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Power to Ontario.
On Demand.
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June 28, 2010

Ms. Dorothy Moryc
Stations and Planning, Engineering Supervisor
Waterloo North Hydro Inc.
300 Northfield Drive East
Waterloo, Ontario
N2J 4A3

Dear Ms. Moryc

Upgrade HV Equipment at Eby Rush MTS
Notification of Conditional Approval of Connection Proposal
CAA ID Number: 2010-EX469

Thank you for the information regarding the proposed HV equipment upgrades at Eby Rush MTS.

We have concluded that the 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,

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cc: IESO Records

Final Report - Expedited System Impact Assessment
Waterloo North Hydro Inc.

1.0 GENERAL DESCRIPTION & PROPOSED MODIFICATIONS

Eby Rush MTS is a DESN type municipal transformer station (MTS) supplied by the 115 kV circuit D8S between Detweiler TS and Seaforth TS and by the 115 kV circuit D10H between Detweiler TS and Hanover TS.

Waterloo North Hydro is proposing to replace existing end-of-life high voltage (HV) equipment with new equipment. Disconnect switches will be replaced with circuit switchers providing interrupting capability. The circuit switchers will include integrated disconnect switches.

In addition, existing ground switches on the line side of the 115 kV disconnect switches and autoground switches will be removed. These details of the ground switches and autoground switches are not part of this assessment.

This work is scheduled to be completed by November 30, 2010.

Transformers T1 and T2 were approved for replacement in the expedited SIA report 2006-EX314 and the addendum for 2006-EX314.

2.0 TECHNICAL SPECIFICATIONS

The two existing disconnect switches T1-D10 and T2-D8 will be replaced with circuit switchers incorporating integrated disconnect switches. The technical specifications of the new circuit switchers are given in the table below.

Circuit Switcher Specifications Eby Rush MTS	
Maximum Continuous Operating Voltage	145 kV
Continuous Current Rating	2000 A
Short Circuit Symmetrical Current Rating	40 kA
Interrupting Medium	SF6
Rated Interrupting Time	60 msec

The technical specifications of the new integrated disconnect switches are given in the table below.

Disconnect Switch Specifications Eby Rush MTS	
Maximum Continuous Operating Voltage	145 kV
Continuous Current Rating	2000 A
Short Circuit Symmetrical Current Rating	63 kA

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.

Appendix 4.1, reference 2 of the Market Rules states that under normal conditions voltages in the south are maintained within the range of 113 kV to 127 kV. Thus, the IESO requires that the 115 kV equipment in southern Ontario must have a maximum continuous voltage rating of at least 127 kV. Fault interrupting devices must be able to interrupt fault current at the maximum continuous voltage of 127 kV.

The Transmission System Code (TSC), Appendix 2 establishes maximum fault levels for the transmission system. For the 115 kV system the maximum 3 phase symmetrical fault level is 50 kA and the single line to ground (SLG) symmetrical fault level is 50 kA. The TSC requires that new equipment be designed to sustain the fault levels in the area where the equipment is installed. If any future system enhancement results in an increased fault level higher than the equipment's capability, the connection applicant is required to replace the equipment at their own expense with higher

rated equipment capable of sustaining the increased fault level, up to the TSC's maximum fault level for the 115 kV system.

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.

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 changes detailed above are not expected to have a material adverse impact on the IESO-controlled grid.