COOBER PEDY ELECTRICITY SUPPLY

History: John Roufos provided Coober Pedy's first power supply. A new diesel fired Power Station was constructed in 1977 by The Electrical Trust of South Australia (E.T.S.A.) who took over the power supply and maintained it under contract, constructing power lines and street lights throughout the town. The capacity was 3.5MW (Mega-watts) At this time power was generated by 6 small diesel engines and by 1989 these were unable to meet the total demand with resultant blackouts and power failure. In 1989 a large 1.5MW generator was built providing an additional 30% power supply which alleviated this problem, making the Coober Pedy Power Station the largest Diesel fired station in Australia.

In December 1988, the District Council of Coober Pedy took over control of the power station and power supply.

In March 1991 a Nordex Wind Turbine Generator was installed and commissioned. It has three fixed pitch blades and a twin speed generator which allows it to maximise its output in the lower wind speeds of Coober Pedy. It is situated adjacent to the Coober Pedy Power Station and is mounted on a 30 metre high steel tower. It has an output of approx 200 KW (kilo-watts – there are 100,000 KW to a mega-watt) and services approx 35-40 houses which is about 4% of the towns power supply.

During 1991 a new High Voltage Switchboard and an Auto-sequencing Plant was installed. This has a Symex processor, the brain of the unit which senses when there is more or less power capacity required and responds accordingly. e.g. if more power is required, the system will start up another generator to cope with the extra demand. Likewise when less power is needed, it will automatically shut down the generator/s which are not required. It also records the ambient temperature outside as well as the temperatures of the operating machinery to ensure that no generators overheat thus saving costs on fuel and wear and tear on the plant.

When there is a minor fault it has an Auto Re-close system which will trip the feeder and reclose automatically. It will try to bring the power back on line two more times before closing down altogether.

If a major fault occurs the Circuit Breakers will open and stay open. The servicemen then, with the aid of the computerised system, locate and repair the fault, bringing the station back on-line with as little delay as possible.

Fuel The station uses and burns 35000 litres of oil and approximately 3.25 million litres of diesel per year. This equates to approximately 9000 litres of diesel per day.

Engines Power is generated by 3 small 1100 HP (horsepower) Caterpillar engines, 1 x 1500 HP English Electric engine and 1 x 3000 HP English Electric engine which is the largest generator in South Australia.

Costs The revenue from the Electricity charges do not pay for the total cost of generating the towns power supply and this is subsidised by E.T.S.A. to the value of approximately $2.5 million per year.

Residents pay .1260c/unit for domestic useage
.2135c/unit for commercial useage
The actual cost is between 65-69c/unit, which would be beyond the means of the towns people to afford.