Stayner TS – Station Upgrades
CAA ID # 2005-190

May 28, 2009
Final Draft Report - Addendum
Expedited System Impact Assessment
Hydro One Networks Inc.

1 GENERAL DESCRIPTION & PROPOSED MODIFICATIONS

This addendum updates the System Impact Assessment (CAA ID 2005-190) originally issued in October 2006 for station upgrades at Stayner TS. Please refer to the original System Impact Assessment report for the assessment details.

In particular, Hydro One proposed to install a 75/100/125 MVA, 230/115 kV autotransformer at Stayner TS with the following specification changes:

Original Specifications for Autotransformer at Stayner TS

- Rated Voltage: 226 kV;
- Off-load tap-changer: 226/125 kV;
- Under-load tap-changer: +/-33.9 kV in 10 steps on the HV side.

New Specifications for Autotransformer at Stayner TS

- Rated Voltage: 239/121/13.8 kV;
- Off-load tap-changer: not applicable;
- Under-load tap-changer: +/- 27.485 kV in 20 steps on the HV side;
- Limited time ratings:
    - Winter Continuous: 125.0 MVA;
    - Winter 10-DAY: 218.4 MVA;
    - Winter 15-MIN: 251.4 MVA;
    - Summer Continuous: 125.0 MVA;
    - Summer 10-DAY: 196.7 MVA;
    - Summer 15-MIN: 251.4 MVA

2 ASSESSMENT & CONCLUSIONS

The information provided by Hydro One Networks Inc. shows that the technical characteristics of the actual autotransformer differ from those of the autotransformer proposed in the original assessment. The ULTC range of the autotransformer has been decreased from 260/192.1 kV to 266.5/211.5 kV.

This range still satisfies the Market Rule requirements that voltage on the IESO-controlled grid be maintained within 220 and 250 kV and should also be adequate to satisfy the voltages studied at Stayner TS.

This addendum concludes that the revisions to the autotransformer specifications as detailed above are not expected to have a material adverse impact on the IESO-controlled grid.