



## BULWER ISLAND

Queensland, Australia

### Capacity

- 33 megawatts
- 150 tonnes/hr. of steam

### Equipment

- Two 13 megawatt Siemens SGT400 gas turbines each equipped with a TEI-Senior heat recovery steam generator designed to produce a total of 90 tonnes per hour of steam
- 7 megawatt Peter Brotherhood steam turbine
- One 60 tonne/hr. Rolls Royce John Thompson boiler designed to run on both natural gas and refinery off gas
- One 200 tonne/hr. demineralization facility supplied by AquaClear

The Bulwer Island Cogeneration Station provides 100% of the electric needs, 75% of the non-process HP steam and 100% of the demineralized water needs related to the expansion of BP's Bulwer Island Refinery in Queensland, Australia.

The 33 megawatt (MW) electrical and 55 MW thermal-equivalent cogeneration / combined-cycle power station provides energy to BP's Queensland Clean Fuels Project. BP's \$500 million AUD expansion at Bulwer Island enabled the refinery to produce world-class, ultra low sulphur diesel fuel and to set a new environmental standard for the Australian fuel market.

The cogeneration station was part of the Queensland Clean Fuels Project, which won the 2001 Australian Construction Achievement Award.

ATCO was involved in the project management, construction and commissioning of the Bulwer station. As the operating partner, ATCO is responsible for the complete operation and maintenance of this facility.

ATCO and Origin Energy of Australia each hold a 50% ownership interest in the Bulwer Island Cogeneration Station.

### Highlights

- Low emissions, NOx and SOx. High overall thermal efficiency (>70%)
- Utilizes recycled water from the Brisbane City Luggage Point facility for the demineralization facility and for the cooling system
- Can provide "islanding capability" for the refinery in the event of loss of power from the grid
- Long-term energy services agreement with BP

### Commissioned

- 2001

### Ownership

- ATCO – 50%
- Origin Energy – 50%



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