

**Brock University  
St. Catharines, Ontario  
Cogeneration Facility**



**Client**

Sandwell Inc./Brock University

**Project**

Cogeneration Facility

**Services**

Mechanical and I&C engineering services, procurement, design audit and technical management

**Project Description**

Acting as subcontract to Sandwell Inc. to provide engineering and technical management services for the construction of an 8 x 820 Kw reciprocating engine cogeneration facility. Energy recovered from the high temperature engine jacket water cooling system and flue gas exhaust system was utilized in a hot water circulating loop and recovered in the existing hot water heating and chilled water system.

Hot water was recovered via water to water heat exchange and integrated into the existing hot water loop and gas fired boiler. A single effect 800 ton (1000 ton rated) Trane absorption chiller was added to the existing central chilled water facility to recapture the waste heat from the cogeneration facility during summer months when heating loads are not significant. Both systems were integrated in an existing dual temperature thermal storage system that allowed operating flexibility of the cogeneration facility to maintain peak efficiency and maximize displacement electrical savings.

The project was completed in July 1994.



**Can Ecosse Engineering Inc.**