October 11, 2012

Mr. S. Douglas Cromey
Senior Project/Process Engineer
Novelis Inc.
1 Lappan's Lane
Kingston, ON
K7L 4Z5

ieso
Power to Ontario.
On Demand.
Station A, Box 4474
Toronto, ON
M5W 4E5

Dear Mr. Cromey:

Replace Main Breaker 110MB2 at Novelis CTS
Notification of Conditional Approval of Connection Proposal
CAA ID Number: 2012-EX632

Thank you for the information regarding the replacement of the main breaker 110MB2 at Novelis CTS. The IESO has 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 modifications detailed in the attached expedited System Impact Assessment report. Please note that any material changes to your proposal may require a re-assessment by the IESO, and may nullify your conditional approval.

You may now initiate the IESO's **Facility Registration/Market Entry** process. To do so, please contact Registration & Compliance Support at market.entry@ieso.ca as soon as possible prior to your expected energization date. The SIA report, attached hereto, details the requirements that your company must fulfill during this process, including demonstrating that the equipment *as installed* will not be materially different from the equipment *as approved* by the IESO. The document entitled **Market Entry: A Step-by-Step Guide** describes the key steps in the Market Entry process.

When your company has successfully completed the IESO's **Facility Registration/Market Entry** process, the IESO will provide you with a **final approval**, thereby confirming that the equipment is fully authorized to connect to the IESO-controlled grid.

For further information, please contact me via connection.assessments@ieso.ca.

Yours truly,

Michael Falvo
Manager – Market Facilitation
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Final Report - Expedited System Impact Assessment
Novelis Inc.

1.0 GENERAL DESCRIPTION & PROPOSED MODIFICATIONS

Novelis Inc. is planning to replace their main high voltage breaker 110MB2 at Novelis CTS. Novelis CTS is connected to the 115 kV circuits Q3M6 out of Frontenac TS.

The proposed in-service dates will be communicated to the IESO.

2.0 TECHNICAL SPECIFICATIONS

The technical specifications of the replacement high voltage breaker 110MB2 is given in Table 1 below.

Novelis CTS 110MB2 Breaker Specifications		
	Existing	**Replacement**
Configuration	3 phase	3 phase
Maximum Continuous Rated Voltage (kV)	145	145
Maximum Interrupting Time (cycles)	3	3
Continuous Current Rating (A)	1200	2500
Short Circuit Symmetrical Duty (kA)	40	40

Table 1 – Specifications of Disconnect Switches at Novelis CTS

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.

Voltage Requirements

Appendix 4.1 of the Market Rules states that under normal operating conditions, the voltages in the 115 kV system in southern Ontario 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.

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

Fault Levels

The Transmission System Code requires the new equipment to be designed to sustain the fault levels in the area where the equipment is installed. Thus, the connection applicant shall ensure that the new equipment at the facility is designed to sustain the fault levels in the area. Appendix 2 of the Transmission System Code establishes the maximum fault levels for the transmission system. For the 115 kV system, the maximum 3 phase and single line to ground symmetrical fault levels are 50 kA.

The interrupting capability of the proposed breaker is less than 50 kA, but is adequate for the short circuit levels of about 9.0 kA existing in the area. If any future system changes result in an increased fault level higher than the equipment's capability, the connection applicant is required to replace the equipment with higher rated equipment capable of sustaining the increased fault level, up to maximum fault level specified in the Transmission System Code.

IESO Monitoring Requirements

In accordance with Section 7.5 of Chapter 4 of the Market Rules, the connection applicant shall provide to the IESO the applicable telemetry data listed in Appendix 4.17 of the Market Rules on a continual basis. The data shall be provided in accordance with the performance standards set forth in Appendix 4.22, subject to Section 7.6A of Chapter 4 of the Market Rules. For this proposed project, the IESO will continue to require the status of the replacement switches.

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 replacement breaker at Novelis CTS is not expected to have a material adverse impact on the IESO-controlled grid provided that all requirements in this report are met.