

# Bundaberg Sugar Ltd - Millaquin Mill (Qld)

## Powerhouse Upgrade 2002

### Project Overview

i.Power Solutions was awarded a contract by Bundaberg Sugar Ltd to design, construct, supply and commission a new turbo-generator governing and voltage regulating system for the three existing turbo-generators at Millaquin Mill.

### Description of Works

The scope of work included control panels, Basler Digital Excitation regulator equipment, fibre network, protection relays, battery chargers and Earthing Resistor circuit breaker cubicle.

#### Control System

The new system was required to interface to existing turbo-generators and 415-volt switchboards and control equipment. i.Power Solutions, as the only officially appointed Basler systems integrator in Australia, were well placed to design the excitation system. The DECS 125-15 regulator was selected as it matched the field excitation requirements.

Five separate panels were designed to house the equipment and these were:

\* Three CGC/AVR Panel that comprised the Si-TEC CGC x-Tend module, DECS regulator and excitation equipment, Protection relay and Vipa remote I/O bases on Profibus DP

\* Single GSM/Incomer Panel that comprised the Si-TEC GSM x-Tend module, Vipa remote I/O bases on Profibus DP and further connections

with Modbus between the Si-TEC modules. Fibre Optic cables and converters between the GSM/Incomer panel and Siemens PLC provides reliable communication link.

\* Three Battery Charger Panels which included separate chargers and battery banks for the CGC and GSM modules

Commissioning of the system with i.Power Solutions and Dawson Technology took place in 2002 just prior to the commencement of the crushing season.



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