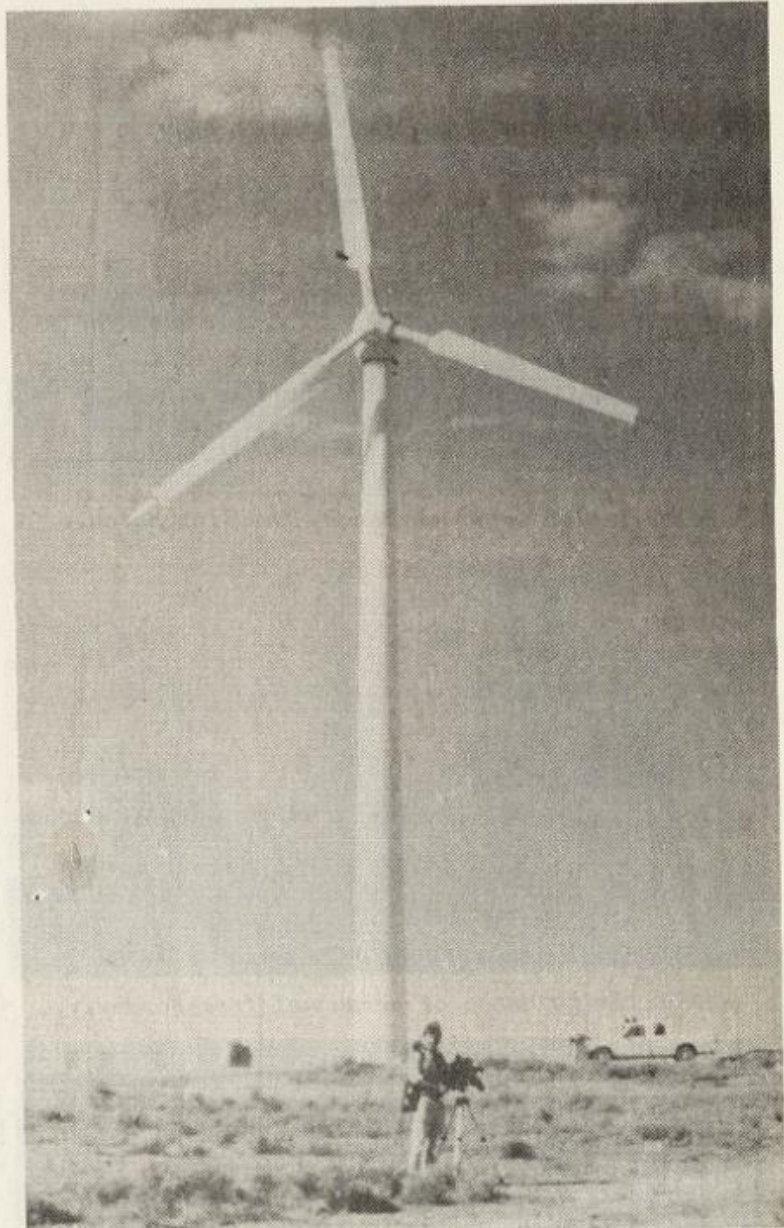
Installation began on Monday the 11th March under the guidance of personnel from Nordex of Denmark, the Electricity Trust of South Australia and the Office of Energy Planning.

One of Australia's largest cranes, a 100 tonne Nissan, was booked to help assemble and erect Australia's largest Wind Turbine Generator.

...sting a 30 metre high steel tubular tower supporting three fixed pitch blades which span 27 metres, this prominent landmark dominates the town. "It'll be an amazing tourist attraction", said local Lance Stormonth.

Funding for the experimental project came from the Commonwealth Government's Energy Research Development and Demonstration program (\$300,000), the State Treasury (\$200,000), the Electricity Trust of South Australia (ETSA - \$100,000) and the Office of Energy Planning (\$100,000).

The Nordex 150 Wind Turbine Generator, a supplement to the diesel-powered generators at the Coober Pedy power station, is expected to generate more than 300,000 kilowatt hours of electricity per year. Projected fuel



Coober Pedy's Danish-built Nordex 150 Wind Turbine Generator towers over the town. (All Wind Turbine photos courtesy of Todd Arthur).

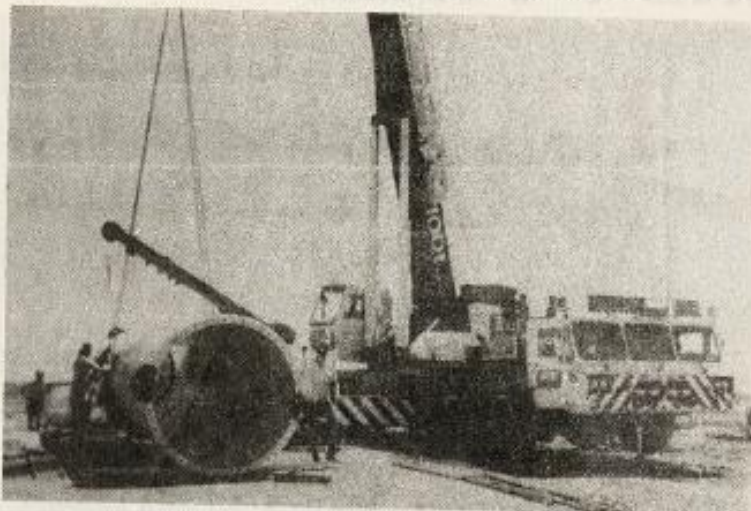
savings is approximately 100,000 litres a year or \$60,000.

The Wind Turbine Generator is equipped with a twin-speed generator which cuts in at speeds as low as 3.5 metres

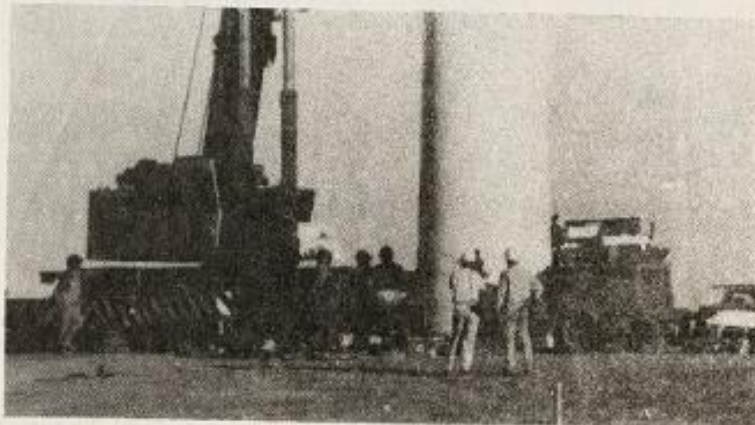
per second (about 12kph) and generates its rated output of 150 kilowatts with wind speeds of 10 metres per second (35kph).

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Wind power cont...



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under the guidance of personnel from Nordex,...



Electricity Trust of SA & Office of Energy Planng.

From Page 5.

Operations Manager of the Coober Pedy Electricity Supply, Ken Marks, said that prior to the installation of the Wind Turbine Generator, "the revenue from Coober Pedy didn't even pay the fuel bill". The State Government will benefit from this pilot project by reduced subsidy payments for remote area electricity supply. Electricity rates for residents will not directly be affected.

The Nordex 150 Wind Turbine Generator will be closely monitored for two years, and collectively managed by the Office of Energy Planning, the Electricity Trust of South Australia and the District Council of Coober Pedy.

Works Manager for the District Council of Coober Pedy, Grant Drummond, said that the Wind



One of Australia's largest cranes, a 100 tonne Nissan

Wind power cont...

Turbine Generator has been excellently crafted down to a fraction of a millimetre, with nothing left to chance.

Although Coober Pedy has been labeled as "the driest town in the driest state on the driest continent of the world", even lightning rods have been placed on top of the nacelle to protect against the possibility of a strike during a storm. Ken Marks confirmed that a lightning strike in November 1990 "burned out the big generator"

Vi Nguyen, a Chemical Engineer for Renewable Energy Technologies of ETSA, stressed the importance of decreasing the use of diesel fuel which emits the greenhouse gas, carbon dioxide, and increasing the use of alternative energy.



Harnessing the third blade for installation



Hoisting the third blade into position



Installing the first 27 metre fixed pitch blade



Taking a ride to the top

It is estimated that the operational Wind Turbine Generator will reduce Coober Pedy's annual output of carbon dioxide by 300 tonnes.

The success of this demonstration project could lead to the installation of more Wind Turbine Generators in remote areas.

Mayor John Thrower envisages the town as becoming a major hub for alternative energy sources.

On the morning of Monday the 15th March, Coober Pedy was propelled into the future. "It's ready to go", said Ken Marks.

One resident summed it up very simply, "I like that windmill up there. I reckon it's a ripper."

Nancy Dold

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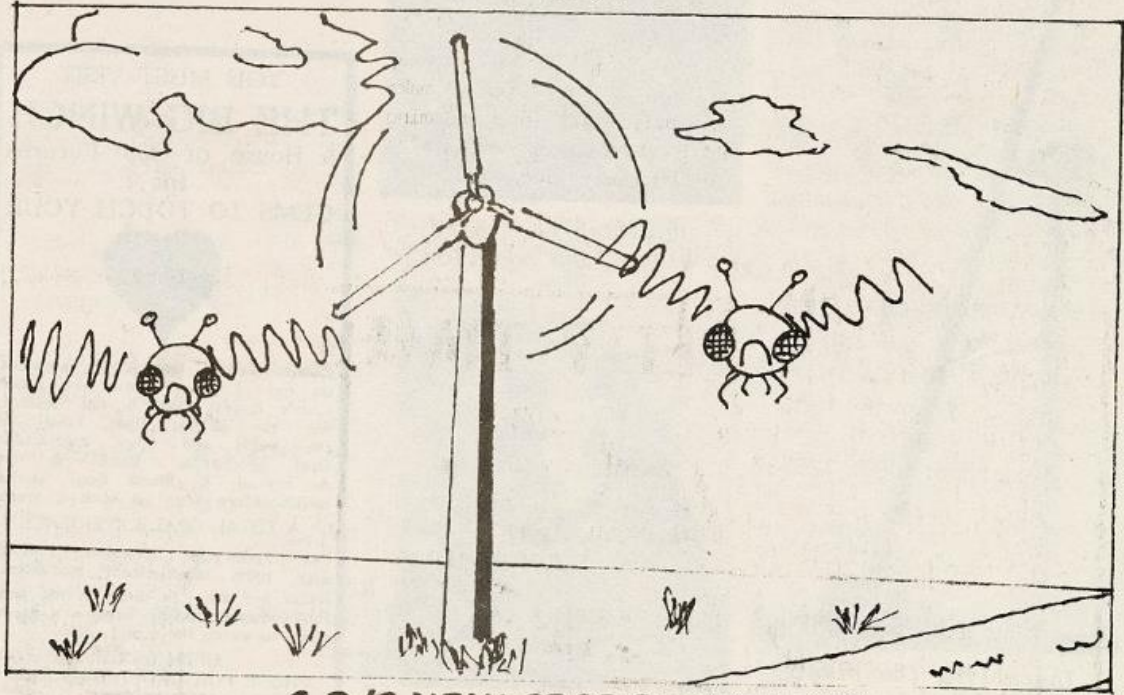
Coober Pedy's lookout & landmark on top of town centre is Coober Pedy's largest Opal & Art Gallery. See the largest Opal Fossil in the world and other spectacular Opal specimens. Rough & cut & crystal & black Opal stones never before seen on such a scale.

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