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December 06, 2016

**Via RESS and Courier**

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
Attention: Market Entry  
P.O. Box 2319  
2300 Yonge Street, Suite 2700  
Toronto, Ontario M4P 1E4

Dear Ms. Walli,

**Re: Ontario Power Generation Inc.'s Submission of Comments Relating to the Board's Proposed Amendments to the Transmission System Code – Board File No.: EB-2016-0299**

Enclosed, please find three (3) paper copies and one (1) electronic copy (sent via RESS) of Ontario Power Generation Inc.'s (OPG) submission related to the Board's proposed amendments to the Transmission System Code (TSC) per EB-2016-0299.

OPG appreciates the opportunity to comment on the proposed amendments to the TSC and looks forward to its continued involvement in the review of the technical requirements of the TSC and related matters. If there are any questions with respect to this submission, please feel free to contact me at (416-592-6089)

Yours Truly,

[Original signed by]

David Ramkalawan

Encl.

Cc: Chris Fralick, OPG  
David Kwan, OPG

**Ontario Power Generation Inc.'s (OPG) Submission of  
Comments to EB-2016-0299**

December 06, 2016

OPG appreciates the opportunity to provide comments on the Board's proposed amendments to the Transmission System Code (TSC) issued October 19, 2016 (per EB-2016-0299).

OPG supports the Board's efforts to improve the consistency and clarity of the TSC requirements for both transmitters and generators.

OPG is also encouraged that the Board recognizes that changes to the technical provisions in the TSC are warranted based on the duplication of provisions that reside within the NERC and NPCC reliability standards and Criteria.

The following outlines OPG's specific comments on the proposed amendments to the TSC and its Appendices:

**Sections of the TSC identified for deletion (per EB-2016-0299):**

**1) TSC Section 8.1**

OPG Comments:

- Concur with deletion of Section 8.1 as the requirement to comply with all applicable reliability standards is already set out in TSC Section 5.1.2 and IESO Market Rules Chapter 4.

**2) TSC Section 8.2**

OPG Comments:

- Concur with deletion of Section 8.2 as the criteria in NPCC D4 would address the technical aspects of the deleted TSC Section 8.2.

**3) TSC Section 9.1**

OPG Comments:

- Concur with deletion of Section 9.1 as the requirements for operating transformers with on-load tap changers is covered under Market Rules Ch 5 Section 9, Voltage Control.

**4) TSC Section 10.2**

OPG Comments:

- Concur with deleting Section 10.2 as the test schedule for Communication Systems associated with Protection Systems is addressed via NERC PRC-005-6.
- NOTE: The associated section for Generator Customers is: TSC Appendix 1, Version B, Schedule G, Section 1.2. This should also be proposed for deletion.

**5) TSC Section 10.3**

OPG Comments:

- Concur with deleting Section 10.3 as the re-verification schedule for Protection Systems is addressed via NERC PRC-005-6.
- NOTE: The associated section for Generator Customers is: TSC Appendix 1, Version B, Schedule G, Section 1.3.1, 1.3.2, and 1.3.3. This should also be proposed for deletion.

**6) TSC Section 10.4.1 and 10.4.2**

OPG Comments:

- Concur with deleting Section 10.4.1 and 10.4.2 as the re-verification of DC circuitry for Protection Systems is addressed via NERC PRC-005-6.
- NOTE: The associated section for Generator Customers is: TSC Appendix 1, Version B, Schedule G, Section 1.4.3 and 1.4.4. This should also be proposed for deletion.

**7) TSC Section 10.6**

OPG Comments:

- The associated section for Generator Customers is: TSC Appendix 1, Version B, Schedule G, Section 1.6. This should also be considered for deletion if TSC Section 10.6 is being proposed for deletion.

**8) TSC Section 10.7**

OPG Comments:

- The associated section for Generator Customers is: TSC Appendix 1, Version B, Schedule G, Section 1.7. This should also be considered for deletion if TSC Section 10.7 is being proposed for deletion.
- For black start credited resources, the battery requirements are stated in IESO Market Manual 7.8, Section 11.4.

**9) TSC Appendix 1, Schedule E (in its entirety)**

OPG Comments:

- Concur that the criteria in NPCC D4 would address the technical aspects of the deleted TSC Appendix 1, Version B, Schedule E.

**Additional TSC Sections proposed for deletion/modification (currently not included in EB-2016-0299 proposed scope):**

**a) TSC Section 8.3 and 8.4**

OPG Comment:

- These sections refer to Insulation and Grounding, which are also covered by NPCC D4. If the basis for deleting TSC Section 8.1 and 8.2 is the regional reliability standard, NPCC D4, being in effect, Sections 8.3 and 8.4 should also be considered for deletion.

**b) TSC Section 9.2.1**

OPG Comment:

- Section 9.2.1 (Protection Requirements) makes a reference to Exhibit E.1, Schedule E, Appendix 1. However, Appendix 1, Schedule E is being proposed for deletion, per EB-2016-0299. This discrepancy should be addressed.

**c) TSC Appendix 1, Section 25**

OPG Comment:

- Sections 25.1 and 25.2 should be updated to remove reference to Schedule E, since Appendix 1, Schedule E is being proposed for deletion, per EB-2016-0299.

**d) TSC Appendix 1, Schedule F, Section 1.2**

OPG Comment:

- Section 1.2 – remove reference to Schedule E, since Appendix 1, Schedule E is being proposed for deletion, per EB-2016-0299.

**e) TSC Appendix 1, Schedule F, Section 1.1.3**

OPG Comment:

- TSC Section 8.2, which discusses redundant protection systems, is being proposed for deletion, per EB-2016-0299. TSC Appendix 1, Schedule F, Section 1.1.3 should be proposed for deletion, as it also relates to redundant protection systems.

**f) TSC Section 10.1.1 and Appendix 1, Schedule G, Section 1.1.1**

OPG Comment

- These TSC sections are the same as IESO Market Rules Ch4, Appendix 4.4, item 9. This duplication should be considered to be removed from the TSC.

**g) TSC Appendix 1, Version B, Schedule G, Section 1.2.**

OPG Comment:

- This Section should also be considered for deletion, as it coincides with deletion of TSC Section 10.2.

**h) TSC Appendix 1, Version B, Schedule G, Section 1.3.1, 1.3.2, and 1.3.3.**

OPG Comment:

- This Section should also be considered for deletion, as it coincides with deletion of TSC Section 10.3.1 and 10.3.2.

**i) TSC Appendix 1, Version B, Schedule G, Section 1.4.3 and 1.4.4.**

OPG Comment:

- This Section should also be considered for deletion, as it coincides with deletion of TSC Section 10.4.1 and 10.4.2.

**j) TSC Appendix 1, Version B, Schedule G, Section 1.6.**

OPG Comment:

- This Section should also be considered for deletion if TSC Section 10.6 is being proposed for deletion.

**k) TSC Appendix 1, Version B, Schedule G, Section 1.7.**

OPG Comment:

- This Section should also be considered for deletion if TSC Section 10.7 is being proposed for deletion.