

Project QC-2012-01 Consultation on Proposed Reliability Standards and Supporting Documents

Technical meeting (Webinar)

September 4, 2013



**RELIABILITY
COORDINATOR**



Outline

- Objectives of the session
- Webinar (instructions)
- Feedback on the proposed standards:
 - Summary of the standard
 - Comments received
 - Question period and exchange
- Other questions
- Next steps

Objectives of the session

- Follow-up on the comment period of the proposed documents
- Answer questions on technical aspects related to the proposed standards
- Present the next steps

Webinar instructions

- Please place your phone on **mute** during the webinar
- To ask a question:
 - Use the button "**Lever la main**" in the tool bar to indicate your intention of asking a question.
 - The presenter will allow you to speak during the question period provided for this purpose.
- A brief transcript of the questions and answers will be published on the coordinator's web site after the webinar.
- The PowerPoint presentation will also be available on the coordinator's web site after the webinar.

Standard EOP-003-2: Load Shedding Plans

- Concerned entities

- Transmission Operator
- Balancing Authority

- Purpose

- Avoid an uncontrolled failure of an Interconnection
- Avoid a general system failure

- Key Requirements

- Establish plans for automatic load shedding for undervoltage conditions
- Establish plans for automatic under-frequency load shedding
- Establish plans for manual load shedding

- Particularities

- Applies to the RTP only

Standard EOP-003-2: Load Shedding Plans (con't)

- Your questions:
 - Responses to comments received:
 - No comments received
 - Other questions?

Standard FAC-008-3: Facility Ratings

- Concerned entities
 - Transmission Owner
 - Generator Owner
- Purpose
 - Possess ratings of its facilities
 - Establish reliable operating limits
- Key Requirements
 - Provide tools to establish ratings
 - Documentation of these tools
 - Provide documentation and the ratings to other responsible entities within the zone
- Particularities
 - Applies to the RTP only

Standard FAC-008-3: Facility Ratings

(con't)

- Your questions:
 - Responses to comments received:
 - The comments received related to the requirements, E2, E2.2.4, E8.2 and E8 have not been retained. (See explanation in the responses to the comments which are posted on the consultation website of the Coordinator)
 - Other questions?

Standard FAC-013-2: Establish and Communicate Transfer Capabilities

- Concerned entities
 - Planning Coordinator
- Purpose
 - Annual assessment of transfer capability in the near-term transmission planning horizon following a defined methodology.
- Key Requirements
 - Documentation of this methodology
 - Issue this methodology to the entities subject to this methodology
 - Make the assessments results available
- Particularities
 - Applies to the RTP only

Standard FAC-013-2: Establish and Communicate Transfer Capabilities (con't)

- Your questions:
 - Responses to comments received:
 - Comments on the use of capital letters for the defined terms in the glossary in the "Preliminary Assessment of the relevance and impact" document. The Coordinator will retain this comment for the upcoming public consultations.
 - Other questions?

Standard IRO-008-1: Reliability Coordinator Operational Analyses and Real-time Assessments

- Concerned entities
 - Reliability coordinator
- Purpose
 - Assessment of problematic situations for stability
- Key Requirements
 - Performance of next day assessments
 - Performance of real-time assessments (every 30 minutes)
 - Sharing of the assessment results with the concerned entities
- Particularities
 - Applies to the RTP only

Standard IRO-008-1: Reliability Coordinator Operational Analyses and Real-time Assessments (con't)

- Your questions :
 - Responses to comments received:
 - Comments on the use of capital letters for the defined terms in the glossary in the "Preliminary Assessment of the relevance and impact" document. The Coordinator will retain this comment for the upcoming public consultations.
 - Other questions?

Standard IRO-009-1: Reliability Coordinator Actions to Operate within IROs

- Concerned entities
 - Reliability Coordinator
- Purpose
 - To prevent or mitigate instances of exceeding the IROs.
- Key Requirements
 - Own processes, instructions and plans including actions to be taken at all times to prevent and eliminate exceeding IROs.
- Particularities
 - Applies to the RTP only

Standard IRO-009-1: Reliability Coordinator Actions to Operate within IROs (con't)

- Your questions:
 - Responses to comments received:
 - Comments on the use of capital letters for the defined terms in the glossary in the "Preliminary Assessment of the relevance and impact" document. The Coordinator will retain this comment for the upcoming public consultations.
 - Other questions?

Standard IRO-010-1a: Reliability Coordinator Data Specification and Collection

- Concerned entities
 - Reliability Coordinator
 - Balancing Authority
 - Generator Owner
 - Generator Operator
 - Interchange Authority
 - Load-Serving Entity
 - Transmission Operator
 - Transmission Owner

Standard IRO-010-1a: Reliability Coordinator Data Specification and Collection (con't)

- Purpose
 - To ensure that the reliability coordinator has the data it needs to monitor and asses the operation of its reliability coordinator area.
- Key Requirements
 - To have a data specification of all required data
 - Distribute this data specification to the entities required to provide data of installations within the reliability coordinator area.
 - All concerned entities must provide this data
- Particularities
 - Applies to the RTP only

Standard IRO-010-1a: Reliability Coordinator Data Specification and Collection (con't)

- Your questions:
 - Responses to comments received:
 - Comments on the use of capital letters for the defined terms in the glossary in the "Preliminary Assessment of the relevance and impact" document. The Coordinator will retain this comment for the upcoming public consultations.
 - Comments on the nature of the information requested. The Coordinator stated that it will provide its data specification in accordance with the requirements of the standard.
 - Other questions?

Standard MOD-001-1a: Available Transmission System Capability

- Concerned entities
 - Transmission Service Provider (TSP)
 - Transmission Operator (TOP)
- Purpose
 - To ensure that the TSPs perform the calculations necessary to maintain awareness of available transmission system capability
- Key Requirements
 - Selection of a methodology for calculating ATC and AFC (TOP)
 - Calculation of the ATC and AFC values according to the selected methodology by the TOP (TSP)
 - Preparation and updates of an Available Transfer Capability Implementation Document (ATCID) (TSP)
- Particularities
 - Applies to the RTP only

Standard MOD-001-1a: Available Transmission System Capability (con't)

- Your questions:

- Responses to comments received:

- Application of the RTP as proposed in the preliminary evaluation shall be added in the Québec appendix.

- Other questions?

Standard MOD-008-1: Transmission Reliability Margin Calculation Methodology (TRM)

- Concerned entities
 - Transmission Operators that maintain TRM (TOP)
- Purpose
 - To promote the consistent and reliable calculation, verification, preservation, and use of the TRM.
- Key Requirements
 - Preparation and updates of a TRM Implementation Document (TRMID)
 - Make available the TRMID upon request
 - Provide TRM values to the TSP and TP
- Particularities
 - Applies to the RTP only

Standard MOD-008-1: Transmission Reliability Margin Calculation Methodology (TRM) (con't)

- Your questions:
 - Responses to comments received:
 - No comments received
 - Other questions?

Standard MOD-028-1: Area Interchange Methodology

- Concerned entities

- Transmission Operators (TOP) and Transmission Service Providers (TSP) that use the Area Interchange Methodology to calculate Total Transfer Capabilities (TFC) for ATC Paths.

- Purpose

- To ensure consistency and reliability in the development and documentation of the transfer capability calculations.

- Key Requirements

- Preparation of a Available Transfer Capability Implementation Document (ATCID) including the specified elements (TSP)
- Usage of a transmission model comprised of specified elements when calculating the TTC (TOP)
- Calculation and establishment of the TTC according to a specified methodology (TOP)
- Calculation of the ATC and ETC according to a specified methodology (TSP)

- Particularities

- Applies to the RTP only

Standard MOD-028-1: Area Interchange Methodology (con't)

- Your questions:
 - Responses to comments received
 - Application of the RTP as proposed in the preliminary evaluation shall be added in the Québec appendix.
 - Other questions?

Standard MOD-029-1a: Rated System Path Methodology

- Concerned entities
 - Transmission Operators (TOP) and Transmission Service Providers (TSP) that use the Rated System Path Methodology to calculate the TTC.
- Purpose
 - To ensure consistency and reliability in the development and documentation of the transfer capability calculations.
- Key requirements
 - Usage of a transmission model comprised of specified elements when calculating the TTC (TOP)
 - Calculation and establishment of the TTC according to a specified methodology (TOP)
 - Calculation of the ATC and ETC according to a specified methodology (TSP)
- Particularities
 - Applies to the RTP only

Standard MOD-029-1a: Rated System Path Methodology (con't)

- Your questions:
 - Responses to comments receive :
 - Application of the RTP as proposed in the preliminary evaluation shall be added in the Québec appendix.
 - Other questions?

Standard MOD-030-2: Flowgate Methodology

- Concerned entities
 - Transmission Operators (TOP) and Transmission Service Providers (TSP) that use the Flowgate Methodology to calculate AFCs on flowgates.
- Purpose
 - To ensure consistency and reliability in the development and documentation of the transfer capability calculations.
- Key requirements
 - Preparation of a Available Transfer Capability Implementation Document (ATCID) including the elements specified (TSP)
 - Perform the actions as specified in the methodology (TOP)
 - Make available to the TSP a transmission model to determine the AFC that meets specific criteria (TOP)
 - Calculation of the AFC and ETC according to a specified methodology (TSP)
- Particularities
 - Applies to the RTP only

Standard MOD-030-2: Flowgate Methodology (suite)

- Your questions:
 - Responses to comments received:
 - Application of the RTP as proposed in the preliminary evaluation shall be added in the Québec appendix.
 - Other questions?

Standard PER-004-2: Reliability Coordination

- Concerned entities
 - Reliability Coordinators
- Purpose
 - To ensure that the reliability coordinators have sufficient, competent staff to perform its functions
- Key Requirements
 - Shall be staffed with NERC-certified personnel, 24 hours per day, seven days per week
 - Ensure that the operating personnel has the best available information on system operating limits (SOL and IROL) at all times
- Particularities
 - No specific provisions

Standard PER-004-2: Reliability Coordination (con't)

- Your questions:
 - Responses to comments received:
 - No comments received
 - Other questions?

Standard PER-005-1: System Personnel Training

- Concerned entities
 - Reliability Coordinators
 - Balancing Authority
 - Transmission Operator
- Purpose
 - To ensure that the system operators performing real-time, reliability-related tasks have the necessary competencies.
- Key Requirements
 - Establishment and implementation of a training program for company-specific reliability-related tasks performed by the system operators
 - Provide a minimum of 32 hours of annual emergency operations training to each system operator
- Particularities
 - No specific provisions

Standard PER-005-1: System Personnel Training (con't)

- Your questions:
 - Responses to comments received:
 - No comments received
 - Other questions?

Standard PRC-006-1: Automatic Underfrequency Load Shedding (UFLS)

- Concerned entities
 - Planning Coordinators (PC).
 - Transmission Owners that operate or control UFLS equipment established by PC
 - Distribution Providers that operate or control UFLS equipment established by PC
- Purpose
 - Establish a UFLS program to arrest declining frequency and provide last resort preservation measures.
- Key Requirements
 - The UFLS program must respect the criteria as specified on the underfrequency and overfrequency load shedding curves.
 - The UFLS program must respect the criteria as specified on the underfrequency and overfrequency generator trip modeling curves.
 - Development of a UFLS program and update it every 5 years.
- Particularities
 - The Québec regional variance is integrated in the standard.

Standard PRC-006-1: Automatic Underfrequency Load Shedding (UFLS) (con't)

- Your questions:

- Responses to comments:

- In its response to comments received, the Coordinator stated that the specific provision in the Québec appendix on Article E.A.3 be removed since this paragraph was identical to that of the standard. However, requirement E.A.3 of the Québec appendix showed a slight difference. The paragraph will be changed to highlight the difference.
 - A special provision is present in the appendix to correct the reference (Attachement 1A instead of Attachment 2A). This provision shall be reformed to clarify this aspect.

- Other questions?

Standard PRC-023-2: Transmission Relay Loadability

- Concerned entities
 - Planning coordinators
 - Transmission owners, generators owners, distribution providers with load-responsive phase protection system.
- Circuits subject to requirements
 - Main Transmission System (RTP)
 - Transmission lines operated at 200kV and above
 - Transformers with low voltage terminals connected at 200kV and above
- Purpose
 - The relay must be set so as not to restrict the transfer capacity of the circuit, nor impair the ability of the system operator to take the necessary measures to preserve the reliability of the network.

Standard PRC-023-2: Transmission Relay Loadability (con't)

○ Key Requirements

- In coordination with the Planning Coordinator, each Transmission Owner, Generation Owner, and Distribution Provider shall:
 - Set protections with load-responsive phase protection systems in order to comply one of the thirteen criteria listed in requirement R1 (ex. thermal rating, emergency rating, maximum transfer capability rating, maximum load current rating).
 - Update annually its list of circuits as described in Appendix B and transmit it to the concerned entities within 30 days

○ Particularities

- Circuits subject to the RTP of Québec

Standard PRC-023-2: Transmission Relay Loadability (con't)

- Your questions:

- Responses to comments:

- The applicability section of this standard already covers only the generator owners with load-responsive phase protection systems installed on the same circuits as defined in applicability section.
 - It should read "...has elements of the "Bulk" network ...". This text will be corrected (Section D of the preliminary assessment).

- Other questions?

Other questions

- Questions and comments on the other proposed documents
- General questions and comments on the public consultation project

Next steps

- Second round of comments
- Final updates of the documents and preparation of the filing to the Régie de l'énergie
- Filing of the standards and documents for adoption or approval with the Régie de l'énergie following a final decision within the project R-3699-2009

RELIABILITY **COORDINATOR**

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