



Conestoga-Rovers & Associates Project Summary

KEY PROJECT ELEMENTS

- Preliminary Design
- Detailed Design
- Support During Construction
- Integrated Boiler Controls
- Integrated Pumping Controls
- Integrated Cooling Tower System Controls
- HMI Interface
- Utility Interconnection

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SUDBURY DISTRICT ENERGY CENTRAL UTILITIES PLANT

SUDBURY, ONTARIO



TOROMONT ENERGY LTD.

DURATION: 1999-2000

POWER: 5.0-MWe Prime, 10.3-MWt Distributed

Toromont Energy constructed a co-generation plant on behalf of Sudbury District Energy Corporation adjacent to downtown Sudbury. The 5.0-MWe of electrical power is connected to the local utility's grid. The thermal power (10.3-MWt capacity) distributed by 2.5 km of underground insulated piping is used to heat 7 office/ municipal buildings in the downtown area. The plant consists of two 2.45-MWe reciprocating engine-generator sets, three 2.0-MWt step fired natural gas boilers, thermal heat transfer equipment, thermal heat rejection equipment, medium voltage switchgear, motor control centres, control panels, utility interconnection, electrical substation, building envelope, building systems, and remote control and monitoring (SCADA).

CRA provided design services for the electrical, and instrumentation and control installation of the power generation equipment and the development of PLC programming for the control and monitoring systems. In addition to the electrical engineering services, CRA staff, while with a previous firm, undertook the project management, design management, utility interface protection, electrical system design and construction management for the project. Additionally, negotiation and coordination was conducted with the local hydro utility and Ontario Hydro.

The duration of the project was 11 months from the approval to proceed to the generation of power. This multi-million dollar project was delivered on schedule and on budget.