April 3, 2009

Mr. Gerry Finlayson
Plant Manager
Georgia Pacific Thorold
319 Allanburg Road
Thorold Ontario
L2V 5C3

Dear Mr. Finlayson

New Circuit Switcher at Georgia Pacific Thorold Mill 121 kV SS
Notification of Conditional Approval of Connection Proposal
CAA ID Number: 2008-EX412

Thank you for the detailed information regarding the installation of a new circuit switcher at the Georgia Pacific's Thorold Mill 121 kV SS.

We have concluded that the proposed change 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, subject to your signed acknowledgment below. 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 shall demonstrate the requirements have been fulfilled and the equipment installed has characteristics no worse than those in the proposal assessed by the IESO. Please contact market.entry@ieso.ca if you have not received a Facility Registration Summary package within the next 10 days.

For further information, please contact the undersigned.

Yours truly

Barbara Constantinescu
Manager – Market Facilitation
Telephone: *(905) 855-6406*
Fax: *(905) 855-6372*
E-mail: *barbara.constantinescu@ieso.ca*
cc: IESO Records

Georgia Pacific Thorold (GP Thorold) acknowledges receipt of the System Impact Assessment Report setting out the IESO requirements for final approval, and commits to fulfill these requirements, and all other applicable Market Rules, before receiving final approval to connect to the IESO-controlled grid.

Dated:_____

Per:_____

Name:_____

Title:_____

ASSESSMENT SUMMARY

Georgia Pacific Thorold

1.0 GENERAL DESCRIPTION & PROPOSED MODIFICATIONS

A new circuit switcher is being installed at GP Thorold Mill's 121 kV substation to replace an older disconnect switch approaching its end of life. This substation is fed from Allanburg TS via the 115 kV line D1A or via the 115 kV line D3A. The replacement work is scheduled to be completed by May 2009.

The existing disconnect switch (T3A-T) does not provide load break capability and is approaching its end of life. Load break capability is presently accomplished via a remote trip signal which momentarily trips Hydro One breakers DL1 and L1L6 at Allanburg TS allowing GP Thorold to open their non-load break disconnect switch (DS-89-T3A-1).

The new circuit switcher (CS-52-1) will provide GP Thorold with on-site supply point load break capability. It will also incorporate a non-load break disconnect switch that will provide isolation capability.

2.0 TECHNICAL SPECIFICATIONS

The technical specifications of the new circuit switcher and disconnect switch are given below.

GP Thorold Mill - 121 kV substation	
New Circuit Switcher	
Configuration	3 phase
Maximum Continuous Rated Voltage	138 kV
Load Interrupting Current	1200 A
Interrupting Time	6 cycles (0.10 ms)
Interrupting Media	SF6
Short Circuit Symmetrical Duty Rating	40 kA
New Disconnect Switch	
Configuration	3 phase
Maximum Continuous Rated Voltage	138 kV
BIL	650 kV
Continuous Current Rating	1200 A
Short Circuit Symmetrical Duty Rating	40 kA
Model	S&C Electric Model 2020

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 states that equipment on the 115 kV grid may be exposed to voltages as high as 127 kV. In addition, some recognized contingencies (e.g. load shedding, open line end) can cause a temporary voltage increase above the maximum continuous voltage of 127 kV. For these conditions, connection equipment may be exposed to voltages above the maximum continuous voltage of 127 kV for the short period of time that it takes the IESO to direct operations to restore a normal voltage profile, and to prepare for the next contingency. This re-preparation period will be as short as possible, but it will not take longer than 30 minutes. Therefore, the IESO requires that 115 kV connection equipment in southern Ontario:

- must have a maximum continuous voltage rating of at least 127 kV; and
- must remain in service and not automatically trip for voltages up to 5% above the maximum continuous voltage or 133.4 kV, for up to 30 minutes, to allow the system to be re-dispatched to return voltages to their normal range.

The Transmission System Code (TSC) indicates that the transmission system has to be designed to sustain short circuit currents of 50 kA for the 115 kV system.

The TSC states in section 10.5.5 that "when circuit switchers are used, the interrupter and disconnect switch shall operate independently. Protection systems that trip the interrupter shall simultaneously initiate opening of the disconnect switch."

The TSC also states in section 10.5.6 that "the direct current voltage supplied to the interrupter and disconnect switch shall be fed from separately fused and monitored direct current supplies: that is, by two direct current cables to the control cabinet."

Protection systems must be designed to meet all the requirements of the TSC and any additional requirements identified by Hydro One. They must be fully duplicated and supplied from separate batteries, and coordinated with the existing schemes. Provided that the TSC requirements are satisfied, the IESO does not have additional requirements.

4.0 ASSESSMENT & CONCLUSIONS

The new circuit switcher will meet the maximum voltage requirements stated in section 3.

The new circuit switcher does not meet the TSC requirements for short circuit capability. The installation of a circuit switcher with a 40 kA short circuit symmetrical duty rating instead of 50 kA rating is a risk assumed completely by Georgia Pacific Thorold. If any future system enhancements in the area result in short circuit levels higher than the capability of the new circuit switchers, Georgia Pacific Thorold is required to replace the new equipment with higher rated equipment at their expense.

Based on typical short time emergency ratings of the T3 transformer at GP Thorold Mill's 121 kV substation, the continuous current rating of the new circuit switcher appears to be adequate.

This expedited System Impact Assessment concludes that the installation of the new circuit switcher is not expected to have a material adverse impact on the IESO-controlled grid.

5.0 NOTIFICATION OF CONDITIONAL APPROVAL

It is therefore recommended that a Notification of Conditional Approval of the Connection Proposal be issued, subject to the requirements detailed above.

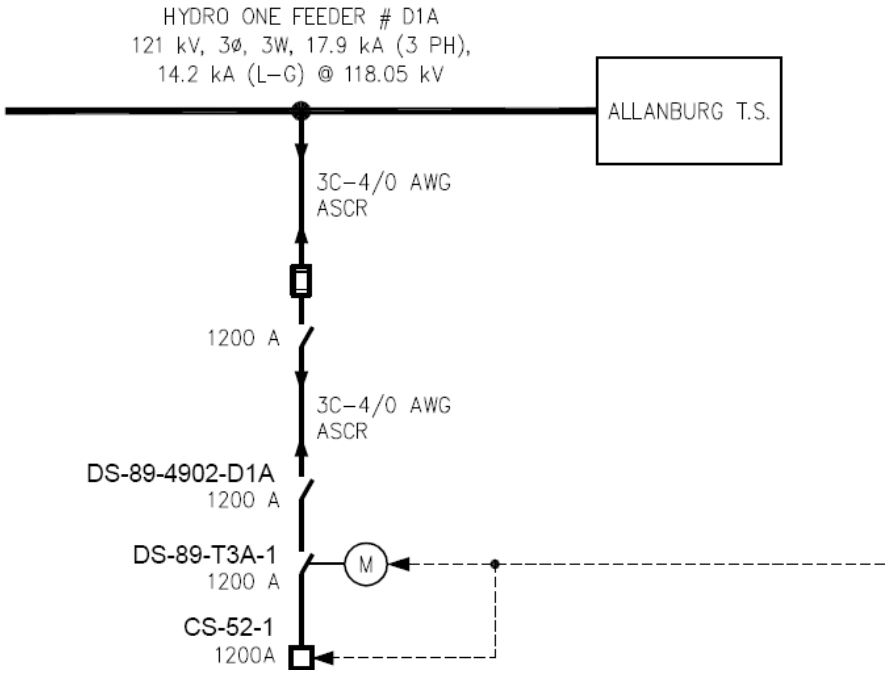

Figure 1 - GP Thorold Mill 121 kV Substation – Future Configuration