



Manitoba Hydro Louis Riel Substation Construction

CLIENT

Manitoba Hydro

LOCATION

Winnipeg, Manitoba

PROJECT DESCRIPTION

Manitoba Hydro is a major energy utility providing the lowest electricity rates in Canada. It operates 15 hydroelectric facilities on the Saskatchewan, Winnipeg, Burntwood, Laurie and Nelson Rivers; two thermal stations; and four diesel generating stations. Black & McDonald (B&M) was working as a prime contractor to the utility on the construction of a substation named for the province's founder, Louis Riel.

B&M SCOPE OF WORK

B&M's scope of work included supply of all supervision, qualified labour, tools, equipment, hardware and materials required to complete project as described:

Louis Riel Substation Construction

500 kV Outdoor Yard

- Installation of electrical equipment (transformers, switches, etc.)
- Installation of steel structural support and insulators
- Installation of tubular and bundled wire bus
- Installation and testing AC/DC wiring
- Installation and testing of protection and controls, SCADA wiring
- Equipment, structure and system grounding

Manitoba Hydro Louis Riel Substation Construction

240 kV Outdoor Yard

- Installation of electrical equipment (transformers, switches, etc.)
- Installation of steel structural support and insulators
- Install tubular and bundled wire bus
- Installation and testing of AC and DC wiring
- Installation and testing of protection and controls, SCADA wiring
- Equipment, structure and system grounding

46 kV Outdoor Yard

- Installation of electrical equipment (transformers, switches, etc.)
- Installation of steel structural support and insulators
- Installation of tubular and bundled wire bus
- Installation and testing of AC/DC wiring
- Installation and testing of protection & controls, SCADA wiring
- Equipment, structure & system grounding

Other Work We Performed

- Installation of indoor and outdoor 12 kV distribution system
- Installation of protection and controls, SCADA equipment
- Installation of conduit and cable trays
- Installation of grounding system

B&M's project management responsibilities included all supervision, construction plant, equipment, labour, material and permits for completion of transmission line construction works. It also included securing materials from hydro stores and transportation to the work sites, and management of the project schedule, health and safety program, the environmental program, and a quality program. Finally, the project management covered construction as built, test reporting and documenting surplus materials and packages and returning them to Manitoba Hydro stores.

BENEFITS TO CLIENT OR PROBLEM SOLVED

When Manitoba Hydro needed to construct a vital power substation as part of its electrical infrastructure, it called on Black & McDonald to ensure the job was done right and on time.