Project QC-2015-01
Consultation on Proposed Reliability Standards and Supporting Documents

Information Session with Concerned Entities

May 12, 2015

RELIABILITY
COORDINATOR

Hydro Québec
TransÉnergie

Outline

- Objectives of session
- Webinar (instructions)
- Québec regulatory framework
- Régie's D-2015-059 ruling
- Consultation process
- Project QC-2015-01
  - Proposed reliability standards
- Next steps
- Question period and discussion

Objectives of session

- Status report on reliability standards in Québec
- Present the proposed standards and supporting documents
- Explain the consultation process
- Respond to questions
- Present the next steps

The following will not be covered:

- **Issues related to filings presently before the Régie de l'énergie;**

Webinar instructions

- Place your phone on **mute** during the webinar
- To ask a question:
  - Use the **"Chat"** button 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 in English and in French on the consultation website of the Reliability Coordinator after the webinar.

Québec regulatory framework

- The Régie de l'énergie is responsible for:
  - designating the Reliability Coordinator for Québec
  - adopting the reliability standards filed by the Reliability Coordinator
  - approving the register of entities subject to the reliability standards adopted by the Régie de l’énergie

Decision D-2015-059

- In it's decision D-2015-059 of May 4, 2015, Régie de l'énergie:
  - Adopted 14 reliability standards and their respective appendix
  - Rejected 9 reliability standards and their respective appendix
  - Request to refile in a separate filing for adoption 18 reliability standards
  - Request to refile for adoption the register of entities and the glossary
  - Adopted the document "Reliability Standards Violation Risk Factor"

Consultation process

- Sending of the notice of consultation
- Publication of the proposed standards and supporting documents
- Information session
- Comment period
  - Comments on the standards and documents
  - Assessment of the financial impact of the proposed standards
- Response to comments
- Additional comment periods if necessary
- Filing with the Régie de l’énergie

Project QC-2015-01
Proposed New Standards and Supporting Documents

Proposed reliability standards

- 14 new standards accompanied by an informational document
- 12 new versions of standards accompanied by an informational document
- Removal of requirements in 7 standards and supporting documents ("Paragraph 81")
- The informational document comprised of the following elements:
  - A preliminary assessment of the relevance and impact of the proposed standard
  - Modification to other standards or to the glossary
  - Applicability and specific provisions for Québec
  - Proposed effective dates
  - A preliminary assessment of the impact of the standard based on the application at Hydro-Québec

Preliminary impact assessment legend:

Low : Normal industry practice or standard involving minor adjustments to processes or practices in place.

Moderate : Changes that require an allocation of certain material, human or financial resources to implement, maintain and monitor compliance of the proposed standard.

Important : Changes that require significant provision and allocation of material, human or financial resources to implement, maintain and monitor compliance of the proposed standard.

Removal of requirements ("Paragraph 81")

- The requirements are clearly identified in the standard and in the Québec appendix.
- 15 requirements among 10 standards to be withdrawn
- The effective date of the proposed amended standards for Québec's the first day of the first calendar quarter to occur one month after the adoption by the Régie
- Not necessary to conduct an assessment of the impact of these changes

Standard	Requirement	Registered Entity	Criterion A	Criterion B
BAL-005-0.2b	R2	BA	X	Redundant (BAL-001-0.1a R1, E2)
CIP-003-1	R1.2	RC, BA, IA, TSP, TO, TOP, GO, GOP, LSE	X	Administrative
CIP-003-1[1]	R3 R3.1 R3.2 R3.3	RC, BA, IA, TSP, TO, TOP, GO, GOP, LSE	X	Administrative, documentation
CIP-003-1[1]	R4.2	RC, BA, IA, TSP, TO, TOP, GO, GOP, LSE	X	Administrative, documentation, redundant (CIP-003-1 R4)
CIP-005-1[1]	R2.6	RC, BA, IA, TSP, TO, TOP, GO, GOP, LSE	X	Administrative, documentation
CIP-007-1[1]	R7.3	RC, BA, IA, TSP, TO, TOP, GO, GOP, LSE	X	Administrative, data
FAC-002-1	R2	PA, TOP, GO, TO, LSE, DP	X	Administrative, data
FAC-010-2.1	R5	PA	X	Administrative, Reporting and Commercial
FAC-011-2	R5	RC	X	Administrative, Reporting and Commercial
IRO-016-1	R2	RC	X	Administrative, data
PRC-010-0	R2	LSE, TO, TOP, DP which implements undervoltage load shedding	X	Administrative, data
PRC-022-1	R2	TOP, LSE, DP	X	Administrative, data

Standard BAL-003-1

- **Summary**
  - Ensure that each Interconnection has sufficient Frequency Response in order to prevent the frequency from reaching under frequency load shedding thresholds
  - Directs Frequency Response Obligations
  - Provides consistent calculation methods for Frequency Response and Frequency Bias Setting
  - Improves the reliability of the system in cases of events involving loss of generation or load
- **Modifications to other standards or to the glossary**
  - Retirement of the BAL-003-0.1b standard
  - Three new definitions
  - One modified definition
- **Applicability**
  - Balancing Authorities (BA)
  - Frequency Response Sharing Group (FRSG) for Interconnections with multiple BAs.
  - The standard only applies to the direction Contrôle des mouvements d'énergie of Hydro-Québec

Standard BAL-003-1 (con't)

➢ Proposed effective date

Requirements	United States Effective Dates	Proposed Effective Dates in Québec	Justification
R1	April 1st, 2016	April 1st, 2016	Standardization of practices with other jurisdictions.
R2, R3 and R4	April 1st, 2015	The first day of the first calendar quarter one month after the adoption of the standard by the Régie de l'énergie.	

[1] If the adoption date of the standard by the Régie is after one of the proposed dates, requirement R1 would become effective the first day of the first calendar quarter one month after the adoption of the standard by the Régie.

[1].

➢ Preliminary Impact Assessment

	Low	Moderate	Important
Implementation of the standard	**X**		
Maintenance of the standard	**X**		
Compliance Monitoring	**X**		

Standard EOP-004-2

- **Summary**
  - Merging of the CIP-001-2a standard into the EOP-004-2 standard
  - To have a dated event reporting Operating Plan and the event report protocol
  - To report as per their Operating Plan within prescribed delays
  - To validate each calendar year all contact information contained in the Operation Plan
- **Modifications to other standards or to the glossary**
  - Retirement of the EOP-004-1 and CIP-001-2a standards
- **Applicability**
  - Reliability Coordinator (RC)
  - Balancing Authority (BA)
  - Transmission Owner (TO)
  - Transmission Operator (TOP)
  - Generator Owner (GO)
  - Generator Operator (GOP)
  - Distribution Provider (DP)

Standard EOP-004-2 (con't)

- **Provisions specific to Québec**
  - Applies only to the facilities of the Main Transmission System (RTP)
- **Proposed effective date**

Standard	Enforcement date in the United States	Proposed enforcement date in Québec	Justification
EOP-004-2	January 1st, 2014	The first day of the first calendar quarter one month after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions.

- **Preliminary impact assessment**

	Low	Moderate	Important
Implementation of the standard	X		
Maintenance of the standard	X		
Compliance Monitoring	X		

Standard EOP-010-1

Summary

- Mitigate the effects of geomagnetic disturbances (GMD) events by implementing operating plans, processes and procedures

Applicability

- Reliability Coordinator (RC)
- Transmission Operator (TOP)

Proposed effective date

Requirement	Enforcement date in the United States	Proposed enforcement date in Québec	Justification
R1,E3	April 1st 2014	The first day of the first calendar quarter one month after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions.
R2	The first day following retirement of IRO-005-003.1a	The first day following retirement of IRO-005-003.1a	Standardization of practices with other jurisdictions.

Preliminary impact assessment

	Low	Moderate	Important
Implementation of the standard		X	
Maintenance of the standard		X	
Compliance Monitoring		X	

Standard FAC-001-1

- **Summary**
  - Document and make available facility connection requirements to the Generator Operators (GO)
  - Assist in the transmission process
  - Ensure that there is appropriate coordination and communication regarding the interconnection of facilities
- **Modifications to other standards or to the glossary**
  - Retirement of the FAC-001-0 standard
- **Applicability**
  - Transmission Owner (TO)
  - Generator Owner[1] (GO)

[1] Only the GO that has an Agreement to evaluate the reliability impact of interconnecting a third party Facility to the GO's existing Facility that is used to interconnect to the interconnected Transmission systems are subject to the standard

Standard FAC-001-1 (con't)

➢ Proposed effective dates

Standard	Enforcement date in the USA	Proposed enforcement date in Québec	Justification
FAC-001-1	November 25, 2013	**For the TO:** The first day of the first calendar quarter one month after the adoption by the Régie de l'énergie. **For the applicable GO:** The first day of the first calendar quarter, one year after the adoption by the Régie de l'énergie.	Harmonization of versions with the United States and with neighbouring provinces.

➢ Preliminary impact assessment

	Low	Moderate	High
Implantation of the standard	X		
Maintenance of the standard	X		
Compliance Monitoring	X		

Standard FAC-003-3

- **Summary**
  - Develop and maintain a vegetation control program to manage vegetation located on transmission
  - Prevent encroachment of the vegetation on transmission lines
  - Extending the vegetation management requirements to certain Generator Owner interconnection facilities
- **Modifications to other standards or to the glossary**
  - Retirement of the FAC-003-1 standard
  - One new definition
  - Two modified definitions
- **Applicability**
  - Requirements R1 through R7 and their associated elements apply to Transmission Owners and Generator Owners that own transmission facilities with transmission lines operated at 200kV and higher, or lines operated at below 200kV that are identified as an element of an IROL under the standard FAC-014 by the Planning Coordinator

Standard FAC-003-3 (con't)

➢ Proposed effective dates

Standard	Entity	Requirement	Enforcement date in the USA	Proposed enforcement date in Québec	Justification
FAC-003-3	TO	R3	July 1st, 2014	The first day of the first calendar quarter, six months after the adoption by the Régie de l'énergie.	Allow sufficient time for entities to implement the standard.
		R1, R2, R4, R5, R6 and R7	July 1st, 2014	The first day of the first calendar quarter, one year after the adoption by the Régie de l'énergie.	
	GO	R3	January 1st, 2015	The first day of the first calendar quarter, six months after the adoption by the Régie de l'énergie.	
		R1, R2, R4, R5, R6 and R7	January 1st, 2016	The first day of the first calendar quarter, one year after the adoption by the Régie de l'énergie.	

➢ Preliminary impact assessment

	Low	Moderate	Important
Implementation of the standard		X	
Maintenance of the standard		X	
Compliance Monitoring		X	

Standards INT-004-3, INT-006-4, INT-009-2, INT-010-2 et INT-011-1

- **Summary**
  - Making Request for Interchange (RFI) more apparent
  - Clearly establish the criteria of acceptation or refusal of a RFI
  - Take account of technological advances
  - Clarification of the terms of the glossary for a better understanding
  - Requested accountability and communication in the processing of the RFI
  - Avoid congestion on the transmission line
- **Modifications to other standards or to the glossary**
  - Retirement of the INT-001-3, INT-003-3, INT-004-2, INT-005-3, INT-006-3, INT-007-1, INT-008-3, INT-009-1 and INT-010-1 standards
  - Four new definitions
  - 10 modified definitions
- **Applicability**
  - Balancing Authority (BA)
  - Purchasing Selling Entity (PSE)
  - Transmission Service Provider (TSP)
  - Load Serving Entity (LSE)

Standards INT-004-3, INT-006-4, INT-009-2, INT-010-2 et INT-011-1 (con't)

➢ Proposed effective dates

Standard	Enforcement date in the USA	Proposed enforcement date in Québec	Justification
INT-004-3	October 1st, 2014	The first day of the first calendar quarter one month after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions.
INT-006-4	October 1st, 2014	The first day of the first calendar quarter one month after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions.
INT-009-2	October 1st, 2014	The first day of the first calendar quarter one month after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions.
INT-010-2	October 1st, 2014	The first day of the first calendar quarter one month after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions.
INT-011-1	October 1st, 2014	The first day of the first calendar quarter one month after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions.

Standards INT-004-3, INT-006-4, INT-009-2, INT-010-2 et INT-011-1 (con't)

- **Preliminary impact assessment**

INT-004-3	Low	Moderate	Important
Implementation of the standard	X		
Maintenance of the standard	X		
Compliance Monitoring	X		

INT-006-4	Low	Moderate	Important
Implementation of the standard	X		
Maintenance of the standard	X		
Compliance Monitoring	X		

INT-009-2	Low	Moderate	Important
Implementation of the standard	X		
Maintenance of the standard	X		
Compliance Monitoring	X		

INT-010-2	Low	Moderate	Important
Implementation of the standard	X		
Maintenance of the standard	X		
Compliance Monitoring	X		

Standards MOD-025-2, MOD-026-1 et MOD-027-1

- **Summary**
  - Verify generator Real and Reactive power capability
  - Verify synchronous condenser Reactive power capability
  - Verify that the generator excitation control system accurately represent the behavior of these systems
  - Identification of requirements dependant on regional criteria or procedures
  - Replace requirements assigned to the Regional Reliability Organization by requirements that are applicable across the continent
- **Applicability**
  - Generator Owner(GO)
  - Transmission Owner (TO)
  - Transmission Planner (TP)

Standards MOD-025-2, MOD-026-1 et MOD-027-1 (con't)

- **Provisions specific to Québec**
  - Applies only to the facilities of the Main Transmission System (RTP)
  - In Québec, the term "applicable Facility" in the MOD-025-2 standard shall mean one of the following:
    - Generating plant /Facility that are part of the RTP
    - Synchronous condenser that are part of the RTP
  - In Québec, the term "applicable unit" in the MOD-026-1 and MOD-027-1 standards shall mean generating stations that are part of the RTP with total generation capability greater than 100 MVA (gross aggregate nameplate rating)

Standards MOD-025-2, MOD-026-1 et MOD-027-1 (con't)

➢ Proposed effective dates

MOD-025-2

Required level of compliance (all requirements) (%)	Proposed effective date for Québec
At least 40% of applicable Facilities	The first day of the first calendar quarter, one year after the adoption of the standard by the Régie de l'énergie.
At least 60% of applicable Facilities	The first day of the first calendar quarter, 18 months after the adoption of the standard by the Régie de l'énergie.
At least 80% of applicable Facilities	The first day of the first calendar quarter, two years after the adoption of the standard by the Régie de l'énergie.
100% of applicable Facilities	The first day of the first calendar quarter, 30 months after the adoption of the standard by the Régie de l'énergie.

MOD-026-1 et MOD-027-1

Requirements and verification percentage of the number of applicable units (%)	Proposed effective date for Québec
R1 and R3 to R6 (MOD-026-1) and R1 and R3 to R6 (MOD-027-1)	The first day of the first calendar quarter one month after the adoption of the standard by the Régie de l'énergie.
R2 for 30% of applicable units (MOD-026-1 and MOD-027-1)	The first day of the first calendar quarter, three years after the adoption of the standard by the Régie de l'énergie.
R2 for 50% of applicable units (MOD-026-1 and MOD-027-1)	The first day of the first calendar quarter, five years after the adoption of the standard by the Régie de l'énergie.
R2 for 100% of applicable units (MOD-026-1 and MOD-027-1)	The first day of the first calendar quarter, eight years after the adoption of the standard by the Régie de l'énergie.

Standards MOD-025-2, MOD-026-1 et MOD-027-1 (con't)

- **Preliminary impact assessment**

MOD-025-2	Low	Moderate	Important
Standard implementation		X	
Standard maintenance		X	
Compliance monitoring		X	

MOD-026-1	Low	Moderate	Important
Standard implementation		X	
Standard maintenance		X	
Compliance monitoring		X	

MOD-027-1	Low	Moderate	Important
Standard implementation		X	
Standard maintenance		X	
Compliance monitoring		X	

Standards MOD-028-2

Summary

- Clarification with regards to the frequency of the TTC calculations in MOD-028-1
- Necessary in context with the MOD-001 standard, which requires the Transmission Owner to opt for one of the three following calculation methodologies:
  - Area Interchange Methodology – Standard MOD-028
  - Rated System Path Methodology – Standard MOD-029
  - Flowgate Methodology– Standard MOD-030

Applicability

- Transmission Operator (TOP)
- Transmission Service Provider(TSP)

Provisions specific to Québec

- Applies only to the facilities of the Main Transmission System (RTP)

Proposed effective dates

Standard	Effective date in the United States	Proposed effective date for Québec	Justification
MOD-028-2	October 1st, 2013	The first day of the first calendar quarter, one month after the adoption of the standard by the Régie de l'énergie.	Standardize practices with the other jurisdictions.

Standard MOD-028-2 (con't)

- **Preliminary impact assessment**

	Low	Moderate	High
Standard implementation		x	
Standard maintenance	x		
Compliance monitoring		x	

Standards MOD-032-1 and MOD-033-1

- **Summary**
  - Clarify modeling data requirements and reporting procedures
  - Include short-circuit data
  - Validate steady-state and dynamic models using actual system responses and data
  - Ensure efficient planning
- **Applicability MOD-032-1**
  - Balancing Authority (BA)
  - Generator Owner(GO)
  - Load-Serving Entity(LSE)
  - Planning Coordinator (PC)
  - Resource Planner(RP)
  - Transmission Owner (TO)
  - Transmission Planner(TP)
  - Transmission Service Provider (TSP)
- **Applicability MOD-033-1**
  - Planning Coordinator(PC)
  - Reliability Coordinator (RC)
  - Transmission Operator (TOP)

Standards MOD-032-1 and MOD-033-1 (con't)

➢ Provisions specific to Québec

- Applies only to the facilities of the Main Transmission System (RTP)

➢ Proposed effective dates

Standard	Effective date in the United States	Proposed effective date for Québec	Justification
MOD-032-1	July 1st 2015, R1	By the first day of the first calendar quarter one month following the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions
MOD-032-1	July 1st 2016, R2 to R4	By the first day of the first calendar quarter, one year following the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions while allowing entities in Québec sufficient time to implement the standard
MOD-033-1	July 1st 2017	By the first day of the first calendar quarter, two years following the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions while allowing entities in Québec sufficient time to implement the standard

➢ Preliminary impact assessment

MOD-032-1	Low	Moderate	Important
Standard implementation		x	
Standard maintenance	x		
Compliance Monitoring		x	

MOD-033-1	Low	Moderate	Important
Standard implementation		x	
Standard maintenance	x		
Compliance Monitoring		x	

Standard PER-005-2

- **Summary**
  - Provide training using a systematic approach to RC, BA, and TOP operators
  - Provide training using a systematic approach to personnel who act independently
  - Provide training using a systematic approach to operations support personnel on the impact of their tasks with reliability
  - Provide training using a systematic approach to personnel who can act independently to operate or direct the operation of the BES facilities in real time
- **Modifications to other standards or to the glossary**
  - Retirement of the PER-005-1 standard
  - One new definition
  - One modified definition
- **Applicability**
  - Reliability Coordinator(RC)
  - Balancing Authority (BA)
  - Transmission Operator (TOP)
  - Generator Operator (GOP)
  - Transmission Owner (TO)

Standard PER-005-2 (con't)

➢ Proposed effective dates

Standard	Enforcement date in the USA	Proposed enforcement date in Québec	Justification
PER-005-2	July 1st, 2016	The first day of the first calendar quarter one year after the adoption of the standard by the Régie de l'énergie	Standardization of practices with other jurisdictions while allowing entities in Québec sufficient time to implement the standard.

➢ Preliminary impact assessment

	Low	Moderate	High
Implementation of the standard		X	
Maintenance of the standard		X	
Compliance Monitoring		X	

Standard PRC-005-2

- **Summary**
  - Maintain the protection systems in working order
  - Represents a complete revision of the PRC-005-1 standard
  - Specification of the minimum maintenance activities
  - Identification of the minimum maintenance activities
  - Establish maintenance for performance-based program or for maximum maintenance interval program
- **Modifications to other standards or to the glossary**
  - Retirement of the PRC 005 1b, PRC 008 0, PRC 011 0 and PRC 017 0 who shall remain active during the implementation phase of the PRC-005-2 depending of the requirement
  - One new definition
  - One modified definition
- **Applicability**
  - Transmission Owner(TO)
  - Generator Owner(GO)
  - Distribution Provider (DP)

Standard PRC-005-2 (con't)

- **Provisions specific to Québec**
  - Applies only to the facilities of the Bulk Power System (BPS)

- **Proposed effective dates**

Requirement	Enforcement date in the USA	Proposed enforcement date in Québec	Justification
R1, R2 and R5	April 1st, 2015	The first day of the first calendar quarter one month after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions while allowing entities in Québec sufficient time to implement the standard.
R3 and R4	See the table below	See the table below.	

Standard PRC-005-2 (con't)

- **Proposed effective dates**

Maximum Maintenance Interval (Tables 1 to 3)	Maintenance Required (%)	Date in the USA	Date in Québec
< 1 year	100%	October 1st, 2015	First day of the first calendar quarter three months after the adoption of the standard by the Régie de l'énergie.
1year to 2 years	100%	April 1st, 2017	April 1st, 2017
3 years	30%	April 1st, 2016	First day of the first calendar quarter six months after the adoption of the standard by the Régie de l'énergie.
	60%	April 1st, 2017	April 1st, 2017
	100%	April 1st, 2018	April 1st, 2018
6 years	30%	April 1st, 2017	April 1st, 2017
	60%	April 1st, 2019	April 1st, 2019
	100%	April 1st, 2021	April 1st, 2021
12 years	30%	April 1st, 2019	April 1st, 2019
	60%	April 1st, 2023	April 1st, 2023
	100%	April 1st, 2027	April 1st, 2027

Standard PRC-005-2 (con't)

- **Preliminary impact assessment**

	Low	Moderate	Important
Implementation of the standard		X	
Maintenance of the standard		X	
Compliance Monitoring		X	

Standard PRC-006-NPCC-01

- **Summary**
  - More stringent than the PRC-006-1 NERC standard
  - Addition to the program specific characteristics prescribed by PRC-006-1 specificities related to regional related topology
  - The PRC-006-NPCC-1 is based on the ”Directory 12”
- **Applicability**
  - Planning Coordinator (PC)
  - Generator Owner(GO)
  - Distribution Provider (DP)
  - Transmission Owner(TO)
- **Provisions specific to Québec**
  - Applies only to the facilities of the Main Transmission System (RTP)

Standard PRC-006-NPCC-01 (con't)

➢ Proposed effective dates

Requirement	Enforcement date in the United States	Proposed enforcement date in Québec	Justification
R8 to R23	July 1st, 2015	The first day of the first calendar quarter six months after the adoption of the standard by the Régie de l'énergie.	To allow sufficient time for entities to implement the standard in a catch-up scenario of presently enforceable versions in the United States.
R1 to R7	January 1st, 2016	The first day of the first calendar quarter nine months after the adoption of the standard by the Régie de l'énergie.	To allow sufficient time for entities to implement the standard in a catch-up scenario of presently enforceable versions in the United States.

➢ Preliminary impact assessment

	Low	Moderate	Important
Implementation of the standard		X	
Maintenance of the standard		X	
Compliance Monitoring		X	

Standard PRC-019-1

- **Summary**
  - Periodic verification of production facilities
  - Assure that mechanisms are in place to verify devices, characteristics and settings

- **Applicability**
  - Propriétaire d'installation de transport (TO)
  - Propriétaire d'installation de production (GO)

- **Provisions specific to Québec**
  - Applies only to the facilities of the Main Transmission System (RTP)

Standard PRC-019-1 (con't)

➢ Proposed effective dates

Applicable Facilites (all requirements) (%)	Proposed enforcement date in Québec	Justification
At least 40% of applicable facilities	The first day of the first calendar quarter 12 months after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions while allowing entities in Québec sufficient time to implement the standard.
At least 60% of applicable facilities	The first day of the first calendar quarter 18 months after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions while allowing entities in Québec sufficient time to implement the standard.
At least 80% of applicable facilites	The first day of the first calendar quarter 30 months after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions while allowing entities in Québec sufficient time to implement the standard.
100% of applicable facilites	The first day of the first calendar quarter 42 months after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions while allowing entities in Québec sufficient time to implement the standard.

➢ Preliminary impact assessment

	Low	Moderate	Important
Implementation of the standard	X		
Maintenance of the standard	X		
Compliance Monitoring	X		

Standard PRC-023-3

- **Summary**
  - Set the protection relays according to specific criteria prescribed by the standard
  - Use the calculated circuit capability as the facility ratings
  - not limit transmission loadability and do not interfere with the system operator ability to take remedial action to preserve system reliability
  - Periodic review of the transmission relays loadability
  - Share information between entities and keep evidence data
- **Modifications to other standards or to the glossary**
  - The standard PRC-025-1 “Generator Relay Loadability” should be adopted in parallel
- **Applicability**
  - Planning Coordinator (PC)
  - Generator Owner (GO)
  - Transmission Owner (TO)
  - Distribution Provider (DP)

Standard PRC-023-3 (con't)

- **Provisions specific to Québec**
  - Applies only to the facilities of the Main Transmission System (RTP)
  - The setting value of 105% (R1, criteria 10) replaces the setting value of 115%
- **Proposed effective dates**
  - First draft of the proposed standard in Québec
  - Proposed implementation period inspired from the implementation of the previous versions of the standard
  - Effective date as per requirement. Refer to the table the supporting document
- **Preliminary impact assessment**

	Low	Moderate	Important
Implementation of the standard		X	
Maintenance of the standard		X	
Compliance Monitoring		X	

Standard PRC-024-1

- **Summary**
  - Ensures that generating units are not tripped by their protective relays
  - communication of the expected generating unit performance to the Planning Coordinator and the Transmission Planner
  - Ensures that the generating units will stay synchronized while experiencing excursions of short duration
  - Ensures consistent settings throughout the Interconnection
- **Applicability**
  - Generator Owner (GO)
- **Provisions specific to Québec**
  - Applies only to the facilities of the Main Transmission System (RTP)

Standard PRC-024-1 (con't)

➢ Proposed effective dates

Applicable Facilites (all requirements) (%)	Proposed enforcement date in Québec	Justification
At least 40% of applicable facilities	The first day of the first calendar quarter one year after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions while allowing entities in Québec sufficient time to implement the standard.
At least 60% of applicable facilities	The first day of the first calendar quarter two years after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions while allowing entities in Québec sufficient time to implement the standard.
At least 80% of applicable facilities	The first day of the first calendar quarter three years after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions while allowing entities in Québec sufficient time to implement the standard.
100% of applicable facilities	The first day of the first calendar quarter 4 years after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions while allowing entities in Québec sufficient time to implement the standard.

➢ Preliminary impact assessment

	Low	Moderate	Important
Implementation of the standard		X	
Maintenance of the standard		X	
Compliance Monitoring		X	

Standard PRC-025-1

- **Summary**
  - Set the load-responsible protective relays to prevent nuisance tripping
  - Set the load-responsible protective relays, respecting the information provided in Attachment 1
  - Choose one of the options documented in Attachment 1 as criteria to set the relay according to its application and relay type
- **Prerequisite for adoption**
  - The standard PRC-023-3 “Transmission Relay Loadability” must be adopted in parallel
- **Applicability**
  - Generator Owner (GO)
  - Transmission Owner (TO)
  - Distribution Provider (DP)
  - Generating unit
  - Generator step-up transformer (GSU)
  - Unit auxiliary transformer(s) (UAT)
  - Certain elements that connect the GUS transformer(s) to the Transmission system
  - Elements utilised in the aggregation of dispersed poser producing plants

Standard PRC-025-1 (con't)

➢ Proposed effective dates

Standard	Proposed enforcement date in Québec	Proposed implementation period granted in Québec	Justification
PRC-025-1	The first day of the first calendar quarter 1 month after the adoption of the standard by the Régie de l'énergie	48 months after the adoption of the standard by the Régie de l'énergie if the load responsible relays can be adjusted according to the standard Or 72 months after the adoption of the standard by the Régie de l'énergie if replacement or removal of those relays is required.	Standardization of practices with other jurisdictions while allowing entities in Québec sufficient time to implement the standard.

➢ Preliminary impact assessment

	Low	Moderate	Important
Implementation of the standard	X		
Maintenance of the standard	X		
Compliance Monitoring	X		

Standard TPL-001-4

- **Summary**
  - Establishes Transmission system planning performance requirements
  - Merging the content of four other standards into a single standard
- **Modifications to other standards or to the glossary**
  - Five new definitions
  - One modified definition
- **Applicability**
  - Transmission Planner (TP)
  - Planning Coordinator (PC)
- **Specific provisions for Québec**
  - Applies only to facilities of the Bulk Power System (BPS)

Standard TPL-001-4 (con't)

➢ Proposed effective dates

Standard	Effective date in the United States	Proposed effective date for Québec	Justification
TPL-001-4	January 1st, 2015, E1 and E7	The first day of the first calendar quarter, one month following the adoption of the standard by the Régie de l'énergie.	Standardize practices with the other jurisdictions.
	January 1st, 2016, R2 to R6 and R8	January 1st, 2016	Standardize practices with the other jurisdictions.

[1] If the adoption date of the standard by the Régie is after the proposed date, the standard (or the requirements) would become effective the first day of the first calendar quarter one month after the adoption of the standard by the Régie.

➢ Évaluation préliminaire de l'impact

	Low	Moderate	High
Standard implementation		x	
Standard maintenance	x		
Compliance monitoring		x	

Standard VAR-001-4

- **Summary**
  - Definition of a system voltage schedule
  - Communication of this schedule to the Reliability Coordinator and the adjacent Transmission Operators
  - Scheduling of sufficient resources
  - Direct the Real time operation of devices to regulate transmission voltage and reactive flow
  - Communication of any generator exemption criteria to the Generator Operator
- **Modifications to other standards or to the glossary**
  - Retirement of the VAR-001-2 standard
- **Applicability**
  - Transmission Operators (TOP)
- **Provisions specific to Québec**
  - Applies only to the facilities of the Main Transmission System (RTP)

Standard VAR-001-4 (con't)

➢ Proposed effective dates

Standard	Enforcement date in the USA	Proposed enforcement date in Québec	Justification
VAR-001-4	October 1st, 2014	The first day of the first calendar quarter one month after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions.

➢ Preliminary impact assessment

	Low	Moderate	High
Implementation of the standard		X	
Maintenance of the standard		X	
Compliance Monitoring	X		

Norme VAR-002-3

- **Summary**
  - Ensure that voltage levels, reactive load flows and reactive power reserves are maintained within a specified range in order to protect the equipment and reliability of the network
  - Requires that the Generator Operators notify the Transmission Operators of a change of status, of reactive capability or of reactive power of a generation resource
- **Modifications to other standards or to the glossary**
  - Retirement of the VAR-002-1.1.b standard
- **Applicability**
  - Generator Operator(GOP)
  - Generator Owner (GO)

Standard VAR-002-3 (con't)

- **Provisions specific to Québec**

General provision:

- Applies only to the facilities of the Main Transmission System (RTP)

Specific provision for R2:

- The Generator Operators that are not Transmission Operators must maintain the voltage or reactive power at the output of its generating facilities in order to maintain the voltage of the Main Transmission System within prescribed ranges..
- For Generator Operators that are also Transmission Owners, they must maintain the voltage or reactive power at the connection points of its network with that of a third party in order to maintain the voltage of the Main Transmission System within prescribed ranges

Specific provision for R5 and R6 :

- Generator Operators are not required to meet Requirements R5, R5.1, R5.1.1, R5.1.2, R5.1.3, R6 and R6.1 considering that the Transmission Operator will give instructions based on the voltage to maintain on the transmission system.

Standard VAR-002-3 (con't)

➢ Proposed effective date

Standard	Enforcement date in the USA	Proposed enforcement date in Québec	Justification
VAR-002-3	October 1st, 2014	The first day of the first calendar quarter one month after the adoption of the standard by the Régie de l'énergie.	Standardization of practices with other jurisdictions.

➢ Preliminary impact assessment

	Low	Moderate	High
Implementation of the standard		X	
Maintenance of the standard		X	
Compliance Monitoring	X		

Feedback

- Two forms are available:
  - Standards and supplementary documents
  - Evaluation of the impacts of the proposed standards
- The following information must be clearly indicated:
  - Name of person submitting comments
  - Name of entity represented
  - Document and section to which the comment applies
  - **Impact the proposed standard will have on the entity (human, material and financial resources) (be as specific as possible)**

Send feedback to: fiabilite@hydro.qc.ca

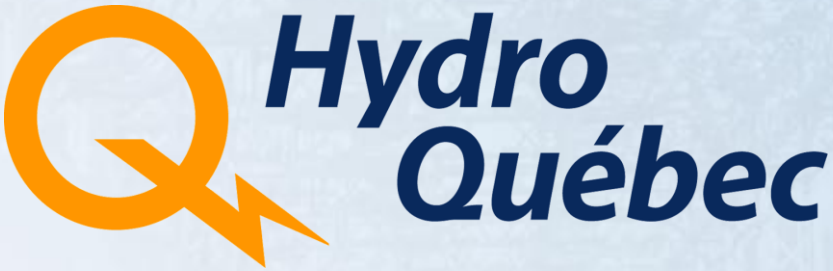
Next steps

- Study of feedback
- Publication of responses to feedback
- Technical meeting (if necessary)
- Integration of retained comments in the standards and supporting documents
- Incorporation of accepted comments into standards and supporting documents
- Filing with the Régie de l'énergie for adoption of standards

Questions and discussion

RELIABILITY

COORDINATOR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