

SENT BY ELECTRONIC MAIL AND REGULAR MAIL

December 21, 2012

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
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Dear Ms. Walli:

**Re: Independent Electricity System Operator
Licence Compliance Report – 2012 Reliability Standards Activities**

The Independent Electricity System Operator's (the "IESO") Licence (EI-2008-0096)¹ section 6.2(f) requires, pursuant to subsections 5(1)(f) or 5(1)(g) of the Electricity Act², reporting to the Ontario Energy Board (the "Board") the significant activities the IESO undertook for the development of reliability standards and criteria. This report summarizes the significant activities the IESO undertook in 2012.

Background

Reliability standards are criteria and standards, including an amendment to a standard or criterion, relating to the reliable operation of the integrated power system established and declared in force by a standards authority, such as the North American Electric Reliability Corporation (NERC) and the Northeast Power Coordinating Council (NPCC).

The IESO is a registered entity with the NERC, a full member of NPCC, and an active participant in the North-American electric reliability arena. The IESO is involved in the ongoing development of standards and criteria by NERC and NPCC. The goal of this involvement is to contribute to the development of clearly written and implementable standards that are in the best interests of Ontario and the North American electricity industry in general.

¹ Independent Electricity System Operator Licence, EI-2008-0096,
http://www.ieso.ca/imoweb/pubs/corp2/OEB_IESO_Licence_20081023.pdf

² Electricity Act, 1998, S.O. 1998, CHAPTER 15, Schedule A, http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_98e15_e.htm#BK71

NERC and NPCC

The IESO continues to maintain and advance constructive relations with NERC and NPCC to influence the development and implementation of reliability standards in North America. This is accomplished through regular interactions, review, comment and response to NERC and NPCC postings, active participation with relevant sector Councils, Task Forces, Subcommittees and Working Groups,

Federal Energy Regulatory Commission (FERC)

The IESO is actively involved with the FERC proceedings, intervened and commented on various FERC proposed rulemakings (NOPRs) and Technical Conferences in 2012. The IESO also worked in close coordination with the ISO/RTO Council (IRC) and Ontario and Canadian stakeholders to submit joint comments on various FERC NOPRs and Technical Conferences.

IESO's Role in Ensuring Reliability

The IESO fulfills its roles and responsibilities with respect to ensuring reliability in a number of ways, including:

- Administering Ontario's electricity markets and enforcing the Ontario Reliability Compliance Program (ORCP), pursuant to the Electricity Act, 1998 and the Ontario Market Rules
- Operating as the Reliability Coordinator (RC), Transmission Operator (TOP), Transmission Planner (TP), Interchange Authority (IA), and Balancing Authority (BA) for Ontario, and as a member of the Northeast Power Coordinating Council (NPCC) and the North American Electric Reliability Corporation (NERC)
- The IESO has adopted the NERC and NPCC reliability standards, regional reliability standards and criteria. Additionally, under the market rules, the IESO has the authority to set additional standards and criteria in Ontario when necessary. These activities are supported by the IESO's Memorandum of Understanding (MOU) with NERC and NPCC which sets out the obligations of the signatories, and compliments the MOU between the Ontario Energy Board (OEB) and NERC; and
- Participating in various industry forums, councils, and committees for the development and administration of a number of activities related to administering electricity markets, coordinating with neighbouring regional entities on market and reliability matters, developing reliability standards that deal with both operational and planning activities, and incorporating emerging technologies including renewable resources, storage technology, smart grid applications and demand response resources.

See **Appendix A** for a summary of the significant activities the IESO undertook in 2012 for the development of reliability standards and criteria. See **Appendix B** for a summary of

participation and Memberships in NERC, NPCC, and relevant sector Councils, Task Forces, Subcommittees and Working Groups.

If you have any questions about this report, I can be reached at 905-855-6481.

Yours truly,

A handwritten signature in blue ink, appearing to read 'David Barrett', with a stylized flourish at the end.

David Barrett, CA
Regulatory Affairs and Sector Policy Analysis

cc: Peter Fraser, Managing Director Regulatory Policy, Ontario Energy Board
Brian Rivard, Manager, Regulatory Affairs and Sector Policy Analysis, IESO

APPENDIX A – Significant Reliability Standards Activities

Pursuant to the IESO's Licence (EI-2008-0096) section 6.2(f), the following are the significant activities the IESO undertook in 2012 related to the development of reliability standards.

(1) Bulk Electric System (BES) Definition

The FERC issued Order 743 on November 18, 2010 and directed NERC to revise its definition of the BES to establish a bright-line threshold that includes all non-radial transmission elements and facilities operated at or above 100 kV, and to eliminate a regional entity's discretion to define the elements and facilities that make up the BES. FERC also ordered NERC to develop an exception process for facilities that would otherwise be included in the revised BES definition.

On September 7, 2012, the IESO Board approved market rule amendments that grant the IESO authority to establish a BES exception procedure. The rules, which took effect October 1, 2012, permit market participants who own elements and facilities or connection applicants who propose to own elements or facilities to apply to the IESO for an exception from the definition of the BES, allow the IESO to recover the costs associated with assessing and processing BES exception requests, and designate the IESO Board as the authority that approves or disapproves a BES exception request.

The IESO sought the authority to establish the BES exception procedure in anticipation of regulatory approval for NERC's revised definition of the BES.

FERC approved the revised BES definition on December 20, 2012.. The revised BES definition will be effective on the first day of the second calendar quarter after receiving FERC's approval in the NOPR proceeding (i.e.: April 1, 2013). The new compliance responsibilities for NERC standards will be required to be in place twenty-four months after the effective date of the revised BES definition. The twenty-four month period will allow entities to bring newly-included facilities into compliance with applicable NERC standards by the end of the implementation period and allow time to file for exceptions and have those exception requests resolved.

(2) Standard Processes Manual (SPM) Revision

The NERC Board of Trustees (BOT) requested the assistance of the NERC Member Representatives Committee to provide policy input, and a proposed framework, for specific improvements to the Standard Processes Manual. The standard drafting team (SDT) made the following substantive changes in response to the recommendations to improve the SPM:

- Added language to clarify that negative ballots without comments count toward quorum but not consensus, except in final ballot where "NO" votes without comments count towards both quorum and consensus.

- Introduced a new waiver provision (Section 16.0) to allow some flexibility in administering the standards process to meet reliability needs. The waiver process allows the Standards Committee to modify the standards process in rare cases for good cause (e.g. in response to a national emergency declared by the US or Canadian government that involves the reliability of the BES or a cyber-attack on the BES)
- Incorporated the concept of a notice period for stakeholders prior to consideration of a waiver request by the Standards Committee and clarified how notice to stakeholders will be provided when the waiver provision is exercised. This provision was added in response to stakeholder concerns regarding transparency, openness and due process protections.

The IESO supported the addition of Section 16 but expressed concern that there is still a gap that needs to be addressed. Namely, Section 16 only addresses urgent reliability standard revisions, and does not address emergency situations requiring immediate action. A clear distinction and separation, possibly supported by separate processes, should be made between an urgent situation requiring an urgent standard development and an emergency situation requiring an immediate action.

In addition, the IESO advised the SDT that the wording added in Section 16 does not provide for industry review and approval/rejection of any new standard or amendment adopted through the waiver process. While the IESO supported the waiver concept, the IESO insisted on including a post-factum review and approval process by the industry.

(3) Cyber Security Order 706 Version 5 CIP

In 2008, FERC Order No. 706 directed the ERO to develop modifications to Version 1 of the NERC CIP Cyber Security Standards to address a range of concerns in various areas of the Version 1 standards. One of the ERO's priorities was to develop a robust set of critical infrastructure reliability standards that enable the industry to adapt to continuously changing threats and vulnerabilities by emphasizing security risk management. The new NERC Version 5 CIP Cyber Security Standards provide a cyber security framework for the categorization and protection of BES Cyber Systems to support the reliable operation of the BES. These standards recognize the differing roles of each entity in the operation of the BES, the criticality and vulnerability of the cyber systems needed to support BES reliability, and the risks to which they are exposed.

The IESO fully supported the new CIP standards and provided technical expertise to the SDT throughout the entire project.

(4) Paragraph 81

In Paragraph 81 of the FERC order issued on March 15, 2012, it is proposed that some requirements that provide little protection for BES reliability or that may be redundant be

removed from Reliability Standards. NERC made specific proposals, identifying the requirements within certain standards that should be revised or removed, setting forth in detail the technical basis for these suggestions. Phase 1 of this project identifies 38 Reliability Standard requirements that clearly meet the criteria set forth in the Technical White paper prepared for the NERC Standards Committee by the P81 Standards Drafting Team and are believed to not require extensive technical research. Subsequent phases of the project will address Reliability Standard requirements that need additional technical research before retirement or modification.

The IESO generally supports this proposed effort and agrees that the most of the identified requirements would meet the proposed criteria for retirement, with some exceptions such as requirements that are still needed for reliability.

(5) NERC Transmission Planning (TPL) Standards and Footnotes b and 12 (FERC orders 693 and 762)

In Order 693 which was issued in March 2007, FERC found that the transmission planning reliability standard should not allow an entity to plan for the loss of non-consequential firm load in the event of a single contingency. It directed NERC to clarify the circumstances in which an entity can plan to interrupt firm demand for a single contingency and to modify TPL standard TPL-002-0b, Table 1, footnote “b” accordingly.

On March 31, 2011, NERC sought approval of its proposal to revise and clarify footnote “b”. The revised footnote “b” allowed for planned load shed in a single contingency provided that the plan is documented and alternatives are considered and vetted in an open and transparent stakeholder process.

On April 19, 2012, FERC issued Order No. 762 remanding the TPL standards with the footnote “b” revision to NERC. It found the revision was still vague and unenforceable. FERC felt that without articulating some bounds on the use of the planned shedding of firm demand, inconsistent and arbitrary exceptions would take place that would allow entities to plan to interrupt any amount of firm demand in any location and at any voltage level. It also directed NERC to issue a data request to collect information about the current utilization of footnote “b” in order for FERC to get a sense of the industry’s reliance on planned firm demand interruptions. On the same day, FERC issued a Notice of Proposed Rulemaking (NOPR) proposing to remand TPL-001-2 (the new standard proposed to roll into one the four currently effective TPL standards) with similar objections for footnote “12”.

Ontario has had a long-standing history of relying on limited and controlled load-shedding, without adversely affecting the remaining parts of the bulk power system, in parts of the transmission system where loads are sparse and the transmission system has limited redundancy, or in situations where load shedding is used as a temporary or stopgap measure to manage the consequence of transmission re-enforcement delays.

The proposed removal or limitations on the use of load-shedding, and the consequential need for additional transmission enhancements to comply with proposed standards may not be cost

justified for all parts of Ontario. The IESO has been actively reviewing and commenting on the proposed changes, and has voted against those changes that have the potential for significant cost implications to Ontario. These standards are still in the development process, but in the event that these are approved at NERC in their current form, the OEB may be requested to review the standard to prevent it from taking effect in Ontario.

APPENDIX B – IESO Participation and Memberships

The table that follows summarizes the IESO's participation and Memberships in NERC, NPCC, and relevant sector Councils, Task Forces, Subcommittees and Working Groups, including organizations that and involvements that have help support standards development in Canada and across North America as they may affect the Ontario.

NERC
Members Representative Committee (MRC)
Electric Sub-Sector Coordinating Council
Standards Committee
Standards Committee Process Subcommittee
ALR - Adequate Level of Reliability Task Force
Planning Committee
Easter Interconnection Reliability Assessment Group (ERAG) - Management Committee
Easter Interconnection Reliability Assessment Group (ERAG) - Steering Committee
Operating Reliability Subcommittee
Functional Model Working Group
Interchange Distribution Calculator Working Group
ERO Members Representative (Notification List)
Variable Generation Task Force
CIP Interpretation Drafting Team
Data Exchange Working Group
Eastern Interconnection Planning Collaborative (EIPC)
BES Security Metrics Working Group

NPCC
Board of Directors
Full Member Representatives
Reliability Coordinating Committee
Public Information Committee
Compliance Committee
Regional Standards Committee
TFSS (Task Force on System Studies)
TFCP (Task Force on Coordination of Planning)
TFCO (Task Force on Coordination of Operations)
TPSP (Task Force on System Protections)
CO-1 (Working Group on Control Performance)
CO-2 (Working Group on Dispatcher Training)
CO-7 (Operational Review Team)
CO-8 (System Operating Managers Working Group)
CO-10 (System Operational Tools Working Group)
CO-11 (Restoration Working Group)
CO-12 (Operations Planning Working Group)
CP-8 (Working Group on Review of Resource and Transmission Adequacy)
CP-11 (Review of NPCC Basic Criteria)
SS-37 (Working Group on Base Case Development)
SS-38 (Working Group on Inter-Area Dynamic Analysis)
RFC-NPCC Steering Committee
RFC-NPCC Working Group
IST-2 (Telecommunications Working Group)
IST-3 (EMS-SCADA Working Group)
TFIST (Task Force on Infrastructure Security and Technology)

ISO/RTO Council (IRC)
Communications
Info Tech
Security Working Group
Architecture Working Group
Markets
Operations
Planning
Regulatory (RLC)
Standards Review Committee (SRC)
Enterprise Risk Management Working Group
North American Energy Standards Board (NAESB)
Board
Canadian Electricity Association (CEA)
Regulatory and Development Task Group
Transmission Council
Security and Infrastructure Protection Committee
CCIRC Task Force
U.S. Department of Energy
Energy Sector Cyber Security Working Group
U.S. Department of Homeland Security (DHS)
Partnership for Critical Infrastructure Security (PCIS)
Cross-Sector Cyber Security WG (CSCSWG) - under PCIS
Federal/Provincial/Territory (FPT)
Canadian Reliability Standards Enforcement Group