

January 28, 2005

Mr. Berk Gursoy  
Senior Transmission Engineer  
Great Lakes Power Limited – Transmission Division  
2 Sackville Road  
Sault Ste. Marie, ON P6B 6J6

Dear Mr. Gursoy

***Breaker and Disconnect Refurbishment Project at Patrick TS –  
Notification of Approval of Connection Proposal - CAA ID Number: 2004-EX211***

Thank you for the detailed information that you provided on the switchgear replacement project at Patrick TS. As your documentation indicated (see appendices A and B), the project will encompass the replacement of existing oil breakers 222, 225, 228, 232, 235, 242, 245 and 248 with more efficient SF6 breakers as well as the replacement of existing disconnect switches 221, 223, 224, 226, 227, 229, 231, 233, 234, 236, 241, 243, 244, 246, 247 and 249.

We have reviewed your proposal and concluded that the proposed upgrade does not have a material impact on the IESO-controlled grid. Based on the information you provided, the project falls under the category of “like-for-like” replacements and a formal Connection Assessment Study is not warranted, because:

- The new switchgear with the operating characteristics shown in Appendix B meet the Market Rules requirements and will have the same operating parameters and interrupting characteristics as the current breakers and switches; and
- Data monitoring for the new switchgear equipment will be supplied from the existing RTU, which will allow GLP to meet the requirements in Appendix 4.16 of the market rules.

The IESO is therefore pleased to grant **conditional approval** for the installation of the new equipment. Any material changes to your proposal may require a re-assessment by the IESO in accordance with Market Manual 2.10, and may nullify your conditional approval.

Provided that the proposed modifications meet OEB’s Transmission System Code, **final approval** will be granted upon successful completion of the IESO Facility Registration process. During facility registration you will be expected to demonstrate that the project you have installed is materially unchanged from the proposal assessed by the IESO. Contact [facility.registration@ieso.ca](mailto:facility.registration@ieso.ca) if you have not received a Facility Registration Summary package within the next 10 days.

To commence the construction process, you are advised to follow the necessary procedures and obtain the required approvals, licences and permits as may be required by the OEB and other regulatory authorities.

For further information, please contact the undersigned.

Yours truly,

Bob Gibbons  
Manager - Long Term Forecasts & Assessments  
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# **Appendix<sup>1</sup> A: Description of Patrick St /Steelton TS Breaker/Disconnect Refurbishment Project & Single Line Diagram for the IMO Expedited System Impact Assessment Application (ESIAA)**

## **1.0 Introduction**

The scope of this Expedited SIA is the system impact of the station refurbishment and 115kV breaker/disconnect replacement project at Patrick St. TS. There will be no configuration changes in the station; the same configuration will be retained as shown in Figure 1.

## **2.0 Station Configuration**

**Patrick St. TS** (Figure 1)

Replace all 8 x 115kV bulk oil circuit breakers and associated manual disconnect switches with new equipment (AB: Air-Break Disconnect Switch. CB: Circuit Breaker):

- AB 221, CB 222 and AB 223
- AB 224, CB 225 and CB 226
- AB 227, CB 228 and AB 229
- AB 231, CB 232 and AB 233 (shown within Steelton TS boundaries on single-line diagram)
- AB 234, CB 235 and AB 236
- AB 241, CB 242 and AB 243
- AB 244, CB 245 and AB 246
- AB 247, CB 248 and AB 249

## **3.0 Protection System Description**

The function and tripping of all the existing protections will remain the same.

## **4.0 AC & DC System**

Currently the circuit breakers at Patrick St. TS are supplied from Algoma Steel's metalclad building inside the station. As part of the refurbishment project, AC and DC supplies to circuit breakers will be rerouted to Steelton TS control building. The existing battery bank, AC and DC panels and DC charger at Steelton TS will be upgraded to accommodate the new load.

## **5.0 Control System Description**

The existing SCADA RTU's will be used. Existing monitoring and control points for Patrick St. TS and Steelton TS continue to be used to control the new breakers. This will allow GLP to meet the IMO Monitoring Requirements as outlined in the Market Rules Chapter 4 Appendix 4.16.

### **Status of replaced equipment to the IMO:**

(No change from present status to IMO)

115kV Breakers 222, 225, 228, 232, 235, 242, 245 and 248 at Patrick St. TS

## **6.0 Customer Impact Assessment (CIA)**

The project is essentially a like-for-like equipment replacement without any impact to supply voltages, system configuration, capacity or short circuit levels. Therefore GLP will not conduct a CIA unless recommended by the IMO.

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<sup>1</sup> Information in the appendices has been provided by the applicant

## 7.0 Single Line Diagram

The existing configuration will be retained. Below is the station single line diagram for reference.

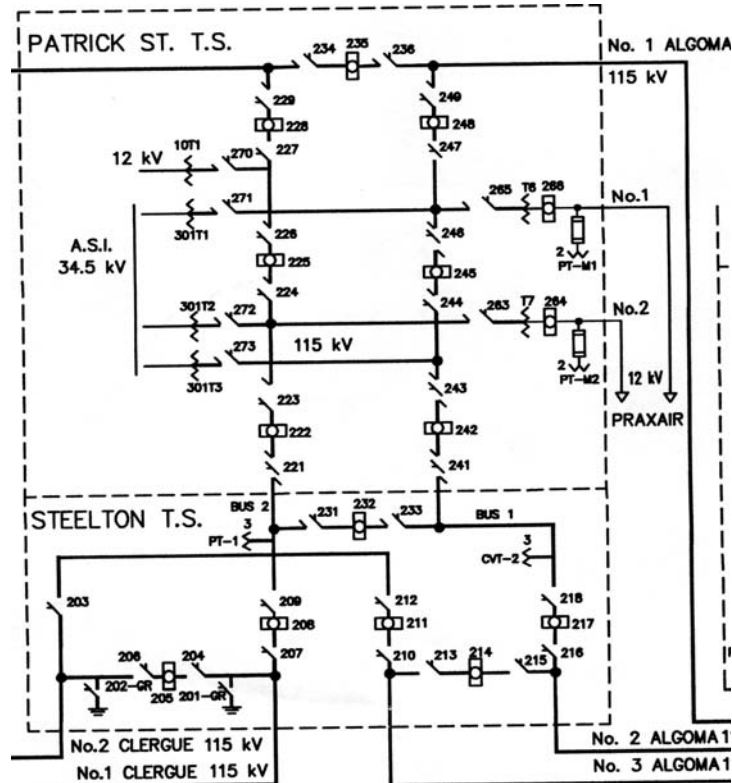


Figure 1 – Existing Single Line Diagram for Patrick St. TS and Steelton TS

## 8.0 Tentative Schedule

The entire project will take approximately seven months to complete with the construction scheduled to start in May 2005 and to be completed by the end of November 2005.

## 9.0 Preliminary Construction Outage Details

Outages will be planned in such way to minimize impact on Customers and GLP Transmission System. The execution of the project may require some temporary configuration changes. These changes and the outage schedule will be submitted to the IMO and the affected Customers will be notified as part of the execution plan.

## Appendix B: Equipment data

<b>Switches</b>	Identifier	<b>Breaker Disconnect Switches 221, 223, 224, 226, 227, 229, 231, 233, 234, 236, 241, 243, 244, 246, 247 &amp; 249 Manual (14 Required)</b>
	Station	<b>Patrick St. T.S.</b>
	Manufacturer	<b>TBD</b>
	Serial number	<b>TBD</b>
	Voltage rating (kV)	<b>Maximum Continuous 132kV</b>
	Type (e.g. disconnect, interrupt)	<b>Disconnect</b>
	Continuous current rating (amps)	<b>2000A</b>
<b>Circuit Breakers</b>	<i>Identifier</i>	<b>Breakers 222, 225, 228, 232, 235, 242, 245 &amp; 248 (7 required)</b>
	<i>Station</i>	<b>Patrick St. TS</b>
	Manufacturer	<b>TBD</b>
	Serial Number	<b>TBD</b>
	<i>Rated voltage (kV)</i>	<b>Maximum Continuous 132kV</b>
	<i>Interrupting time (ms)</i>	<b>&lt;50 ms</b>
	Interrupting media (e.g. air, oil, SF <sub>6</sub> )	<b>SF<sub>6</sub></b>
	<i>Rated continuous current (A)</i>	<b>2000A</b>
<i>Rated symmetrical short circuit capability (A)</i>	<b>40,000A</b>	