

Ontario Energy
Board

Commission de l'Énergie
de l'Ontario



ONTARIO ENERGY BOARD

Transmission System Code

June 10, 2010

TABLE OF CONTENTS

1.	PURPOSE	1
2.	DEFINITIONS	2
3.	APPLICATION AND INTERPRETATION	10
4.	STANDARDS OF BUSINESS PRACTICE AND CONDUCT.....	14
4.1	GENERAL REQUIREMENTS.....	14
4.2	TRANSMISSION SERVICE CHARGES	15
4.3	FACILITIES STANDARDS	15
4.4	OPERATIONAL STANDARDS AND REPORTING PROTOCOL.....	17
4.5	PERFORMANCE STANDARDS.....	17
4.6	COMPLIANCE OF FACILITIES WITH STANDARDS	19
4.7	CONFIDENTIALITY	20
5.	REQUIREMENTS FOR OPERATIONS AND MAINTENANCE.....	21
5.1	DAY-TO-DAY OPERATIONS.....	21
5.2	FORCED OUTAGES	21
5.3	SCHEDULING OF PLANNED WORK	21
5.4	EMERGENCY OPERATIONS.....	22
6.	CUSTOMER CONNECTIONS	24
6.1	GENERAL REQUIREMENTS.....	24
6.2	AVAILABLE CAPACITY.....	28
6.3	COST RESPONSIBILITY FOR NEW AND MODIFIED CONNECTIONS.....	34
6.4	CUSTOMER IMPACT ASSESSMENTS.....	40
6.5	ECONOMIC EVALUATION OF NEW AND MODIFIED CONNECTIONS.....	40
6.6	CONTESTABILITY	45
6.7	REPLACEMENT, RELOCATION AND BYPASS OF EXISTING FACILITIES.....	48
6.8	OBLIGATIONS BETWEEN NEIGHBOURING ONTARIO TRANSMITTERS	50
6.9	RECORD KEEPING AND REPORTING REQUIREMENTS	51
6.10	RECONNECTION.....	51
7.	COMPLIANCE, INSPECTION, TESTING AND MONITORING	53
7.1	REQUIREMENTS.....	53
8.	GENERAL TECHNICAL REQUIREMENTS.....	54
8.1	GUIDELINES OF RELIABILITY ORGANIZATIONS	54
8.2	PROTECTION AND CONTROL	54
8.3	INSULATION COORDINATION.....	56
8.4	GROUNDING	56
9.	TECHNICAL REQUIREMENTS FOR TAPPED TRANSFORMER STATIONS SUPPLYING LOAD.....	57
9.1	SUPPLY CONSIDERATIONS.....	57
9.2	PROTECTION REQUIREMENTS.....	57
10.	PROTECTION SYSTEM REQUIREMENTS	59
10.1	TELECOMMUNICATIONS	59
10.2	TEST SCHEDULE FOR RELAYING COMMUNICATION CHANNELS	60
10.3	VERIFICATION AND MAINTENANCE PRACTICES.....	60
10.4	FUNCTIONAL TESTS AND PERIODIC VERIFICATION.....	61
10.5	FAILURE PROTECTION FOR HIGH VOLTAGE INTERRUPTING DEVICES.....	61
10.6	INSTRUMENT TRANSFORMERS	62
10.7	BATTERY BANKS AND DIRECT CURRENT SUPPLY	62

11.	EMBEDDED GENERATION AND BYPASS COMPENSATION	64
11.1	EMBEDDED GENERATION	64
11.2	BYPASS COMPENSATION	65
12.	DISPUTE RESOLUTION	66
12.1	OBLIGATION TO INCLUDE IN PROCEDURES	66
13.	COMING INTO FORCE	68

APPENDICES

Appendix 1:	Version A- Form of Connection Agreement for Load Customers
Appendix 1:	Version B - Form of Connection Agreement for Generator Customers
Appendix 2:	Transmission system Connection Point Performance Standards
Appendix 3:	Information to be made available to Customers by Transmitters
Appendix 4:	Customer Financial Risk Classification
Appendix 5:	Methodology and Assumptions for Economic Evaluations

APPENDIX 1

VERSION A - FORM OF CONNECTION AGREEMENT FOR LOAD CUSTOMERS

TABLE OF CONTENTS

PART ONE: GENERAL

1. DEFINITIONS
2. INTERPRETATION
3. INCORPORATION OF TRANSMISSION SYSTEM CODE
4. SCHEDULES
 - 4.1. Incorporation of Schedules
 - 4.2. Schedules
 - 4.3. Additional Schedules
5. NOTICE
 - 5.1. Method of Giving Notice and Effective Date
 - 5.2. Address for Notice
 - 5.3. Exception
6. ASSIGNMENT
7. FURTHER ASSURANCES
8. WAIVER
9. AMENDMENTS
10. SUCCESSORS AND ASSIGNS
11. ENTIRE AGREEMENT
12. GOVERNING LAW
13. COUNTERPARTS

PART TWO: REPRESENTATIONS AND WARRANTIES

14. REPRESENTATIONS AND WARRANTIES
 - 14.1. Customer=s Representations and Warranties
 - 14.2. Transmitter=s Representations and Warranties

PART THREE: LIABILITY AND FORCE MAJEURE

15. LIABILITY
16. FORCE MAJEURE
 - 16.1. No Liability Where Force Majeure Event Occurs
 - 16.2. Obligations Where Force Majeure Event Occurs

PART FOUR: DISPUTE RESOLUTION

17. DISPUTE RESOLUTION
 - 17.1. Exclusivity
 - 17.2. Duty to Negotiate

- 17.3. Submission of Unresolved Disputes to Arbitration
- 17.4. Selection of Arbitrator(s)
- 17.5. Arbitration Procedure

PART FIVE: TERM, TERMINATION AND EVENTS OF DEFAULT

- 18. TERM AND TERMINATION
 - 18.1. Coming into Force
 - 18.2. Termination Without Cause by Customer
 - 18.3. Termination for Cause by Either Party
 - 18.4. Provisions Relating to Termination Generally
 - 18.5. Rights and Remedies Not Exclusive
 - 18.6. Survival
- 19. EVENTS OF DEFAULT AND TERMINATION FOR CAUSE
 - 19.1. Occurrence of an Event of Default
 - 19.2. Curing Events of Default
 - 19.3. Right to Terminate and Disconnect
 - 19.4. Lender's Right of Substitution

PART SIX: DISCONNECTION AND RECONNECTION

- 20. DISCONNECTION
 - 20.1. Voluntary Permanent Disconnection by Customer
 - 20.2. Voluntary Temporary Disconnection by Customer and Reconnection
 - 20.3. Disconnection by Transmitter
 - 20.4. Reconnection after Disconnection by Transmitter
 - 20.5. Provisions Applicable to Disconnection Generally

PART SEVEN: EXCHANGE AND CONFIDENTIALITY OF INFORMATION

- 21. EXCHANGE AND CONFIDENTIALITY OF INFORMATION

PART EIGHT: TRANSMISSION SERVICE AND OTHER CHARGES

- 22. TRANSMISSION SERVICE AND TRANSMISSION SERVICE CHARGES
- 23. OTHER CHARGES AND PAYMENTS

PART NINE: TECHNICAL AND OPERATING REQUIREMENTS

- 24. FACILITY STANDARDS
- 25. ADDITIONAL TECHNICAL REQUIREMENTS
- 26. OPERATIONAL STANDARDS AND REPORTING
- 27. OPERATIONS AND MAINTENANCE
 - 27.1. Work on Site of Other Party
 - 27.2. General
 - 27.3. Controlling Authorities

- 27.4. Communication Between the Parties
 - 27.5. Switching
 - 27.6. Isolation of Facilities at Customer=s Request
 - 27.7. Isolation of Facilities at Transmitter=s Request
 - 27.8. Alternative Method of Isolation
 - 27.9. Forced Outages
 - 27.10. Planned Work
 - 27.11. Shutdown of Customer=s Facilities
 - 27.12. Emergency Operations
 - 27.13. Access to and Security of Facilities
28. INSPECTION, TESTING, MONITORING AND NEW, MODIFIED OR REPLACEMENT CUSTOMER FACILITIES
- 28.1. General Requirements
 - 28.2. New, Modified or Replacement Customer Facilities

PART TEN: SCHEDULE J

29. COMPLIANCE WITH SCHEDULE J

- SCHEDULE A: SINGLE LINE DIAGRAM, DESCRIPTION OF THE CUSTOMER=S CONNECTION POINT(S) AND DETAILS OF SPECIFIC OPERATIONS
- SCHEDULE B: TRANSMISSION SERVICES AND ASSOCIATED CHARGES
- SCHEDULE C: CURE PERIODS FOR DEFAULTS
- SCHEDULE D: FAULT LEVELS AND MODIFICATIONS REQUIRING APPROVAL BY THE TRANSMITTER
- SCHEDULE E: GENERAL TECHNICAL REQUIREMENTS
- SCHEDULE F: ADDITIONAL TECHNICAL REQUIREMENTS FOR TAPPED TRANSFORMER STATIONS SUPPLYING LOAD
- SCHEDULE G: PROTECTION SYSTEM REQUIREMENTS
- SCHEDULE H: FACILITIES DEEMED COMPLIANT AND OBLIGATION TO COMPLY
- SCHEDULE I: EXCHANGE OF INFORMATION
- SCHEDULE J: EMBEDDED GENERATION, BYPASS, ASSIGNED CAPACITY AND TRUE-UPS
- SCHEDULE K: CONTACTS FOR PURPOSES OF NOTICE

APPENDIX 1

VERSION A - FORM OF CONNECTION AGREEMENT FOR LOAD CUSTOMERS

This Connection Agreement is made this ____ day of _____, _____,

BETWEEN

_____, a *[insert form of business organization]* duly *[incorporated/formed/registered]* under the laws of *[insert jurisdiction]* (the ATransmitter@)

AND

_____, a *[insert form of business organization]* duly *[incorporated/formed/registered]* under the laws of *[insert jurisdiction]* (the ACustomer@)

(each a AParty@ and collectively the AParties@)

RECITALS

WHEREAS the Customer has connected or wishes to connect its facilities to the Transmitter=s transmission system.

AND WHEREAS the Transmitter has connected or has agreed to connect the Customer=s facilities to its transmission system.

AND WHEREAS in accordance with its licence and the Market Rules the Transmitter has agreed to offer, and the Customer has agreed to accept, transmission service in relation to the Customer=s facilities.

NOW THEREFORE in consideration of the foregoing, and of the mutual covenants, agreements, terms and conditions herein contained, the Parties, intending to be legally bound, hereby agree as follows:

14.2.1. Subject to section 14.3.1, the Transmitter represents and warrants to the Customer as follows, and acknowledges and confirms that the Customer is relying on such representations and warranties without independent inquiry in entering into this Agreement:

- (a) it is duly incorporated, formed or registered (as applicable) under the laws of its jurisdiction of incorporation, formation or registration (as applicable);
- (b) it has all the necessary corporate power, authority, and capacity to enter into this Agreement and to perform its obligations hereunder;
- (c) the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental and/or other organizational action and does not (or would not with the giving of notice, the lapse of time or the happening of any other event or condition) result in a violation or a breach of or a default under or give rise to a right of termination, greater rights or increased costs, amendment or cancellation or the acceleration of any obligation under (i) any charter or by-law instruments of the Transmitter; (ii) any contracts or instruments to which the Transmitter is bound; or (iii) any laws applicable to it;
- (d) any individual executing this Agreement, and any document in connection herewith, on behalf of the Transmitter has been duly authorized to execute this Agreement and has the full power and authority to bind the Transmitter;
- (e) this Agreement constitutes a legal and binding obligation on the Transmitter, enforceable against the Transmitter in accordance with its terms;
- (f) other than the facilities listed in Schedule H, those of its facilities that are relevant to, or may have an impact on, the Customer=s facilities meet the technical requirements of this Agreement; and
- (g) it holds all permits, licences and other authorizations that may be necessary to enable it to carry on its business as a Transmitter.

14.2.2. The Transmitter shall promptly notify the Customer of any circumstance that does or may result in any of the representations and warranties set forth in section 14.2.1 becoming untrue or inaccurate during the term of this Agreement.

14.3. Transition

14.3.1. Where the provisions of this Agreement apply by virtue of the application of section 3.0.7 of the Code, the representations and warranties referred to in sections 14.1.1(f) and 14.2.1(f) shall be deemed to be given only once the parties have completed sections H.1.1 and H.1.2 of Schedule H.

PART THREE
LIABILITY AND FORCE MAJEURE

15. LIABILITY

- 15.1. Except as otherwise expressly provided in this Agreement, the Transmitter shall not be liable for any Party Losses of the Customer whatsoever arising out of any act or omission of the Transmitter under this Agreement unless such Party Losses result from the willful misconduct or negligence of the Transmitter.
- 15.2. Except as otherwise expressly provided in this Agreement, the Customer shall not be liable for any Party Losses of the Transmitter whatsoever arising out of any act or omission of the Customer under this Agreement unless such Party Losses result from the willful misconduct or negligence of the Customer.
- 15.3. Despite sections 15.1 and 15.2 but except as otherwise expressly provided in sections 21.4, 27.13.6, 27.13.7 and 27.13.9, neither Party shall be liable to the other, whether as claims in contract or in tort or otherwise, for any loss of profits or revenues, business interruption losses, loss of contract or loss of goodwill, or for any indirect, consequential, incidental or special damages, including punitive or exemplary damages.
- 15.4. A Party shall have a duty to mitigate any Party Losses relating to any claim for indemnification from the other Party that may be made in relation to that other Party. Nothing in this section 15.4 shall require the mitigating Party to mitigate or alleviate the effects of any strike, lockout, restrictive work practice or other labour dispute.
- 15.5. A Party shall give prompt notice to the other Party of any claim with respect to which indemnification is being or may be sought under this Agreement.

16. FORCE MAJEURE

16.1. No Liability Where Force Majeure Event Occurs

- 16.1.1. Subject to sections 16.1.2 to 16.1.4, a Party shall not be liable to the other Party for any failure or delay in the performance of any of its obligations under this Agreement in whole or in part to the extent that such failure or delay is due to a Force Majeure Event.
- 16.1.2. The Party invoking a Force Majeure Event shall only be excused from performance under section 16.1.1:
- (a) for so long as the Force Majeure Event continues and for such reasonable period of time thereafter as may be necessary for the Party to resume performance of the obligation; and
 - (b) where and to the extent that the failure or delay in performance would not have been experienced but for such Force Majeure Event.

16.1.3. Nothing in this section 16 shall excuse a Party from performing any of their respective emergency-related obligations in the event of an emergency.

16.1.4. A Party may not invoke a Force Majeure Event unless it has given notice in accordance with section 16.2.

16.2. Obligations Where Force Majeure Event Occurs

16.2.1. Where a Party invokes a Force Majeure Event, it shall promptly give notice to the other Party, which notice shall include particulars of:

- (a) the nature of the Force Majeure Event and, if known, of its duration;
- (b) the effect that the Force Majeure Event is having on the Party=s performance of its obligations under this Agreement; and
- (c) the measures that the Party is taking, or proposes to take, to alleviate the impact of the Force Majeure Event.

Such notice may be given verbally, in which case the notifying Party shall as soon as practicable thereafter confirm the notice in writing.

16.2.2. Where a Party invokes a Force Majeure Event, it shall use all reasonable endeavours to mitigate or alleviate the effects of the Force Majeure Event on the performance of its obligations under this Agreement. Nothing in this section 16.2.2 shall require the mitigating Party to mitigate or alleviate the effects of any strike, lockout, restrictive work practice or other labour dispute.

16.2.3. Where a Party invokes a Force Majeure Event, it shall notify the other Party in writing as soon as practicable of the cessation of the Force Majeure Event and of the cessation of the effects of the Force Majeure Event on the Party=s performance of its obligations under this Agreement.