
TOP-010-1(i) – Real-time Reliability Monitoring and Analysis Capabilities

IRO-018-1(i) – Reliability Coordinator Real-time Reliability Monitoring and Analysis Capabilities

1. OVERVIEW OF THE STANDARDS

1.1. Applicability of reliability standards

The functions covered by TOP-010-1(i) and IRO-018-1(i) are indicated in the table below.

Standard	Functions covered
TOP-010-1(i)	<i>Balancing Authority (BA)</i> <i>Transmission Operator (TOP)</i>
IRO-018-1(i)	<i>Reliability Coordinator (RC)</i>

1.2. Purpose of the reliability standards

The purpose of IRO-018-1(i) is to maintain the reliability of the electric power transmission system by requiring the Reliability Coordinator to implement an Operating Process or an Operating Procedure to ensure the quality of the Real-time data necessary for Real-time monitoring of the system. The purpose of TOP-010-1(i) is to establish requirements for Real-time monitoring and analysis capabilities in support of reliable system operations.

1.3. Regulatory context

TOP-010-1(i) and IRO-018-1(i) are new in Québec.

The purpose of NERC's Project 2009-02, which gave rise to these standards, was to clearly establish requirements for Real-time monitoring and analysis capabilities to support reliable system operation.¹ These two new standards were developed upon the conclusion of that project.

The NERC Board of Trustees adopted TOP-010-1 and IRO-018-1 on May 5, 2016. FERC approved these standards on September 22, 2016, in an order in Docket No. RD16-6-000.² In that same order, it issued a directive calling for modification of the violation risk factors for those standards. The NERC Board of Trustees adopted the revised versions of TOP-010-1(i) and IRO-018-1(i) on November 2, 2016. FERC approved the revised versions in a letter order dated December 14, 2016, in Docket No. RD16-6-001.³

1. NERC, Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities, retrieved on December 3, 2019, at: <https://www.nerc.com/pa/Stand/Pages/Project-2009-02-Real-time-Reliability-Monitoring-and-Analysis-Capabilities.aspx>.

2. FERC, Order in Docket No. RD16-6-000, retrieved on October 23, 2019, at: <https://www.nerc.com/filingsorders/us/FERCOrdersRules/E-6.pdf>.

3. FERC, Letter order in Docket No. RD16-6-000, retrieved on October 23, 2019, at: <https://www.nerc.com/FilingsOrders/us/FERCOrdersRules/Letter%20Order%20Approving%20Revisions%20to%20VRFs%20for%20IRO-018-1%20and%20TOP-010-1.pdf>.

1.4. Specific provisions for Québec

No specific provisions.

1.5. Proposed effective dates

TOP-010-1(i) and IRO-018-1(i) became effective in the United States on April 1, 2018. The NERC Implementation Plan prescribed a period of eighteen months between regulatory approval and the effective date for these standards.⁴

In Québec, the Reliability Coordinator (hereinafter called the "Coordinator") designated by the Régie de l'énergie (hereinafter called the "Régie") proposes a similar delay between adoption and coming into effect of the standards adopted by the Régie.

1.6. Standards or requirements to be retired

- No standard to be retired.

1.7. Changes to the Glossary

- No change to the Glossary.

2. ASSESSMENT OF RELEVANCE

TOP-010-1(i) and IRO-018-1(i) emerge from NERC's Project 2009-02.⁵ That project addressed FERC Order No. 693 following up the recommendations of the reports on the blackouts of 2003 in the Northeast and 2011 in the Southwest and the report of the Real-time Tools Best Practices Task Force (RTBPTF).⁶ These standards complement the standards in the TOP-IRO family.⁷

The two new standards have the effects of

- requiring registered entities to establish an Operating Process or an Operating Procedure for indicating the quality of Real-time data to operating personnel;
- ensuring that the Process or the Procedure includes provisions for addressing Real-time data quality issues that affect Real-time Assessments;
- addressing Real-time data quality issues that affect Real-time Assessments;
- requiring TOs to establish a procedure addressing issues regarding the quality of analysis results used for Real-time Assessments;

4. NERC Implementation Plan, retrieved on October 23, 2019, at:

https://www.nerc.com/pa/Stand/Project%20200902%20Rela%20Time%20Monitotring%20Analysis%20Capa/Implementation%20Plan_RTMAC_20160212_clean.pdf.

5. NERC, Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities, retrieved on October 23, 2019, at: <https://www.nerc.com/pa/Stand/Pages/Project-2009-02-Real-time-Reliability-Monitoring-and-Analysis-Capabilities.aspx>.

6. FERC, Order No. 693, retrieved on December 3, 2019, at:

https://www.nerc.com/pa/Stand/Project%20200902%20Realtime%20Reliability%20Monitoring%20and/order_693.pdf.

7. NERC, Project 2009-02 SAR Justification, retrieved on October 23, 2019, at:

https://www.nerc.com/pa/Stand/Project%20200902%20Rela%20Time%20Monitotring%20Analysis%20Capa/SAR_White_Paper_20150908_clean.pdf.

- requiring development of an alarm process monitor that notifies system operators upon failure of the Real-time monitoring alarm processor.

Under the 2009 agreement between the Régie, NERC and the NPCC and with authorization from the Québec government, external bodies developed and approved these standards for North America, including Québec.⁸ In the opinion of the Coordinator, these two standards are relevant for system reliability in Québec and contribute to harmonization with neighboring systems.

3. PRELIMINARY IMPACT ASSESSMENT

This section presents the Coordinator's preliminary impact assessment.

TOP-010-1(i)	Low	Moderate	High
Implementation of the standard		X	
Enforcement of the standard		X	
Compliance monitoring		X	

IRO-018-1(i)	Low	Moderate	High
Implementation of the standard		X	
Enforcement of the standard		X	
Compliance monitoring		X	

Definitions

- Low:** Normal industry practice or standard requiring only minor adjustments to existing processes or practices.
- Moderate:** Change requiring the allocation of some physical, human or financial resources to implement, enforce and monitor compliance with the proposed standard.
- High:** Change requiring the allocation of significant physical, human or financial resources to plan, implement, enforce and monitor compliance with the proposed standard.

4. FINAL IMPACT ASSESSMENT

This section shall be completed upon receipt of the impact assessment forms and at the conclusion of the consultation process prior to filing of the reliability standards with the Régie.

8. Agreement reached under Order No. 443-21009 of April 8, 2019.