



5th May 2003

Mr Bob Singh  
Manager - Connection & Distribution Development  
Hydro One Networks Inc.  
15th Floor - North Tower  
483 Bay Street  
Toronto M5G 2P5  
Ontario

Dear Mr Singh:

***Lambton TS: Revised LV Supply Arrangement to Terra Nitrogen  
Notification of Approval of the Connection Proposal***

***CAA ID Number: 2003-EX129***

Thank you for the information on your proposal to modify the 27.6kV connections at the Lambton DESN Station.

The proposed changes are shown in Diagram 1. These changes will result in the 230/27.6kV step-down transformer, T6, together with the LV feeders M2 & M4 being dedicated to the supply to the Terra Nitrogen Plant. This work is scheduled to be completed during planned outages at the Terra Nitrogen Plant during the first two weeks of August 2003.

Since this revised supply arrangement will require the 27.6kV bus-tie breaker, DY, to be operated normally-open, an auto-close scheme is to be installed to initiate automatic closure of the bus-tie breaker should either step-down transformer, T5 or T6, be removed from service due to a transformer fault, or, in the case of transformer T5, a line fault involving circuit L23N (to which the transformer is directly connected). Automatic closure of the bus-tie breaker, DY, will not be initiated for busbar faults.

Diagram 2 provides details of the proposed auto-close scheme.

The IMO has concluded that the changes at Lambton TS will have no adverse impact on the IMO-controlled grid and that a formal Connection Assessment study will therefore not be necessary.

The IMO is therefore pleased to grant conditional approval to complete the proposed installation.

Although not identified as an integral part of the proposed modifications to the connection arrangement at the Lambton DESN station, changes may also be required to ensure continued compliance with the Market Rules with respect to the requirements for Under-frequency Load Shedding and Voltage Reduction.

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.

Automatic disconnection of up to 35% of the peak demand is required to be available in response to declining system frequency: 12% of the peak demand at a frequency of 59.3Hz and the remaining 23% at a frequency of 58.8Hz.

Similarly, facilities are required to be available to achieve reductions in load during periods when supply resources are limited through reductions in the customers' voltage of 3% and 5%, within five minutes of receipt of directions from the IMO.

The Market Rules also require that wholesale customers and distributors connected to the IMO-controlled grid shall operate at a power factor within the range 90% lagging to 90% leading as measured at the *defined meter point*, which in this case would be at the 230kV busbar at Lambton TS.

Registration of the proposed changes to the existing facilities will need to be completed through the IMO's 'Facilities Registration' process.

For further information, please contact the undersigned.

Yours truly,

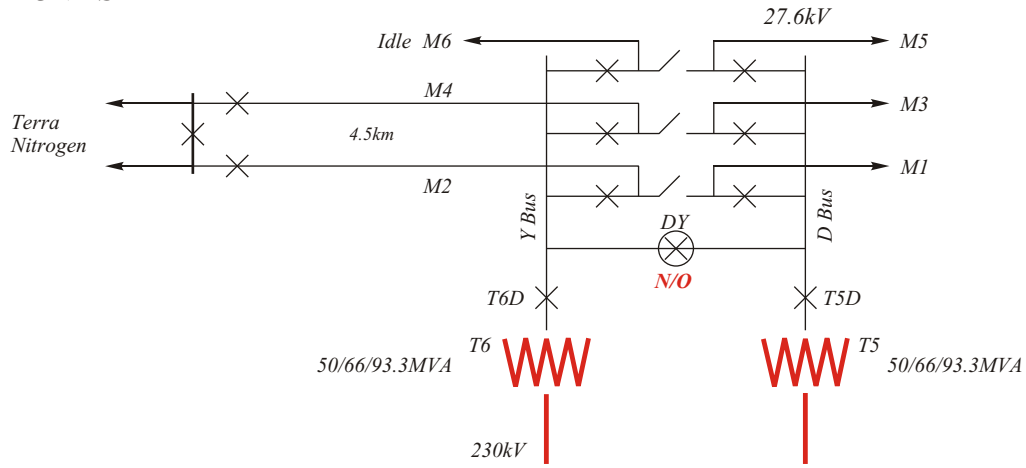
Bob Gibbons  
Manager – Long Term Forecasts & Assessments

cc: IMO Records

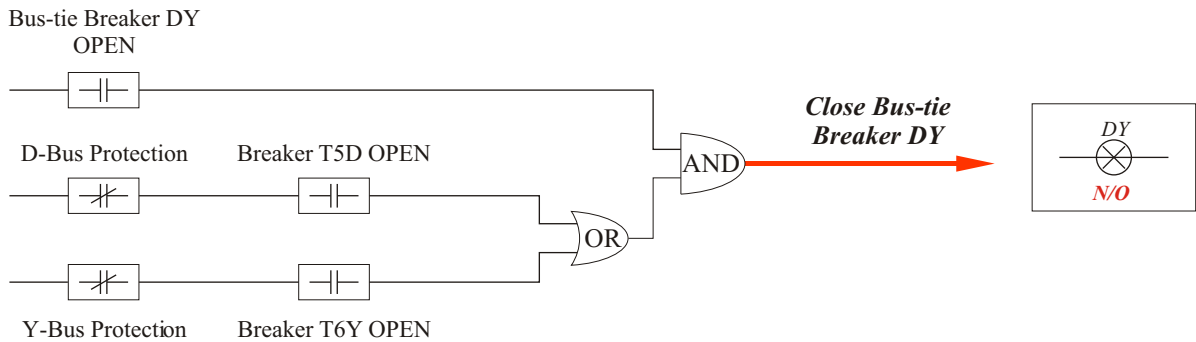
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**LAMBTON TS**



**Lambton DESN**



**Auto-Close Scheme Logic**

Initiate automatic closure of the 27.6kV normally-open bus-tie breaker DY if the following conditions are met:

- Either of the transformer LV breakers, T5D or T6Y, is Tripped (and Open)

**AND**

- The busbar protection associated with Busbar D or Busbar Y has not operated

**AND**

- The bus-tie breaker DY is OPEN

**Auto-Close Scheme for the 27.6kV Bus-tie Breaker at Lambton DESN**