



TransCanada Energy / Irving Oil Grandview Cogeneration Plant

Location: Saint John, New Brunswick, Canada

Client: AECON Industrial

Gryphon Contact: Dominic Au

Project Summary

Conversion of the existing Irving Oil Refinery steam generating facilities (two fired-boilers / HRSGs) to a cogeneration plant by the addition of two new GE LM6000PD natural gas fired, dry low-NOx gas turbine generator packages, and auxiliary equipment including gas compressors, steam and glycol systems, continuous emission monitoring systems, and exhaust ducts with bypass stacks.

The 50 MVA units were connected via unit transformers to the Irving Oil 138-34.5 kV transformer substation. The plant is capable of islanding with the refinery loads and black start during utility grid failures. The black start units were arranged to synchronize with the NB Power system across a choice of 34.5 or 132 KV breakers.

Project Services

Initially appointed as owner's engineer for the cogeneration project, Gryphon provided conceptual design and project definition engineering including project cost estimate. Gryphon also completed the design / build contract bid specifications and provided technical coordination.

During the project implementation phase, Gryphon provided detailed design engineering for the engineering, procurement, and construction (EPC) contractor for the following:

- Plant layout, system process design, and detailed design of all the mechanical systems.
- Civil/structural design.
- Electrical system design and site startup assistance.
- Instrumentation & controls system design including upgrading of the existing DCS system.



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