

December 6, 2010

Ms. Eva Tarasiewicz
Sr. Planning Engineer
Hydro One Networks Inc.
483 Bay St., 15th Floor, North Tower
Toronto, ON
M5G 2P5

Dear Ms. Tarasiewicz

***Install New 230 kV Disconnect Switches on M20D & M21D at Preston TS
Notification of Conditional Approval of Connection Proposal
CAA ID# 2010-EX514***

Thank you for the detailed information regarding the new disconnect switches on M20D/M21D at Preston TS.

We have concluded that these proposed changes will not result in a material adverse impact on the reliability of the integrated power system.

The IESO is therefore pleased to grant **conditional approval** for the modification detailed in the attached assessment report. Any material changes to your proposal may require re-assessment by the IESO in accordance with Market Manual 2.10, and may nullify your conditional approval.

Final approval to connect the facility to the IESO-controlled grid will be granted upon successful completion of the IESO Market Entry process including, without limitation, satisfactory completion of the requirements set out in the System Impact Assessment report. During this process you will be expected to demonstrate that you have fulfilled the requirements and that the facility you have installed is materially unchanged from the proposal assessed by the IESO. Please refer to the '**External Guidelines for Connection to the IESO**' attachment in your approval email for key steps in the Market Entry process. In order to initiate this process, please contact Market Entry at market.entry@ieso.ca as soon as possible prior to your energization date.

For further information, please contact the undersigned.

Yours truly,

Barbara Constantinescu
Manager – Market Facilitation
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cc: IESO Records

Final Report - Expedited System Impact Assessment Hydro One Networks

1.0 GENERAL DESCRIPTION & PROPOSED MODIFICATIONS

Hydro One is planning to install motorized air-break disconnect switches on the 230 kV circuits M20D and M21D at Preston TS to meet the IESO's criteria to restore power in the event of a contingency. These disconnect switches will be used to isolate autotransformer T2 and the DESN transformers T3 and T4 at Preston TS from M20D-M21D. Some load can then be restored via autotransformer T2 within the 30 minutes specified by the Ontario Resource and Transmission Assessment Criteria document.

The proposed configuration is shown below in figure 1.

The expected in-service date is January 3, 2011.

2.0 TECHNICAL SPECIFICATIONS

The technical specifications of the new disconnect switches are given in Table 1 below.

Motorized Line Disconnect Switch Specifications (on M20D-M21D at Preston TS)	
	New Switches
Configuration	3 phase
Maximum Continuous Rated Voltage	250
Rated Continuous Current	2000
Short Circuit Symmetrical Duty Rating	63 kA

Table 1 – Specifications of New Disconnect Switches at Preston TS

3.0 REQUIREMENTS

The proponent must notify the IESO as soon as it becomes aware of any changes to the assumptions made in the connection assessment. The IESO will determine whether these changes require a re-assessment.

Maximum Voltage

Appendix 4.1, reference 2 of the Market Rules states that under normal conditions voltages are maintained within the range of 220 kV to 250 kV. Thus, the IESO requires that the 230 kV equipment in Ontario must have a maximum continuous voltage rating of at least 250 kV.

Fault Levels

Fault interrupting devices must be able to interrupt fault current at the maximum continuous voltage of 250 kV.

The Transmission System Code (TSC), Appendix 2 establishes maximum fault levels for the transmission system. For the 230 kV system, the maximum 3 phase symmetrical fault level is 63 kA and the single line to ground (SLG) symmetrical fault level is 80 kA (usually limited to 63 kA).

The TSC requires that new equipment be designed to sustain the fault levels in the area where the equipment is installed.

Monitoring Requirements for Transmitters

In accordance with the telemetry requirements for transmitters (see Appendices 4.16, 4.20 and 4.21 of the Market Rules) the connection applicant must install equipment at this project with specific performance standards to provide telemetry data to the IESO. The data is to consist of certain equipment status and operating quantities which will be identified during the IESO Market Entry Process.

Protections

Protection systems must be designed to satisfy all the requirements of the Transmission System Code as specified in Schedules E, F and G of Appendix 1 and any additional requirements identified by the transmitter. New protection systems must be coordinated with existing protection systems.

Facilities designated as essential to power system reliability must be protected by two redundant protection systems according to section 8.2.1a of the TSC. These redundant protections systems must satisfy all requirements of the TSC but in particular they may not use common components, common battery banks or common secondary CT or PT windings.

As currently assessed by the IESO, Preston TS is not designated as essential to power system reliability and therefore the above protection requirements do not apply. In the future, as the electrical system evolves, this facility may be designated as such and at that time the above requirements will apply.

Protective relaying must be set to ensure that transmission equipment remains in-service for voltages between 94% of the minimum continuous and 105% of the maximum continuous values in the Market Rules, Appendix 4.1.

The Applicant is required to have adequate provision in the design of protections and controls at the facility to allow for future installation of Special Protection Scheme (SPS) equipment.

Provided that the TSC requirements are satisfied, the IESO does not have additional requirements.

4.0 ASSESSMENT & CONCLUSIONS

This expedited System Impact Assessment concludes that the installation of the new disconnect switches on M20D-M21D at Preston TS is not expected to have a material adverse impact on the IESO-controlled grid.

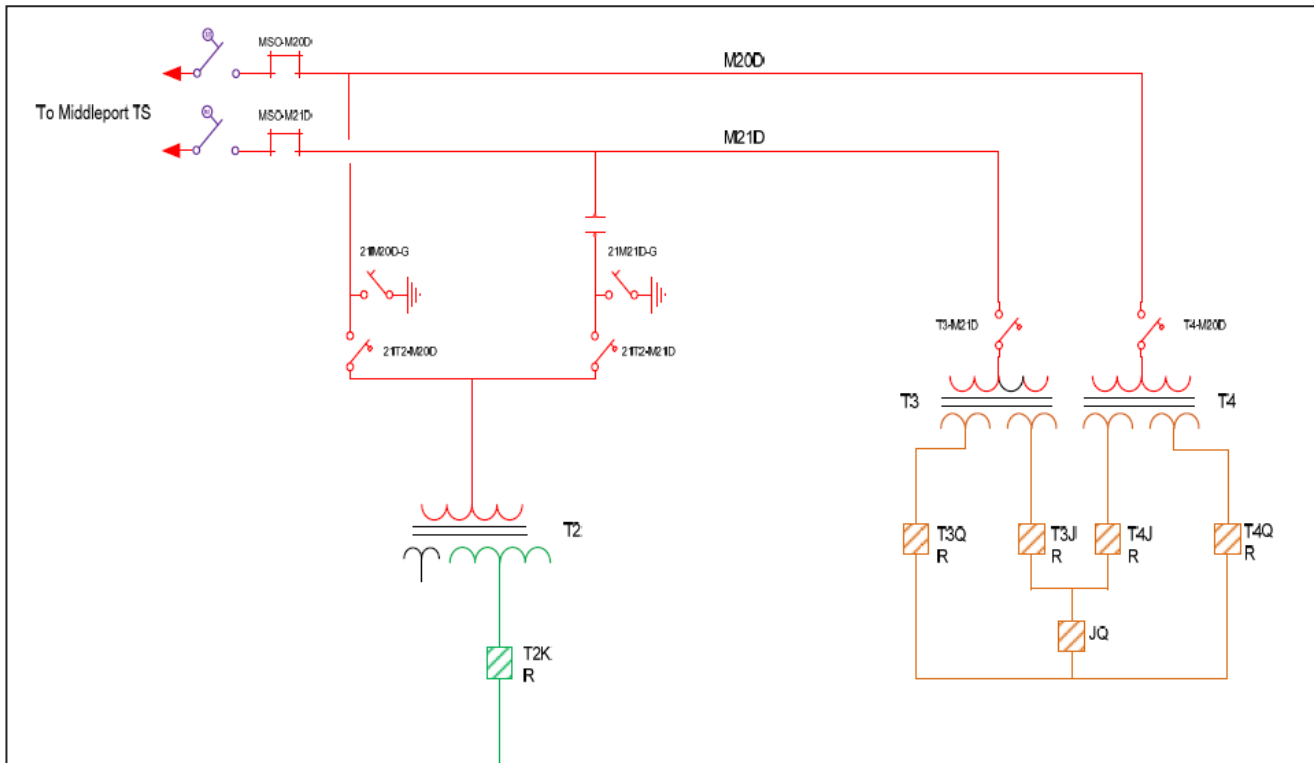


Figure 1 – New disconnect switches on M20D-M21D at Preston TS