

Electric Reliability Organization (ERO): Impact on Ontario

Introduction

This Quick Take takes a look at the development of reliability standards in Ontario. Additionally, it will provide an overview of some of the key participants that monitor and enforce reliability standards for the Ontario electrical grid.

Background

The enforcement of North American reliability standards and many of the standards themselves changed as of June 18, 2007. This Quick Take explains these changes, the role of the Electric Reliability Organization (ERO), and the impact on Ontario.

Compliance with reliability standards is mandatory in Ontario, through the market rules. The IESO's Market Assessment and Compliance Division (MACD) conducts the compliance process. Before the ERO was implemented, most jurisdictions outside of Ontario observed reliability standards on a voluntary basis only. Under the ERO, jurisdictions outside of Ontario must also comply with reliability standards.

We recommend that Ontario companies and organizations participate in the development of ERO standards. This will give Ontario a greater voice in the standards ballot pool of the many North American participants. To further this, we have developed a [Reliability Standards Standing Committee](#).

How did the ERO Develop?

Since the 1990s, the IESO and its predecessors have advocated the adoption of mandatory compliance with reliability standards throughout North America.

Impact of the 2003 blackout

The August 2003 blackout was caused in part by a utility not complying with several voluntary North American Electric Reliability Corporation (NERC) reliability standards – for example, after a fault occurred, they didn't adjust their system in the time specified by NERC. This inaction was one of a series of events that contributed to the blackout. One of the joint U.S.-Canada recommendations following the blackout investigation was that all transmission users, owners and operators be subject to mandatory, enforceable reliability standards.

The U.S. Energy Policy Act (EPAct)

The EPAct required the U.S. Federal Energy Regulatory Commission (FERC) to certify and approve an Electric Reliability Organization (ERO) in the United States. FERC certified NERC as the ERO for the United States in July 2006. NERC has the authority in the U.S to:

- Develop reliability standards
- Enforce mandatory reliability standards, and
- Provide reliability assessment reports.

Recognizing NERC as the North American ERO

On April 4, 2006, NERC submitted applications for recognition to the Ontario Energy Board (OEB), the National Energy Board, and the other provincial regulators. The Ontario Ministry of Energy responded on November 28 by officially recognizing NERC as the ERO.

The Ontario Energy Board (OEB) signed a memorandum of understanding (MOU) with NERC. With this recognition, the OEB gained oversight over NERC.

In addition, the IESO, NERC and the Northeast Power Coordinating Council (NPCC) signed a joint memorandum of understanding that reflected Ontario's existing reliability and compliance framework. The memorandum set out the framework for the day-to-day workings of our relationship with NERC and NPCC.

Key Participants

NERC

NERC has been a voluntary electric industry stakeholdered organization since its inception in 1968. NERC was formed to develop reliability standards for the industry after a major blackout in the U.S. Northeast and parts of Ontario in 1965. Its role has expanded to include a number of activities beyond standards development such as:

- Operator certification,
- Training initiatives, and
- Carrying out audits and reliability adequacy assessments

To take on its role as the Electric Reliability Organization, NERC strengthened its activities, took on compliance enforcement in the U.S., and established delegation agreements with the eight existing regional councils in North America.

NPCC

Within northeastern North America, Ontario, Quebec, the Maritime Provinces, New York and the New England states belong to the Northeast Power Coordinating Council (NPCC). NPCC was formed before NERC in 1966 – after the 1965 blackout discussed earlier.

NPCC has two primary functions:

- First, NPCC develops regional criteria, guides and procedures to promote and respond to reliability-based issues within its members' control areas, at the request of its members, and
- Second, and most important, NPCC is responsible for developing and enforcing regional reliability standards under NERC's authority as the ERO. We see a benefit in this, as it allows enforceability outside of Ontario.

NPCC monitors the IESO and enforces reliability criteria and standards.

Please note that we encourage market participants to sign up for membership in NPCC and NERC to ensure that Ontario has a strong voice in both of these important organizations.

The IESO

We are a member of NERC and NPCC— and we fund their activities on behalf of Ontario through our fees (approved by the OEB).

- One of our objectives under Ontario's Electricity Act 2005 is to 'participate in the development by any standards authority of standards and criteria relating to the reliability of transmission systems.' Consequently, we and our industry stakeholder groups have participated in the ERO development process.
- We also 'establish and enforce standards and criteria' for reliability purposes. This means that NERC and NPCC reliability requirements are adopted in the market rules along with other Ontario-specific reliability standards that we implement. Please note that Ontario market participants do not have to register with NERC.
- On June 28, 2007, the IESO Board approved amendments to Market Rule MR-00330-R00-R04: Reliability Standards - Mapping Reliability Standards to Ontario market participants. Through this amended rule, the IESO was obligated to identify, in consultation with market participants, each market participant's reliability standards' obligations or requirements.
- MACD enforces NERC, NPCC, and other market rule reliability and market requirements that must be followed by the IESO and Ontario market participants.

Ontario Energy Board (OEB)

As Ontario's energy regulator, the OEB oversees ERO activities. In addition, Sections 36.1 and 36.2 of the Electricity Act give the OEB the authority to review reliability standards approved by interjurisdictional standards authorities such as NERC. (See the Reliability Standards Development section below.)

The OEB or any person may make an application for review of a reliability standard as long as actions are initiated within the time prescribed in the Act or in any subsequent regulation.

The OEB has standard review powers similar to other regulators, such as FERC.

Reliability Standards Development

NERC standards are developed in an open and inclusive process:

- Once a request for a standard is approved by the NERC Standards Committee, an industry-based team of experts prepares a draft standard to be voted on by the industry ballot pool.
- Any member or corporation with an interest is able to join one of nine industry segments of the NERC standard ballot body.
- After being accepted by the ballot body – which may involve voting, review of any comments, re-working of the standard, and re-balloting – the standard is submitted to the NERC Board for approval.
- If approved, these standards become mandatory in Ontario on the effective date, and are available for industry use outside of Ontario. Under the ERO, the standards include an effective date to allow time for regulatory reviews as they apply to each jurisdiction.

Please note: Under the 2008 legislation (Sections 36.1 and 36.2 of the Electricity Act), the OEB has the authority to make orders preventing the operation of a standard in Ontario and referring (otherwise known as remanding) the standard back to NERC. In addition, the OEB can stay or refer a standard back to NERC in the interest of coordination with other jurisdictions. Note that the OEB acts on a public complaint only if a market participant files an appeal within 21 days of the IESO posting a new or modified standard. We post on our website and email market participants within 7 days of receiving notification from a standards authority. If no one appeals, the standard becomes mandatory on the effective date unless the OEB itself initiates a review.

Keep in mind that the IESO has only one vote in a ballot pool of many North American participants. Although we have been successful in getting Ontario's position heard by

submitting comments and participating on the standards drafting team, we recommend that Ontario companies and organizations participate in the standards process – especially in the balloting, given the volume of voting potential in other jurisdictions.

Reliability Standards Standing Committee

The Reliability Standards Standing Committee (RSSC) offers stakeholders the opportunity to review and provide advice to us on procedures and business processes as they affect market participants and their business with respect to the NERC standards development and commenting process. The program helps market participants understand their reliability obligations by:

- Notifying participants of reliability-related information on new and developing reliability standards
- Providing a forum to discuss and develop consensus comments on new and developing reliability standards
- Engaging participants in the NERC and NPCC standard development process

We expect to see continuous improvement in NERC reliability standards as the industry focuses on improving the clarity, measurement and compliance aspects of NERC reliability standards.

Please see the [Reliability Standards Standing Committee](#) webpage for more information.

Compliance in Ontario

The market rules require market participants and the IESO to comply with reliability standards, criteria and rules established by NERC, NPCC and the IESO.

- Within Ontario, MACD assesses and enforces compliance with these reliability requirements.
- The Ontario Reliability Compliance Program (ORCP) monitors and assists market participants in meeting their reliability standards obligations.
- Market participants can also report possible standards violations by the IESO and others in Ontario by contacting MACD.
- NPCC monitors the IESO for compliance with ERO reliability standards and NPCC criteria. NPCC can issue a non-monetary sanction against us. (There can still be monetary penalties as a result of a MACD investigation that takes place in parallel with NPCC's review.)

IESO Accountability

The IESO is held accountable for all Ontario violations, regardless of whether the IESO or a market participant is responsible for the violation. If the NPCC imposes a sanction on the IESO, the IESO can request a hearing at NPCC, followed by an appeal to NERC (as the ERO).

Also, under Section 36.3 of the Electricity Act, the IESO can appeal a non-compliance finding to the OEB if the finding is made by an inter-jurisdictional standards authority in relation to a violation of a reliability standard in Ontario.

Compliance Monitoring by NPCC

As mentioned above, NPCC monitors IESO and Ontario area compliance with ERO standards. They do this by regular compliance audits of the IESO, done on a three-year cycle, and on an event-specific investigation basis. The results of the audits are made public.

Compliance Monitoring by MACD

MACD monitors and investigate alleged market rule breaches by the IESO and market participants, including alleged breaches of a NERC or NPCC reliability standard or criteria. MACD's investigation may result in a sanction or monetary penalty, based on the seriousness of the incident, the operating history of the participant, mitigation efforts, etc.

Summary

NERC operates as the Electric Reliability Organization throughout North America, including Ontario. NERC reliability standards became mandatory and enforceable in jurisdictions outside of Ontario as of June 18, 2007. Because we already had mandatory compliance with reliability standards in Ontario, market participants saw very few changes in their day-to-day operations.

The IESO continues to be involved in further developments of the ERO, with the goal of having mandatory and enforceable reliability standards throughout North America.

List of Acronyms

CEA	Canadian Electricity Association
EPAct	U.S. Energy Policy Act
ERO	Electric Reliability Organization
FERC	US Federal Energy Regulatory Commission
IESO	Ontario's Independent Electricity System Operator

MACD	Market Assessment and Compliance Division
MOU	Memorandum of Understanding
NERC	North American Electric Reliability Corporation (formerly called North American Electric Reliability Council)
NPCC, INC. (NPCC)	Northeast Power Coordinating Council, Inc.
OEB	Ontario Energy Board
RSSC	Reliability Standards Standing Committee

Before and after the ERO

	Before ERO	With ERO
Compliance and enforcement within Ontario	Reliability standards are mandatory and enforceable through market rules	Reliability standards are mandatory and enforceable through market rules (no change)
Compliance within jurisdictions outside of Ontario	Most have only voluntary compliance with reliability standards	Mandatory compliance with reliability standards
Electric Reliability Organization (ERO) for North America	No ERO	NERC is the North American ERO
Development of standards	NERC, NPCC, IESO	NERC (as ERO), NPCC (member and ERO activities), IESO
Ontario enforcement authorities	Over market participants and IESO: OEB, MACD (including monetary sanctions); Over IESO (representing Ontario): NPCC (non-monetary sanctions)	Over market participants and IESO: OEB, MACD (including monetary sanctions); Over IESO (representing Ontario): NPCC (non-monetary sanctions)
NERC membership	8 regional councils, including NPCC (bottom-up structure)	8 regional councils (including NPCC), as well as other industry participants including the IESO (top-down structure)
OEB role	Ontario regulator	Ontario regulator – also oversees ERO activities in Ontario
Participants’ role in developing NERC/ERO standards	Some participants currently participate	IESO recommends that Ontario companies and organizations participate in developing ERO standards to give Ontario a greater voice both at the NERC and regional level

Additional Resources

NERC website at <http://www.nerc.com/>

OEB website at <http://www.ontarioenergyboard.ca/OEBNPCC>,

Inc. (NPCC) web site at <http://www.npcc.org/>

Contact Us

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IESO Quick Takes provide the Ontario electricity sector with insights into specific initiatives or issues. Market participants should ensure that they read and understand the specific obligations in the market rules and market manuals for their participation in Ontario's electricity market. For more information, please email us at customer.relations@ieso.ca.