



March 26, 2004

Mr. Gord Haines

Section Manager  
Technical Compliance  
Ontario Power Generation  
700 University Avenue  
Toronto, Ontario, M5G 1X6

Dear Mr. Haines:

***Replacement of Nanticoke T4 with Universal Spare Unit  
Notification of Approval of Connection Proposal  
CAA ID Number: 2004-Ex189***

Thank you for the detailed information that you provided on OPGI's proposal to replace the failed Nanticoke step-up transformer T4 with a universal spare unit.

We have reviewed the data and concluded that this project will not have any adverse impact on the reliability of the IMO-controlled grid since there are no material differences between the two transformers. The data supplied by OPG for the failed and the replacement units are attached to this notification.

The IMO is therefore pleased to grant **conditional approval** of the proposed transformer replacement. Any material changes to your proposal may require a re-assessment by the IMO in accordance with Market Manual 2.10, and may nullify your conditional approval.

**Final approval** will be granted upon successful completion of the IMO 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 IMO. Contact [facility\\_registration@theIMO.com](mailto:facility_registration@theIMO.com) if you have not received a Facility Registration Summary package within the next 10 days.

For further information, please contact the undersigned.

Yours truly,

Bob Gibbons  
Manager - Long Term Forecasts & Assessments  
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E-mail: bob.gibbons@theimo.com

cc: IMO Records

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All information submitted in this process will be used by the IMO solely in support of its obligations under the *Electricity Act, 1998*, the *Ontario Energy Board Act, 1998*, the *Market Rules* and associated policies, standards and procedures and in accordance with its licence. All information submitted will be assigned the appropriate confidentiality level upon receipt.

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***Nanticoke GS***

***Failed T4***

Data for three phase transformer:

Rated Voltage for each Winding(LL):	HV:234 kV	LV:20.9 kV
Rating:	570 MVA	
Impedance:	X=14.8% on 570 MVA	
Off-load Taps	244 kV 239 kV 234 kV 229 kV 224 kV	
In service off-load tap position	239 kV	
Connection Arrangement	HV: Wye (grounded via 7.5 ohms reactance)	LV: Delta

Proposed in-service data (Outage March 2004)

***Replacement Unit***

Data for three phase transformer:

Rated Voltage for each Winding(LL):	HV:240.2 kV	LV:22.8 kV
Rating:	550 MVA	
Summer Continuous Rating:	570 MVA	
Impedance:	X=13.16% on 550 MVA	
Off-load Taps	HV: 259.98 kV 253.4 kV 246.82 kV 233.11 kV 226.52 kV 219.94 kV	
	LV: 22.8 kV 20.9 kV 19.0 kV	
In service off-load tap position	240.24/20.9 kV	
Connection Arrangement	HV: Wye (grounded via 7.5 ohms reactance)	LV: Delta

Proposed in-service data (Outage March 2004)

***Assessment***

The information provided by OPG shows that technical characteristics of the replacement transformer are similar to the transformer unit that failed. The two units have the same winding configuration and grounding, the same summer continuous rating, similar off-load tap position and similar positive sequence impedances.