



CONNECTION ASSESSMENT & APPROVAL PROCESS

ASSESSMENT SUMMARY

Applicant: Hydro One Networks Inc.

*Project: Replacement of 230kV Breakers
L23T5 & L23T6 at Lakeview SS*

CAA ID No. 2002-EX030

Long Term Forecasts & Assessments Department

Date: 10th May 2002

ASSESSMENT SUMMARY

HYDRO ONE NETWORKS Inc. LAKEVIEW SS - Replace 230kV breakers L23T5 & L23T6

1.0 GENERAL DESCRIPTION

Hydro One Networks Inc. is planning to replace the two existing 230kV bulk oil circuit breakers, L23T5 & L23T6 at Lakeview SS with 3000 amp SF₆ units. The associated disconnect switches are not being changed.

The physical location of the two breakers that are to be replaced at Lakeview SS is shown in Diagram 1.

The scheduled in-service dates for the two replacement breakers are as follows:

L23T5	11 th May 2002
L23T6	1 st June 2002

2.0 SPECIFICATION FOR THE REPLACEMENT BREAKERS

The replacement SF₆ breakers are identical and are rated as follows:

- 3000 amp continuous
- 63kA interrupting capability
- 250kV maximum voltage
- 3-cycle interrupting time

[In accordance with normal Hydro One practice, the breakers are designed to trip and lock open upon detection of a low gas pressure condition. If the affected breaker should fail to open, then breaker failure protection will be initiated.]

For comparison, the existing bulk oil circuit breakers have a fault interrupting capability of 38.5kA symmetrical & 46.2kA asymmetrical.

3.0 ASSESSMENT

All of the following 230kV breakers at Lakeview SS have already been replaced with 63kA SF₆ units:

T1T8 T2T3 T6T7 L21T1 & L21T2

Once breakers L23T5 & L23T6 have been replaced, only the following breakers will remain with a lower rating of 38.5kA:

T4T5 L22T3 L22T4 L24T7 & L24T8

However, as mentioned in the SIA Report for the Sithe Cluster, one breaker of each of the following pairs is effectively redundant (because an idle terminal occupies the position between the two breakers) and it was therefore recommended that the lower-rated breaker of each pair should be removed and the vacated position by-passed with new buswork:

T6T7 & L24T7	<i>Remove breaker L24T7</i>
T1T8 & L24T8	<i>Remove breaker L24T8</i>
T2T3 & L22T3	<i>Remove breaker L22T3</i>

Once breakers L24T7, L24T8 & L22T3 have been removed, only breakers T4T5 & L22T4 would remain with a lower rating.

Replacing these two remaining breakers would then increase the operational rating of Lakeview SS to 63kA, thereby providing greater flexibility in the manner in which the 230kV busbar can be operated and reducing the occasions on which it would need to be operated split.

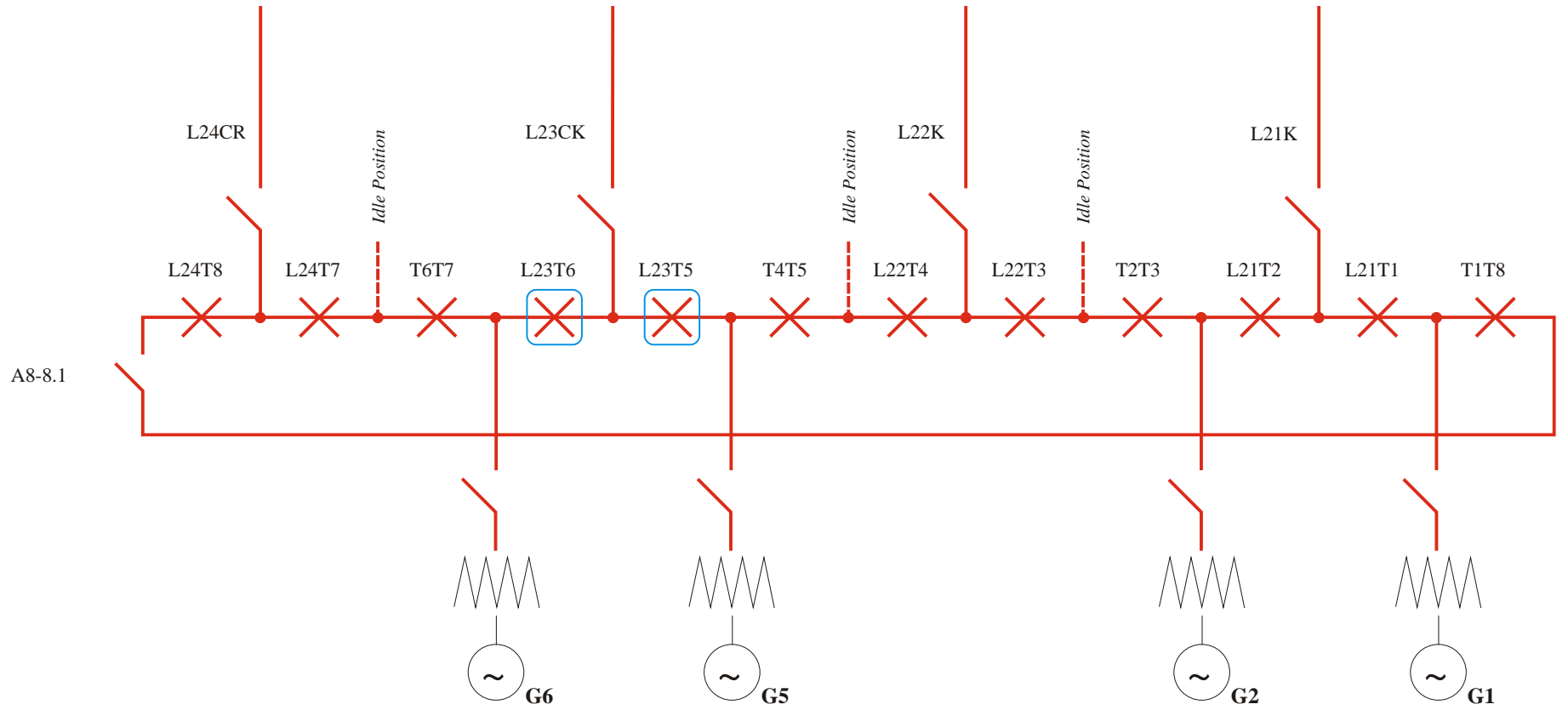
Conclusions

Since the replacement of breakers L23T5 & L23T6 at Lakeview SS is considered to represent a like-for-like replacement of existing facilities, it will have no adverse impact on the IMO-controlled grid.

4.0 NOTIFICATION OF APPROVAL

It is therefore recommended that a Notification of Approval of the Connection Proposal be issued.

LAKEVIEW SS



Breaker to be replaced

DIAGRAM 1

10th May 2002