

603 County Road 49 - 44kV Substation for LTC in Picton

Tender Breakdown - Electrical 44kV Substation

Owner: Prince Edward County

Oct 3, 2024

Contract: TBD

Item	Description	Unit	Qty	Unit Price	Item Price
1.0	Complete Construction of 44kV Substation				
1.1	General Electrical Requirements: Start Up, ESA Inspections, As Builts, and Local Utility Coordination, etc	LS	1	\$	\$
1.2	44kV Switch Pole: complete with 55' Class "L" Pre-Cast Concrete Pole 44kV Primary Load Break Adulti-Rupter Switch, pipe extension with Rotating Type Handle Operating Mechanism, Six (6) SMD-2C Fuses, three 39MCOV 48kV Polymer Intermediate Class LA's, Gradient Mat and #3/0ACSR Overhead Primary Conductors for connection to Hydro One pole. Include all required mounting hardware, crush stone, ground rods, grounding conductor and support brackets.	LS	1	\$	\$
1.3	44kV Underground Primary Ductbank and Cable: 4x103mm Rigid-DBII Ducts and 3-1C #4/0AWG AL 46kV Type URD Primary Cables (1 cable per duct) plus HV cable terminations at both ends. Estimated distance between Pole and Transformer is 100m.	LS	1	\$	\$
1.4	Main Transformer T-1: 44kV -600/347V 2MVA Substation Transformer installed on concrete foundation, complete with LV cable terminations, #2/0AWG Cu Bare ground grid around transformer with four (4) 19mmDia.x3m Cu-Clad grounding rods and ground connections to transformer.	LS	1	\$	\$
1.5	Ground Grid: 44kV Main Substation grounding system complete with twenty (20) 19mmDia.x3m Cu-Clad grounding rods, 80m x 15m (1200m2area) ground grid in 5m x 10m grid pattern, #2/0AWG Cu Bare ground conductor, and Cu compression connectors and interconnected to grid around transformer.	LS	1	\$	\$
1.6	Pole Foundation: Engineered Concrete Foundation for 44kV Switch Pole prepared and stamped by P.Eng registered with the PEO in the Province of Ontario for free-standing design. Refer to OESC Clause 75-300 4).	LS	1	\$	\$
1.7	Transformer Foundation: Engineered Concrete Foundation for Substation Transformer T-1, prepared and stamped by P.Eng registered with the PEO in the Province of Ontario.	LS	1	\$	\$
1.8	Transformer Site Testing: include field testing of transformer for turns ratio, winding resistance, power factor and dissipation, insulation resistance, and Dissolved Gas Analysis (DGA) and standard oil sample. Include 24 hour soak in time of transformer prior to adding load. Submit start-up report.	LS	1	\$	\$
1.9	Auxiliary Ductbank: Provide 2x53mm Rigid PVC Ducts Between Electrical Room and Transformer Control Box, including 2C#12AWG+GND Cu RW90 power cables for space heater in control box, 8C#12AWG+GND Cu RW90 for 120VAC Alarm Wiring and Terminal Box inside Electrical Room.	LS	1	\$	\$
1.10	Miscellaneous Items: twelve (12) Concrete Bollards with ground connection	LS	1	\$	\$
Subtotal Item 1.1				\$ -	