



File OF-Fac-ElecGen-Rel-IPL 05
6 December 2012

To: Certain International Power Line (IPL) companies under the jurisdiction of the National Energy Board

Order for Electricity Reliability Standards

This letter is to notify you that the National Energy Board (NEB or Board) has issued an Order that imposes mandatory reliability standards on certain IPL companies under the Board's jurisdiction. The Order comes into effect immediately and applies to NEB-regulated IPLs participating in the power system in North America, used for import and export of electricity operating at voltages of 100 kV and above, and some 69 kV power lines.

The IPL companies to whom the Order applies appear below; these are 32 certificate holders and five permit holders. General Order MO-036-2012 (attached) has been issued for the certificate holders, and Amending Orders have been issued to amend the applicable permits. The provisions for the General Order and Amending Orders (the Order) are the same.

The Order addresses the regulatory gap for mandatory reliability standards that exists for IPLs between upstream provincial governance and the downstream United States jurisdiction. The provisions for the Order contain 12 reliability standards requirements, which correspond to the main categories of reliability standards developed by the North American Electric Reliability Corporation. The requirements are defined broadly so that they may include regional variations and can be harmonized with provincial regulatory frameworks as they relate to reliability standards.

On 23 February 2011, the NEB issued draft provisions for an order containing mandatory reliability standards for comment. The Board received submissions from the Canadian Electricity Association and seven IPL owners. Further comments were also received through follow-up meetings. The Board has considered all these comments and submissions. The Board has provided further remarks in respect of these comments and submissions (attached). In addition, further information is provided in a set of Questions and Answers (attached).

If you have any questions or require further information on this matter, please contact Tab Gangopadhyay at 403-299-3611 (tab.gangopadhyay@neb-one.gc.ca). For service in French, please contact Natalia Lis at 403-299-7886 (natalia.lis@neb-one.gc.ca). You can also reach us by calling 1-800-899-1265.

Yours truly,

A handwritten signature in black ink that reads "Sheri Young".

Sheri Young
Secretary of the Board

Attachments

Applicable Certificates and Permits

The **General Order** for mandatory electricity reliability standards applies to the following:

Province	Owner / Operator	Certificate No.	Line Designation	Line Parameters (kV)	No. of IPLs
British Columbia	BC Hydro	EC-III-12	5L51	500	1
	BC Hydro	EC-III-04	5L52	500	1
	BC Hydro	EC-III-10	2L112	230	1
	Teck Cominco Metals Ltd.	EC-III-01	C51	230	1
Saskatchewan	Saskatchewan Power Corporation	EC-III-19	B10T	230	1
Manitoba	Manitoba Hydro	EC-III-16		500	1
	Manitoba Hydro	EC-III-09	Y2OP	230	1
	Manitoba Hydro	EC-III-14	R40M	230	1
Ontario	Hydro One Networks Inc.	EC-III-6	L4D	345	1
	Hydro One Networks Inc.	EC-III-13	L51D	345	1
	Hydro One Networks Inc.	EC-III-20	PA301, PA302	230	2
	Hydro One Networks Inc.	EC-18	L33P	230	1
	Hydro One Networks Inc.	EC-11	L34P	230	1
	Hydro One Networks Inc.	EC-13	J5D	230	1
	Hydro One Networks Inc.	EC-12	B3N	230	1
	Hydro One Networks Inc.	EC-16	BP76, PA27	230	2
	Hydro One Networks Inc.	EC-14	BSC105N	69	1
	Hydro One Networks Inc.	EC-15	BSC105S	69	1
	Hydro One Networks Inc.	EC-17	BL104	115	1
Hydro One Networks Inc.	EC-17	BSH-106	69	1	
New Brunswick	New Brunswick Power Transmission Corporation	EC-III-08	301	345	1
	New Brunswick Power Transmission Corporation	EC-III-25		345	1
	New Brunswick Power Transmission Corporation	EC-III-18		138	1
	Algonquin Power	EC-III-2	Tinker 6904	69	1
	Algonquin Power	EC-III-3	Tinker 6901	69	1
Québec	Hydro-Québec	EC-III-15	7040	765	1
	Hydro-Québec	EC-III-21	451 - 452	+/- 450 DC	1
	Hydro-Québec	EC-III-17	1400	120	1
	Cedars Rapids Transmission Company Ltd.	EC-III-24		120	1
	Hydro-Québec	EC-III-22		120	1

Amending Orders for mandatory electricity reliability standards apply to the following:

Province	Owner / Operator	Certificate No.	Line Designation	Line Parameters (kV)	No. of IPLs
Alberta	Montana-Alberta Tie Ltd.	EP-301		243	1
Manitoba	Manitoba Hydro	EP-196	Glenboro	230	1
Ontario	Hydro One Networks Inc.	EPE-59	Fort Frances East	115	1
	Hydro One Networks Inc.	EPE-113	Fort Frances West	115	1
	Canadian Niagara Power Inc.	EP-137	Line 7	115	1

Note: separate Amending Orders have been issued for each of the five permit holders above.

National Energy
Board



Office national
de l'énergie

ORDER MO-036-2012

IN THE MATTER OF the *National Energy Board Act* (Act)
and the regulations made under that Act; and

IN THE MATTER OF the reliability, safety and security of
international power lines under the Board's jurisdiction under
File OF-Fac-ElecGen-Rel-IPL-05.

BEFORE the Board on 29 November 2012.

WHEREAS the Board may order the holders of certificates issued in respect of international power lines to take measures that the Board considers necessary for the safety and security of international power lines, including their reliability;

AND WHEREAS as a result of the 2003 blackout in Eastern Canada and the Eastern United States, a bilateral Canada-U.S. team recommended the development and enactment of mandatory electricity transmission reliability standards;

AND WHEREAS the Board recognizes that the electrical power system in North America is integrated and that mandatory and enforceable transmission reliability standards are critical to the proper functioning of the electrical power system;

AND WHEREAS the Board has determined that it is necessary for the safety and security of international power lines as part of the electrical power system to require the holders of the certificates issued in respect of international power lines listed in the Appendix to comply with mandatory and enforceable transmission reliability standards;

AND WHEREAS the Board acknowledges that the harmonization of rules respecting the reliability of international power lines with regulatory authorities in the provinces promotes the overall safety and security of international power lines;

.../2

IT IS ORDERED that, pursuant to subsection 48(1.1) and section 58.27 of the Act, the following Order be made:

Interpretation – Reliability Standards

1. In this Order,
 - (a) "certificate" means a certificate issued or deemed to have been issued under Part III.1 of the *National Energy Board Act* in respect of an international power line;
 - (b) "reliability standard" means a standard, rule or requirement for the purpose of planning and promoting the reliable and secure operation, monitoring or maintenance of the power system that is, from time to time,
 - (i) adopted or approved by a provincial authority, or
 - (ii) established, developed or adopted by a standards development authority;
 - (c) "power system" has the same meaning as in section 2 of the *National Energy Board Electricity Regulations*;
 - (d) "provincial authority" means any entity authorized by the laws of a province to adopt or approve a reliability standard;
 - (e) "standards development authority" means
 - (i) the Midwest Reliability Organization (MRO),
 - (ii) the North American Electric Reliability Corporation (NERC),
 - (iii) the Northeast Power Coordinating Council Inc. (NPCC),
 - (iv) the Western Electricity Coordinating Council (WECC), or
 - (v) any successor to a body listed in subparagraphs (i) to (iv).

Application

2. This Order applies only in respect of the holders of the certificates listed in the Appendix and the international power lines for which those certificates were issued.

Reliability Standards

3. The holder of a certificate shall, in accordance with this Order, operate, monitor and maintain the international power line, in respect of which the certificate was issued, to
 - (a) be reliable and secure;
 - (b) avoid any adverse effects that the operation of the international power line may have on the reliability of any power system to which the international power line is interconnected; and
 - (c) comply with the reliability standards specifically required under section 5.
4.
 - (1) The Board may exempt the holder of a certificate from compliance with a reliability standard or any other related obligation under this Order if it is satisfied that
 - (a) the reliability standard or any other related obligation does not properly apply to the international power line for which the certificate was issued;
 - (b) an entity, other than the holder of a certificate, is responsible under the laws of a province for operating or maintaining the international power line for which the certificate was issued in compliance with that reliability standard or obligation instead of the holder of the certificate.
 - (2) The holder of a certificate may request the Board for an exemption under subsection 4(1) by filing an application, in a form acceptable to the Board, that specifies
 - (a) each reliability standard or other related obligation under this Order for which the holder requests an exemption; and
 - (b) the reasons for each exemption including, in the case referred to in paragraph 4(1)(b), the identity of the other entity and the provincial law under which the other entity has responsibility for a reliability standard or other related obligation under this Order.
5.
 - (1) The holder of a certificate shall comply with reliability standards respecting resource and demand balancing for the proper use and control of power system resources and the development of tools and methodologies to
 - (a) maintain interconnection steady-state frequency by balancing power generation to continuously match actual demand; and
 - (b) maintain the reliable operation of the power system.

- (2) The holder of a certificate shall comply with reliability standards respecting critical infrastructure protection, including security management controls, to protect the operation, performance, integrity and reliability of the physical and cyber assets of the international power line and to provide demonstrable evidence of the reliability of the power system.
- (3) The holder of a certificate shall comply with reliability standards respecting communications so that adequate and reliable communication facilities are available, used and maintained for the exchange and coordination of information between system operators, reliability coordinators and other authorities.
- (4) The holder of a certificate shall comply with reliability standards respecting emergency preparedness and operations for the development, maintenance and implementation of a set of plans to mitigate, monitor and report operating emergencies, including load shedding, system restoration, black start capabilities and loss of control centre functions.
- (5) The holder of a certificate shall comply with reliability standards respecting facilities design, connection and maintenance to
 - (a) establish methodologies to determine and implement facility rating, system operating limits and transfer capabilities, and
 - (b) manage vegetation to prevent outages from vegetation inside the international power line's right of way, minimize outages from vegetation outside that right of way and maintain clearance between transmission lines and vegetation on and along that right of way.
- (6) The holder of a certificate shall comply with reliability standards respecting interchange, scheduling and coordination to check each interchange schedule of power transfer according to the reliability requirements of interchange scheduling and dynamic power transfers in one or more control areas before a power transfer is implemented.
- (7) The holder of a certificate shall comply with reliability standards respecting interconnection reliability operations and coordination for the authorization of a reliability coordinator to determine that the power system is operated reliably under normal and contingency conditions, conduct system studies, prepare reliability assessments, provide a wide-area view of reliability and coordinate emergency operations for one or more control areas.
- (8) The holder of a certificate shall comply with reliability standards respecting modelling, data and analysis for consistent and uniform methodologies to determine, verify and use available transmission system capabilities and capacity margins.

- (9) The holder of a certificate shall comply with reliability standards respecting personnel performance, training and qualifications for personnel operating the international power line to have the training, competence, responsibility and authority necessary to take timely action to maintain the reliability of the power system.
 - (10) The holder of a certificate shall comply with reliability standards respecting the protection and control of the power system against abnormal power system conditions.
 - (11) The holder of a certificate shall comply with reliability standards respecting transmission system planning and operations to maintain steady state stability and dynamic stability of the power system through the planning of normal operations, planned outages and operation under single or multiple contingencies.
 - (12) The holder of a certificate shall comply with reliability standards respecting voltage and reactive control for the monitoring, control and maintenance of voltage levels, reactive flows and reactive resources in real time within operating limits to protect equipment and the reliable operation of the international power line.
6. (1) The holder of a certificate shall maintain a record, in the form of a spreadsheet, that contains
- (a) the identity of the provincial authority or standards development authority whose reliability standards the holder of the certificate is complying with for the purposes of sections 3 and 5;
 - (b) the names and any reference numbers of the reliability standards applicable to the international power line; and
 - (c) the reasons why the holder is complying with those reliability standards.
- (2) The holder of a certificate shall, within 90 days of issuance of this Order, file with the Board a declaration that it is maintaining the record under subsection 6(1) and a copy of the record.
7. The holder of a certificate shall, within 30 days after the end of each year, file with the Board a report that contains a detailed description of any reliability standard adopted, approved, established or developed after this Order is made, with which the holder is complying, including
- (a) the identity of the provincial authority or standards development authority that adopted, approved, established or developed those reliability standards;
 - (b) the names and any reference numbers of the reliability standards applicable to the international power line; and

- (c) the reasons why the holder is complying with those reliability standards.
8. For greater certainty, the holder of a certificate is not required to obtain approval from the Board for
- (a) the particular reliability standards with which the holder of the certificate is complying for the purposes of sections 3 and 5;
 - (b) the content of the record under subsection 6(1); or
 - (c) the content of the report under section 7.

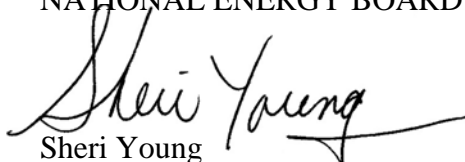
Compliance Document

9. The holder of a certificate shall, on request, provide to the Board a copy of any compliance document, or any portion thereof, prepared by the holder that describes the manner in which the holder is conducting compliance monitoring and enforcement to assess, investigate, evaluate, audit or measure its compliance with any reliability standard.

Reporting on Non-Compliance

10. (1) The holder of a certificate shall report to the Board any event known to be a failure to comply with sections 3 or 5.
- (2) The report referred to in subsection 10(1) must be sent without delay after the event has been determined to be a failure and must contain a detailed description of
- (a) the nature, duration and cause of the event; and
 - (b) any steps the holder has taken or proposes to take to mitigate the event or correct the performance of the international power line.
- (3) If the holder of a certificate is obliged, by law or agreement, to send a report or notice that contains the same information required under subsections 10(1) and 10(2) to a provincial authority or standards development authority, the holder may send a copy to the Board of that report or notice, or such portions thereof that provide the required information, in lieu of the report under subsection 10(1).

NATIONAL ENERGY BOARD


Sheri Young
Secretary of the Board

ORDER MO-036-2012

APPENDIX

Certificates and International Power Lines Subject To This Order

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