

**SCHEDULE 1**  
**SCOPE OF WORK**  
**[Name of Project]**  
**CAA ID 200x-xxx**

**1. Introduction**

[*Connection applicant*] is proposing to develop a [xx] MW facility, namely [xxx], in or near [xxx], in [zone]. The facility will consist of [xxx]. [*Provide a brief description of the proposed connection arrangement and the exact connection location.*]

The preliminary in-service date is [xxx].

**2. Assumptions**

This assessment will be comprised of a review of the proposed connection arrangement for the proposed facility and its impact on the reliability of the IESO-controlled grid. This assessment will be performed based on related procedures and guideline documents that are in force at the time of the assessment.

The system model will include transmission projects existing, committed, or under construction, all existing generators (including increased capacity at existing generating facilities) and new generators that were selected in all procurement processes completed to date, have signed a contract with a purchaser or have signed a connection cost recovery agreement with a transmitter.

**3. Data Verification**

This assessment will check the models and data of the proposed facility to ensure compliance to the Market Rules and Transmission System Code. This assessment will advise the *connection applicant* of any omissions, errors or data that appears to be inadequate. If data is missing and unavailable, typical agreed upon data will be used in the studies.

**4. Connection Arrangement**

This assessment will review and comment on the proposed connection arrangement for the proposed facility and the intended mode of operation. The analysis will determine if any additional or new equipment, other than those that are specified by the *connection applicant* as part of the connection arrangement, may be required and whether the proposed equipment is rated appropriately.

**5. Power System Analysis**

The IESO will perform load flow and/or transient analyses, as necessary, to determine the effect of the proposed facility on thermal loading, voltage and transient performance of the transmission system and to verify that both the Market Rules and the IESO's reliability criteria are met. This assessment will:

- identify the local system upgrades that may be required to allow incorporation of the proposed facility;
- identify the effect of the proposed facility on the transfer capability of selected transmission interfaces or on existing system operating limits and, if necessary, identify the need for system upgrades that may be required to restore the transfer capabilities of the interfaces or the system operating limits to their former levels;
- determine the reactive power compensation that may be required at the proposed facility to provide adequate dynamic voltage control and to compensate for excessive reactive losses;
- determine if there is a need for a special protection system (SPS) such as generation/load rejection, generation run-back or cross-tripping, etc. to maintain acceptable system performance following contingencies and, if necessary, produce a high level functional description for a suitable SPS and provide the necessary evidence to support determination of NPCC type status;
- if necessary, review the performance of the proposed equipment and its control systems and assess the transient performance of the proposed facility under fault conditions; and
- identify any deficiencies with the proposed facility.

## **6. Short Circuit Assessment**

This assessment will determine, if necessary, the effect of the proposed facility on fault levels and will identify any equipment that would be inadequately rated for the projected fault levels arising from the incorporation of this new facility. This study will be performed by Hydro One on behalf of the IESO.

If inadequately rated equipment is identified, this assessment will examine measures that could be implemented to avoid the need for replacing breakers (e.g. installing reactors, introducing normally-open points, operating with busbars split, etc.) and confirm that these measures would be effective.

## **7. Protection Impact Assessment [NB: for projects connecting to H1's tx system only]**

A Protection Impact Assessment (PIA) will examine the transmission system protection changes and coordination needed to accommodate the proposed facility with an emphasis on functionality, reach and timing (e.g. distance relays zone 1 and zone 2 coverage and timing). The PIA will be performed by Hydro One on behalf of the IESO.

If protection changes are required, this assessment will examine measures that could be implemented to mitigate the reliability impacts of the protection changes (e.g. modifications of the connection arrangement, etc.) and confirm that these measures would be effective.

## **8. Report**

An SIA report will be issued summarizing the results of the IESO's assessment for the project.

## **9. Reporting & Schedule**

The connection assessment process for the project will be completed by the IESO on a best effort basis as determined by the number of other connection assessments underway and as negotiated with the *connection applicant/proponent* with due consideration to the project completion schedule.

*[NB: Include this paragraph here only if the applicant retains a consultant to do studies]* If a consultant is retained by the *connection applicant/proponent* to perform the studies necessary to the assessment, the IESO staff will meet with the consultant following the execution of the SIA and non-disclosure agreements to discuss the scope of the studies and the reporting requirements. The *connection applicant/proponent* will be charged for the IESO time and expenses associated with these meetings, as well as for the review of the study results and the preparation of the SIA report. The IESO will prepare a draft SIA report, based on the consultant's studies, within 120 calendar days from when the consultant's studies are deemed complete by the IESO.

Upon completion of the assessment, a preliminary version of the SIA report will be circulated to the *connection applicant/proponent* and the transmitter for comments. Once agreement has been reached on the contents of the preliminary version of the SIA report, a draft version of the SIA report will normally be posted on the IESO web site. This is expected to occur at a date mutually acceptable to the IESO and to the *connection applicant/proponent*.

Once the draft version of the SIA report has been completed, the transmitter will be in a position to proceed with the Customer Impact Assessment (CIA). The *connection applicant/proponent* is required to initiate the CIA process with the transmitter well in advance of the completion of the SIA. A period of 30 calendar days is required for the receipt of preliminary responses to the CIA from any affected customers in the area. Any additional comments from the *connection applicant/proponent* or from the transmitter on the draft SIA report are also expected to be received during this period. The SIA report will be finalized based on these comments.

The transmitter's CIA process allows a period of 90 calendar days from the date that the draft SIA report is complete before the CIA report is issued. This is to permit detailed studies to be performed to quantify the specific impact of the new project on adjacent customers' facilities. Should the subsequent comments from affected customers merit significant changes to the final version of the SIA report, then these could be addressed in an Addendum to the SIA report.

## **10. Record of Time & Expenses**

All the costs and expenses incurred by the IESO in completing this assessment are to be recorded and will be settled with the *connection applicant/proponent* as soon as possible following the completion of the assessment.

If the total costs of the IESO's assessment are less than the SIA deposit, the *connection applicant/proponent* will receive a refund in the amount by which the SIA deposit exceeds the total cost of the IESO's assessment.

If the total costs of the IESO assessment are higher than the SIA deposit, the *connection applicant/proponent* will pay the amount by which the total cost of the IESO's assessment exceeds the SIA deposit.