

# RELIABILITY COMPLIANCE ENFORCEMENT IN ONTARIO

June 27, 2016

Training provided for Ontario market participants by the Market Assessment  
and Compliance Division of the IESO

Module 1

# A MACD training presentation

This presentation has been prepared to assist in the Ontario Independent Electricity System Operator's (IESO) training of market participants and has been compiled from extracts from the market rules or documents posted on the web site of the IESO, NERC, NPCC and other source documents. Users of this information are reminded that they remain responsible for complying with all of their obligations under the market rules and associated policies, standards and procedures relating to the subject matter of this presentation, even if such obligations are not specifically referred to herein. While every effort has been made to ensure the information in this presentation is accurate and up to date, users must be aware that the specific provisions of the market rules or particular document shall govern.

# Overview – Acronyms List

- BES - Bulk Electric System
- BPS - Bulk Power System
- CCEP - Criteria Compliance Enforcement Program
- CMEP - Compliance Monitoring and Enforcement Program
- ERO - Electric Reliability Organization
- FERC - US Federal Energy Regulatory Commission
- IESO - Independent Electricity System Operator
- MACD - Market Assessment and Compliance Division (IESO)
- MACD CMP – MACD Compliance Monitoring Program
- MOU - Memorandum of Understanding
- NERC - North American Electric Reliability Corporation
- NPCC - Northeast Power Coordinating Council
- OEB - Ontario Energy Board
- ORCP – Ontario Reliability Compliance Program (IESO)

# Overview

- Reliability Compliance Enforcement Frameworks in Ontario and the U.S.:
  - U.S. - FERC, NERC, NPCC
  - Ontario - OEB, IESO, MACD
- Application of Reliability Standards in Ontario:
  - enforced through the Ontario market rules
- Compliance Monitoring and Enforcement Programs:
  - U.S. - NERC and NPCC CMEP, NPCC CCEP
  - Ontario - ORCP and MACD CMP

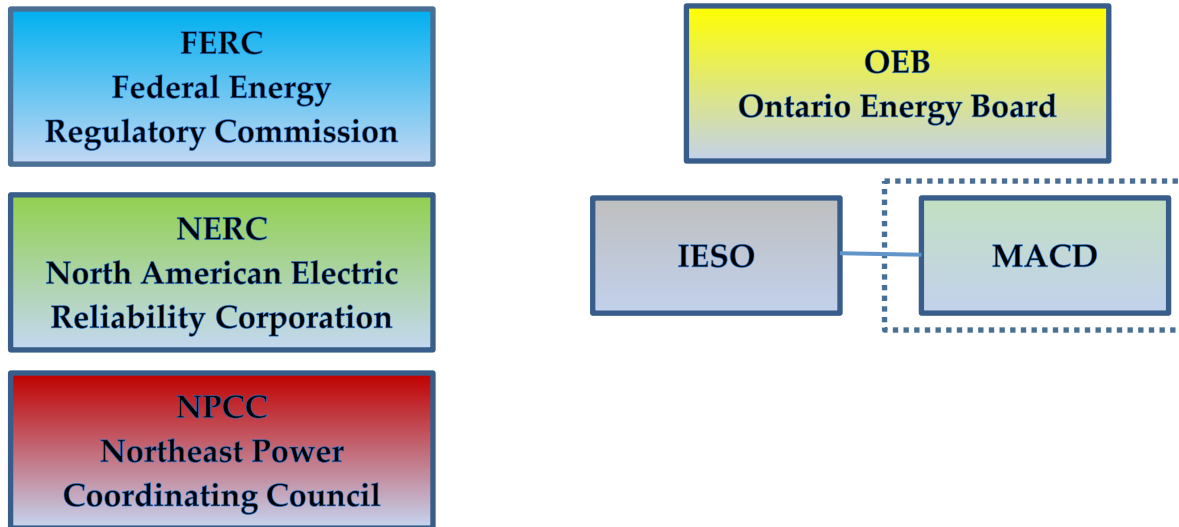
# Reliability Compliance Enforcement Frameworks in the U.S. and Ontario

# North American Reliability Standards

- NERC reliability standards define the reliability requirements for planning, operating, and ensuring the physical and cyber security of the North American BPS/BES
- NERC reliability standards are enforceable in most interconnected jurisdictions in North America:
  - the continental United States;
  - the Canadian provinces of Alberta, British Columbia, Manitoba, New Brunswick, Nova Scotia, Ontario, Quebec, and Saskatchewan; and,
  - the Mexican state of Baja California Norte

# Compliance Enforcement in the U.S. and Ontario

Agencies that are involved in the development, approval, monitoring and/or enforcement of reliability standards in the U.S and Ontario:



# Federal Energy Regulatory Commission (U.S.)

- FERC is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil in the U.S.
- Under the *Energy Policy Act of 2005*, FERC's mandate includes:
  - Regulating the transmission and wholesale sales of electricity in interstate commerce;
  - Protecting the reliability of the high voltage interstate transmission system through mandatory reliability standards; and
  - Enforcing FERC regulatory requirements through imposition of civil penalties and other means.
- FERC oversees the development and review of mandatory reliability standards in the U.S.
- FERC has the authority to review, approve and remand reliability standards, and order the development of new reliability standards
- FERC may independently investigate and apply sanctions for breaches of reliability standards

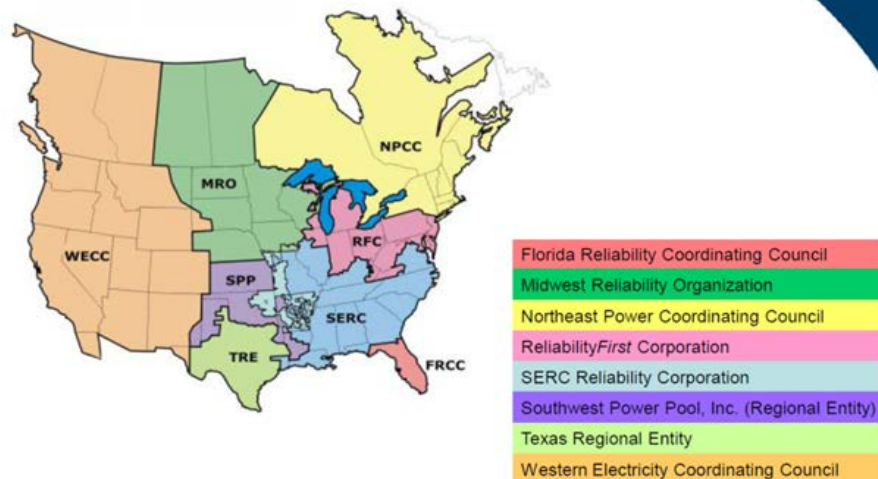


# North American Electric Reliability Corporation

- NERC is a not-for-profit corporation that was certified by FERC in 2006 as the U.S. government-mandated Electric Reliability Organization (“ERO”) in the U.S.
- NERC’s mission is to ensure the reliability of the BPS/BES in North America.
- NERC’s role as ERO in the U.S. is subject to oversight by FERC.
- In Ontario, NERC is recognized as a “standards authority” under the *Electricity Act, 1998*.
- NERC’s jurisdiction includes users, owners, and operators of the BPS/BES, which serves more than 334 million people.
- NERC’s responsibilities in the U.S. include:
  - Developing and enforcing reliability standards;
  - Annually assessing seasonal and long-term reliability;
  - Maintaining system awareness: monitors events and trends related to BES and shares critical information with the industry; and
  - Educating, training, and certifying industry personnel

# Northeast Power Coordinating Council

- The Electric Reliability Organization Enterprise in the U.S. consists of NERC and eight Regional Entities; NPCC is the Regional Entity for northeastern North America.
- NPCC's footprint covers New York, the six New England states, Ontario, Québec, and the Maritime Provinces of New Brunswick and Nova Scotia in Canada
- NPCC's responsibilities include:
  - Developing and enforcing regional reliability standards and establishing regionally-specific criteria; and
  - Carrying out compliance monitoring and enforcement activities on behalf of NERC.



# Ontario Energy Board and Ministry of Energy

## **The Ontario Ministry of Energy:**

- is responsible for setting the policy and the legislative framework for Ontario's electricity system,
- it develops solutions and advises on all aspects of energy policy for Ontario, including electricity, natural gas and oil, and
- has legislative responsibility for the OEB and the IESO.

## **The Ontario Energy Board:**

- its main role in compliance enforcement is that it has legislative authority to stay or revoke the operation of a reliability standard in Ontario and refer it back to NERC or NPCC, as applicable, for further consideration,
- it would also hear appeals of MACD's enforcement actions.

# Independent Electricity System Operator

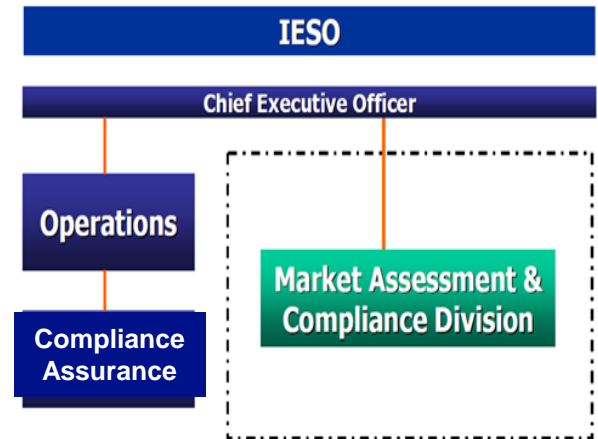
## The IESO:

- is a not-for-profit corporation established under the *Electricity Act, 1998*,
- licenced by the OEB,
- balances the supply of and demand for electricity in Ontario,
- operates the wholesale electricity market and oversees the reliable operation of the provincial electricity grid,
- authorized by the *Electricity Act, 1998*, to establish and enforce the market rules,
- participates in the development of reliability standards made by standards authorities (NERC, NPCC),
- has a signed MOU with NERC and NPCC which outlines the signatories accountabilities in terms of compliance and enforcement, and
- it administers the Reliability Standards Standing Committee (RSSC) as a forum that engages market participants in the standards development process.
- undertakes programs and initiates focussing on long-term planning, procurement and conservation efforts.

# Market Assessment and Compliance Division, IESO

## MACD:

- is a specially-constituted business unit within the IESO,
- the IESO's responsibility to "...monitor, assess and enforce compliance with the market rules...[and] undertake such monitoring as it considers necessary to determine whether market participants are complying with the market rules" has been delegated to the Director of MACD,
- makes all determinations and exercises the IESO's authorities concerning compliance monitoring and enforcement of market rules, including reliability standards, independent of OEB, IESO, NERC and NPCC, and
- is responsible for the design and implementation of the ORCP including auditing market participants for compliance with reliability standards.



# Application of Reliability Standards in Ontario

# Reliability Standards: Adoption and Enforcement

- Reliability standards are adopted and enforced in Ontario in accordance with the *Electricity Act* and the market rules.
  - NERC and NPCC are “standards authorities” as defined in the *Electricity Act*;
  - MACD enforces NERC reliability standards , NPCC regional standards, criteria and directories, and Ontario- specific reliability rules that are adopted under the market rules;
  - MACD implements compliance monitoring and enforcement processes in Ontario, including enforcement of the IESO ‘s compliance; and
  - Separately, NPCC monitors the IESO’s compliance with NERC reliability standards and NPCC criteria and the IESO is subject to audits performed by NPCC.
- Market participants are required to comply and should be able to demonstrate compliance with all applicable market rules and reliability standards at all times.

# Reliability Standards: Electricity Act Definition

- **Reliability standards** “means a standard or criterion, including an amendment to a standard or criterion, relating to the reliable operation of the integrated power system that is approved by a standards authority” (section 2.(1) of Electricity Act, 1998)
- **Standards authority** “means the North American Electric Reliability Corporation or any successor thereof, or any other agency or body designated by regulation that approves standards or criteria applicable both in and outside Ontario relating to the reliability of transmission systems” (section 2.(1) of Electricity Act, 1998)





# Reliability Standards: Description

**NERC Reliability Standards** - define the reliability requirements for planning and operating the North American BES. NERC uses the Reliability Functional Model as the foundation to define required tasks to be performed by entities to ensure the BES operates reliably. Once adopted by the NERC Board of Trustees, NERC files the standard with the appropriate governmental authority in each jurisdiction.

**NPCC Regional Reliability Standards** - are consistent with but more stringent than NERC reliability standards; are developed to address regional differences that are not included in NERC reliability standards, such as the physical differences in the BES. NERC regional reliability standards are balloted regionally, but approved by NERC and filed with regulatory authorities.

**NPCC Criteria and Directories** - are regional reliability rules that describe the minimum requirements for planning, operating and maintaining Bulk Power System (BPS) elements. These are consistent with but more stringent than the NERC reliability standards and are balloted and approved by NPCC members.

**Ontario-specific Reliability Rules** - The IESO has the authority under the market rules to establish Ontario-specific reliability rules, in accordance to the *Electricity Act, 1998*. These reliability rules must be consistent with and no less stringent than NERC and NPCC reliability standards.

# Reliability Standards: Accountabilities

- All Ontario market participants that own or operate elements and facilities that form part of the IESO-controlled grid are subject to compliance with the market rules, including Ontario-specific reliability rules.
- Compliance with NERC reliability standards and NPCC criteria is mandatory for market participants that meet the applicability criteria set out in the *Market Manual 11: Reliability Compliance, Part 11.1: Applicability Criteria for Compliance with NERC Reliability Standards and NPCC Criteria*.
- Market participants and the IESO are subject to MACD's compliance monitoring and enforcement program.
- The IESO is also subject to NERC and NPCC's compliance monitoring and enforcement programs, with the exception of the imposition of financial penalties.



# Compliance Monitoring And Enforcement Programs (CMEP)

# CMEP in the U.S.

- Purpose: NERC CMEP is designed to improve and promote reliability through the effective and efficient monitoring and enforcement of reliability standards.
- The NERC CMEP has evolved over time:
  - prior to 2007, reliability standards were voluntary; compliance monitoring was done regionally; findings of non-compliance resulted in public postings but no financial penalties were issued.
  - after 2007, NERC reliability standards became mandatory and enforceable; NERC introduced a comprehensive CMEP to monitor and enforce all NERC reliability standards and included compliance audits; financial penalties were issued for non-compliances.
  - beginning in 2014, the NERC CMEP took a risk-based approach. It now focusses its resources on matters that pose greater risk to reliability. Lower risk instances of non-compliance are also identified, corrected and tracked.

# CMEP: U.S. Entities

## **The NERC CMEP Implementation Plan:**

- includes the NERC key initiatives during a specific year and areas of focus associated with the risk elements identified for the year, and
- also includes the eight regional CMEP implementation plans.

## **The NPCC CMEP Implementation Plan:**

- developed by NPCC staff for registered entities with NERC within the NPCC footprint,
- published annually and, while considering the continent-wide risk elements identified in NERC's CMEP, may also include additional or different regional-specific risk elements and associated standards to be monitored during a specific year, and
- also includes the compliance monitoring schedule and the audits schedule for entities registered with NERC.

## **The NPCC CCEP :**

- developed by the NPCC Compliance Committee for NPCC member companies,
- published annually and includes NPCC criteria and directories to be monitored during a specific year.

**Note:** The IESO is the sole Ontario entity subject to NERC CMEP and NPCC CMEP&CCEP

# Ontario Reliability Compliance Program (ORCP)

- MACD is responsible for the design and implementation of the ORCP including its annual Compliance Monitoring Plan (MACD CMP),
- The MACD CMP provides market participants with information on the reliability standards to be monitored for compliance in a given year,
- The MACD CMP is published annually,
- The 2016 MACD CMP takes into account the significant changes to the ORCP that are expected to result from the adoption of the new BES definition and the NERC CIP v.5 standards on July 1, 2016.

# MACD CMP - Scope

- Market participants are required to comply with all applicable market rules and reliability standards at all times,
- Only a subset of these requirements is monitored for compliance in a given year,
- Factors considered in selecting these requirements include:
  - the effective date of the standard;
  - the assessed reliability risk of the standard at the continent-wide and regional levels; and
  - the compliance history surrounding the standard.
- MACD publishes the annual MACD CMP before the end of each year for the coming year.

# MACD CMP – Discovery Methods

To obtain reasonable assurance that market participants adhere to reliability standards, MACD monitors compliance using a combination of discovery methods, including:

- self-certifications,
- spot checks,
- compliance audits,
- self-reports, and
- other IESO business units/third-party referrals .



# MACD CMP – Self Certifications

- Written attestations that require market participants to declare their compliance status with specific market rules or reliability standards at a particular point in time or over a period of time.
- Some self-certifications may require market participants to attach evidence of compliance.
- The 2016 MACD CMP includes two self-certification streams with separate compliance reporting schedules that distinguish between market participants with BES elements in 2015 and market participants with newly identified BES elements under the revised NERC BES definition starting on July 1, 2016.
- In the future, as continental, regional and entity risks are incorporated in its decision-making, MACD will transition to a self-certification program that is tailored to each market participant's risk profile.

# MACD CMP – Compliance Audits

- MACD conducts compliance audits in accordance to *Market Manual 2: Market Administration, Part 2.17; Compliance Auditing of Reliability Standards for Ontario Market Participants*.
- MACD identifies the market participants and reliability requirements to be audited using a risk-based approach.
- Market participants selected for an audit are notified at least 90 days prior to the scheduled audit start date.
- The 2016 MACD CMP does not include any compliance audits.

# MACD CMP – Spot Checks

- Similar to compliance audits in that they provide a comparable level of compliance assurance;
- Usually target a more limited number of requirements than a compliance audit;
- May be conducted at any time;
- 2016 CMP includes spot checks, which may or may not be related to the reliability standards monitored in 2016;
- Market participants selected for a spot check will be notified up to 30 business days in advance; notification will include the reliability requirements in scope, and the timetable and manner in which a response should be provided.

# MACD CMP – Self Reporting

- Self-reporting relies on the monitoring mechanisms of the market participant's internal compliance program;
- If a market participant believes that they may have breached a reliability standard, they are encouraged to take all reasonable steps to mitigate the impact that the breach may have caused on reliability and self-report the breach to MACD in a timely manner;
- Such actions may help mitigate the severity of the penalties and other sanctions in the event that MACD determines a breach;
- To self-report potential breaches of market rules and reliability standards, complete and send the *"Non-Compliance Event Report"* (IESO-FORM-1253) to [macd@ieso.ca](mailto:macd@ieso.ca) or use the *IESO Reliability Compliance Tool*.

# References

- [IESO Resources for Market Participants Being Audited](#)

<http://www.ieso.ca/Pages/Participate/Market-Oversight/Resources-for-Market-Participants-Being-Audited.aspx>

- [IESO Reliability Standards Auditing](#)

<http://www.ieso.ca/Pages/Participate/Market-Oversight/Reliability-Standards-Auditing.aspx>

- [Guide to IESO Portal](#)

<http://www.ieso.ca/documents/training/portal.pdf>

- [Compliance Auditing Manual](#)

[http://www.ieso.ca/documents/marketAdmin/ma\\_CompAuditing.pdf](http://www.ieso.ca/documents/marketAdmin/ma_CompAuditing.pdf)

- [2016 Reliability Standards Compliance Monitoring Plan](#)

[http://www.ieso.ca/Documents/2016\\_Compliance\\_Monitoring\\_Plan.pdf](http://www.ieso.ca/Documents/2016_Compliance_Monitoring_Plan.pdf)

- [NERC Compliance & Enforcement](#)

<http://www.nerc.com/pa/comp/Pages/Default.aspx>

- [NPCC Compliance](#)

<https://www.npcc.org/Compliance/Default.aspx>

# Questions?



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