SUCCESS STORIES

Welcon Technologies
ELECTRICAL ENGINEERING SPECIALISTS

Geodynamics 1MW Habanero Pilot Power Plant

Background

Geodynamics' objective was to build a 1MW Pilot Power Plant at Innamincka, to utilise the huge heat reserves 4kms underground in the Cooper Basin. The plant successfully proved the process and technology for tapping into this geothermal energy and transporting the heat to the surface to produce electricity. This was achieved by pumping water deep underground at high pressure and forcing it through cracks in the granite like a massive heat exchanger. This heat is then extracted when the water reaches the surface and before it is recirculated underground to keep the circuit going.

Geothermal energy offers the prospect of zero-carbon, base-load energy generation with power that is available 24 hours a day, 7 days a week, all year round. This provides a significant advantage when compared to a number of other zero-carbon power generation technologies, which are more intermittent and less reliable (such as wind, wave and solar power).

Project Specifics	
Client	Geodynamics
Location	Innamincka, South Australia
Year Completed	2013
Size / Quantities	E&I Design - $1M
Services Provided	• Detailed HV and LV Elect Design • Instr Design and Selection • Control System Strategy • E, I & C Construction Drawings and Installation Specifications • Elect and Instr Procurement Specs • Power System Modelling • Protection Relay Settings • Lightning Risk Assessment • FATs, E&I Testing/Commissioning
Delivery Method	Elect & Instr Design Consultant for the Constructor

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