

# AGL's Bogong Project brings out the specialists

**A**WARD winning, Corke Instrument Engineering has a knack for being in the right place at the right time and AGL's \$250 million Bogong Power Station was no exception. The environmentally sensitive Bogong project demanded the very best from those in a supporting role and so it's little wonder that Corke were AGL's preferred choice for the electrical installation. The company is a 30 year, industry veteran with a history of involvement in many of the most prestigious projects undertaken in Australia. Apart from AGL, the company has worked on projects for Amcor, Exxon Mobil, Qenos and Alcoa of Australia, as well as many other companies involved in the broad spectrum of industrial endeavours in oil, gas, water, power generation, transport, manufacturing, infrastructure and telecommunications.

Although acquired by Downer EDI earlier this year, the family members are still in there doing their thing. But to describe Corke has a family concern in the true sense of the word would be to underestimate the company's size, its know-how and its strength. The company has come a long way in the three decades since its inception and now has a 350 strong workforce and are proven leaders in instrumentation and electrical contracting.

When applying its trade Corke adheres to various policies that govern the company's approach to every project and this includes strict observance of environmental laws and regulations even to the point of waste management, recycling and treatment of waste materials on every site. The company also insists on strict work



practices to maintain worker safety on all projects and the company provides training for all employees to ensure that those standards are met.

Corke has always had a big picture, best practice view. Environmentally conscious, the company has continually applied its expertise with an eye on an ever-changing landscape, where the emphasis has constantly shifted toward a greener approach to energy needs.

In this case AGL Energy were building the new 140MW Bogong Power Station which included the construction of a 6.9km tunnel, headworks and transline for a project defined as the Bogong Power

Development. Located in the upper catchment of the Kiewa Valley about 360 km north-east of Melbourne, the project was extremely, environmentally sensitive. Apart from protecting the local, rural environment, an important aspect of this particular application of renewable energy was to reduce the impact on the surrounding area and in particular to return waterways to their original state.

In a very clever environmental application of renewable energy AGL provided a cascaded Hydro-link between the existing McKay Creek and Clover Power Stations. This return reinstated the flows in the Pretty Valley branch of

the East Kiewa River to natural flows. In a masterstroke AGL dramatically minimised the use of a natural resource by re-using existing water flows from the McKay Creek Power Station to generate electricity at four power stations.

Of course it all has to work efficiently and in principle, amongst a relatively small number of contracted suppliers, Corke were responsible for the installation of the balance of plant under the direction of their Project Manager, Milton Harwood and Site Manager, Neville Batt.

The Corke team's contribution included the supply and installation of all light and power, the ventilation system; the emergency generator system and earthing system. Corke also supplied and installed a number of other systems to manage water cooling, drainage, compressed air, battery backup and an emergency fire system.

Corke also supplied and installed all the necessary high voltage and low voltage switchboards as well as the control equipment and all cables. Corke also supplied two in-house cranes for the heavy lifting of equipment including a 160 tonne generator rotor.

At the end of the day and in typical fashion, Corke Instrument Engineering completed the contract on time and on budget. Along the way the company won an Australian Award for 'Care of the Environment' in appreciation of the sensitive excavation process used in the laying of cables. This was yet another award to add to those received in that past and further emphasised Corke's environmentally friendly credentials.



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### Corke Instrument Engineering supplied the following to the Bogong Power Station Project:

- Design Constructability review including:
  - o Station layout detail
  - o Cable & Terminations schedules
- Procurement, Installation, Termination and Testing of the 3 x 220kv (400sq mm) network link cable including the 220kv termination yard. The cable route runs beneath the East Kiewa River and up a steep incline through significant vegetation. The care demonstrated during these works saw Corke's subcontractor J C Reid receive the Australian Award for 'Care of the Environment'.
- Procurement and Installation of 2 in-house cranes:
  - o 1 x 160T (size of generator rotor) and
  - o 1 x 10T crane.
- Procurement, installation and Commissioning assistance of:
  - o HV & LV Switchboards
  - o Control system
  - o Earthing system
  - o Ventilation system
  - o Emergency Generator system
  - o Cooling Water system
  - o Drainage system
  - o Compressed Air systems
  - o Fire systems
  - o Battery backup system
  - o Internal Generator wiring for Toshiba
  - o Light and power



Above: The tops of the 2 Generators which show the Exciters on the Turbine Floor.

