

## North Bay and Kapuskasing Enhanced Combined Cycle Power Plants



**Location:** North Bay, Ontario - Kapuskasing, Ontario

**Client:** TransCanada Pipelines

**Gryphon Contact:** Dominic Au

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**Project Summary** Expansion of facilities at each of the two TransCanada Pipelines (TCPL) gas compressor stations to provide for 40 MW combined cycle power generation at each site. Expansion includes once through steam generator (OTSG) addition to existing gas compressor drive turbine and installation of one new gas turbine generator with duct fired OTSG, one steam turbine generator, air cooled condenser, plant auxiliaries, electrical switchyard, and overhead transmission lines.

Design steam pressures and temperatures at both stations are 790 psig/900°F.

**Project Services** Initially appointed as owner's engineer for the combined North Bay & Kapuskasing projects, Gryphon provided conceptual design and project definition engineering including project cost estimate and support for environmental impact studies. Additionally, Gryphon provided the service of design/build contract bid specifications, technical coordination, and contract bid selection.

Subsequent to acting as owner's engineer, Gryphon provided detailed design engineering for the following:

- Plant layout, system process design, and detailed design of all mechanical systems including steam, feedwater, condensate, condensate polishing, water treatment, and other miscellaneous systems.
- Detailed design of the steam turbine bypass system and steam energy dispersion devices to meet the plant operation requirements and noise limits.
- Detailed design of the high voltage electrical system.
- Technical coordination for all major equipment supply contracts.
- Preparation of plant automatic control schemes.
- Preparation of steam piping air blow cleaning procedure.
- Engineering and design to support the environmental assessments and permitting applications prepared by others.



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