AUSGRID LEARNING CENTRE
ENERGY AUSTRALIA

PROJECT **DETAILS**

PROJECT LOCATION:
Holker Road, Silverwater
NSW 2128

COMMENCEMENT DATE:
September 2009

COMPLETION DATE:
January 2011

TYPE OF CONTRACT:
Construct

CONTRACT VALUE:
$6 Million

GROSS FLOOR AREA:
15,000 sqm.

PROJECT MANAGER:
Rick Fewtrell

CONSTRUCTION MANAGER:

OVERVIEW **TRADE PACKAGE**

The Energy Australia Learning Centre involved the construction of a multiple-storey training facility, basement car parking, service areas and external landscape and training yard areas. Works included general building works, fitout and FF&E works, landscaping, structural and civil and services works including communications and lifts, signage and fencing.

The fundamental importance was obtaining a 6-Star Green Building Council of Australia (GBCA) Green Star Design Rating and Green Star As-Built Rating.

Star Group's scope of works included

- Underground conduits for HV and LV network cables
- Consumers Mains and associated conduits
- Main Switchboard
- Power factor correction equipment and associated controls
- Submains, complete with all terminations to all switchboards
- Main distribution boards and Meter Panels
- Earthing system• Starter socket outlets and soft-wired socket outlets
- Cable trays and ladders
- Light fittings and Lighting control systems
- Light and power subcircuits.
- Skirting ducts
- Floor boxes and associated conduits
- Emergency escapes lighting systems and exit signs
- Computer based emergency escape lighting and exit sign monitoring system
- Interface with building monitoring system for lighting control

STAR group

- Diesel generator standby power system and controls
- Bulk fuel tank and fuel transfer system
- Busway systems, including take-off boxes and power supplies for fixed equipment and machines
- Uninterruptible power supply (UPS) system and controls
- Private electronic meter system and associated software
- Photo-voltaic cell arrays and controls & connection of PV cell arrays
- Lightning protection system.

PROJECT **CHALLENGES**

- Obtaining a 6-Star Green Building Council of Australia (GBCA) Green Star Design Rating and Green Star As-Built Rating
- Custom light fittings manufactured in Europe
- Photo-voltaic cell arrays and controls & connection of PV cell arrays to motor operated switches and associated electrical services infrastructure.
- Interface with building monitoring system for lighting control and electrical private meter monitoring.
- Diesel generator standby power system and controls
- Tri-generator system and controls.

PROJECT **SPECIFICS**

- Designed with a number of features to reduce energy and water use in mind, one of the most important features is the ability of the building to monitor and display its energy and water use helping staff to recognise and reduce their impact.
- Geothermal bores provide cool water for the air conditioning plant, while a hollow core slab thermal mass system maintains building temperature more evenly. A 260-panel, 51 kilowatt photovoltaic system has been installed on the roof and rainwater is collected in a 147,000 litre rainwater tank. The centre also includes 10 electric vehicle charging stations.
- Purpose-built training features a pole yard for heights training, jointing pits for cable jointers and electrical mechanics workshops have been catered for. A substation simulator, allowing apprentices to hone their skills in different simulated electrical environments was also installed which linked major Energy Australia (EA) substations within the Sydney CBDA ground level incorporating an Integrated Medicine Centre, retail areas, transit lounge and support areas.
- Partial refurbishment of Radiation Oncology building levels 1 and 2.

STAR group

www.star-group.com.au