



## Lake Superior Power 110 MW Combined Cycle Cogeneration Plant

**Location:** Sault Ste. Marie, Ontario, Canada

**Client:** Union Energy

**Gryphon Contact:** Henk van Ballegooyen

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**Project Summary** Installation of a 110 MW gas turbine based, combined cycle, cogeneration plant to supply power to the Ontario power grid and process steam to St. Marys Paper Co. The cogeneration plant major equipment included two 40 MW GE LM6000 gas turbine generators, two duct fired heat recovery steam generators (HRSGs), and one 30 MW automatic extraction condensing steam turbine generator.

Design steam pressures are 925 psig turbine supply and 150 psig export steam.

**Project Services** Appointed as owner's engineer throughout the project duration from feasibility study to commissioning and startup of the facility, and also provided detailed engineering for off-site facilities during project implementation phase. Gryphon's services included the following:

- Site selection and detailed feasibility study prior to the implementation of the project.
- Plant schematic conceptual design for the facility including the high voltage transmission system.
- Preparation of detailed specifications for and execution of contracts for the gas turbine generators, steam turbine generator, heat recovery steam generators, transformers, switchyard, and balance of plant construction.
- Detailed design of the 1-mile long, 16-inch diameter, process steam line to St. Marys Paper and of the fuel oil storage and supply system.
- Contract and project administration, inspection, and expediting.
- Specification, coordination, and carrying out of overall plant performance tests.
- Engineering and design to support the environmental assessments and permit applications prepared by others.



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