Project QC-2014-01
Consultation on Proposed Reliability Standards and Supporting Documents

Information Session with Concerned Entites

May 15, 2014

COORDONNATEUR
DE LA FIABILITÉ

Direction – Contrôle des mouvements d'énergie

Hydro Québec TransÉnergie

Outline

- Objectives of session
- Webinar (instructions)
- Québec regulatory framework
- Status on reliability standards
- Consultation process
- Project QC-2014-01
  - 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 first round of consultation
- 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

- 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 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

Québec regulatory framework (cont.)

- History:
  - In 2007, the Régie de l'énergie designated the Direction – Contrôle des mouvements d'énergie as Reliability Coordinator for Québec
  - In 2008 and 2009, the Reliability Coordinator informed the entities potentially subject to the standards that reliability standards would be filed with the Régie de l'énergie
  - In June 2009, the Reliability Coordinator filed the following with the Régie de l'énergie (docket R-3699-2009)
    - 95 NERC reliability standards for adoption
    - A register identifying 55 entities subject to the standards for approval
    - Supporting documents

Status on reliability standards

- Docket R-3699-2009:
  - Follow-up on decisions D-2011-068 and D-2012-091 (PDF-In French Only)
  - Adoption of 35 standards on October 30, 2013 (decision D-2013-176) and 7 standards on March 20, 2014 (decision D-2014-048)
  - Request for a public consultation on 6 standards (decision D-2014-048)
- Implemented by the Régie de l'énergie:
  - Québec Compliance Monitoring and Enforcement Program (QCMEP)
  - Québec Rules of Procedure (QROP) for Compliance Services, with NPCC and NERC
  - Upcoming agreement between the Régie de l'énergie, NERC and NPCC
    - To be approved by the Gouvernement du Québec on recommendation by the Ministère des Ressources naturelles et de la Faune

Status on reliability standards (cont.)

- On approval of the QCMEP and the QROPs,
  - the Reliability Coordinator will have 30 days to file an updated Sanction Guide that takes these documents into account (docket R-3699-2009, phase 2);
  - a hearing will be held 21 days later.

Cf. Decision D-2011-139 (PDF - In French Only)

Consultation process

- Consultation process prior to filing of reliability standards
- Approved by the Régie de l'énergie in Decision D-2011-139 (PDF - In French only)
- Makes for a fuller assessment of the monetary impact of standards proposed by the Reliability Coordinator (D-2011-068, para. 110)

Cf. Decision D-2011-139

Consultation process

Main steps:

- Sending of the notice of consultation
- Publication of the proposed standards and supporting documents
- Comment period
  - Comments on the standard 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-2014-01

Proposed New Standards and Supporting Documents

COORDONNATEUR
DE LA FIABILITÉ

Hydro Québec TransÉnergie

Proposed reliability standards

Context

- Standards initially presented for adoption in filing R-3699-2009
- Discussed in workshops with concerned stakeholders and the Régie de l'énergie
- Considering the nature of the modifications of these standards compared with the initially filed versions, the Régie asks the Reliability Coordinator to conduct a public consultation for the following standards (réf: D-2014-048, par [184-185]): (PDF in French only)
  - EOP-005-2
  - EOP-006-2
  - EOP-008-1
  - IRO-005-3.1a
  - MOD-004-1
  - PER-003-1

Proposed reliability standards

- Six reliability standards, accompanied by an informational document comprised of the following elements:
  - A preliminary assessment of the relevance and impact of the proposed standard
  - A preliminary assessment of the impact based on the application at Hydro Québec
  - Modifications to other standards or to the glossary
  - Proposed effective dates
- Discussed in workshops with concerned stakeholders and the Régie de l’énergie

Standards
EOP-005-2: System Restoration from Blackstart Resources and EOP-006-2: System Restoration Coordination

- Assessment of relevance
  - Both standards specifically address system restoration following a disturbance in which one or more areas of Bulk Electric System (BES) shuts down.
  - The standards enable controlled system restoration and also coordinate plans between all involved entities.
  - They provide assurance that these entities understand their roles and responsibilities in order to avoid confusion and restore system, safely and promptly.

Standards

EOP-005-2: System Restoration from Blackstart Resources and EOP-006-2: System Restoration Coordination (con't)

- New definition to be added to the glossary

Blackstart resource : A generating unit(s) and its associated set of equipment which has the ability to be started without support from the System or is designed to remain energized without connection to the remainder of the System, with the ability to energize a bus, meeting the Transmission Operator's restoration plan needs for real and reactive power capability, frequency and voltage control, and that has been included in the Transmission Operator's restoration plan

- New definition to be removed from the glossary

Blackstart Capability Plan : A documented procedure for a generating unit or station to go from a shutdown condition to an operating condition delivering electric power without assistance from the electric system. This procedure is only a portion of an overall system restoration plan.

Standards

EOP-005-2: System Restoration from Blackstart Resources and EOP-006-2: System Restoration Coordination (con't)

Applicability

Requirements	Applicable functions				
	Reliability Coordinator	Transmission Operator	Generator Operator	Transmission Owner	Distribution Provider[1]
EOP-005-2		X	X	X	X
R1 to R10		X			
R11				X	X
R12		X			
R13		X	X		
R14 to R18			X		
EOP-006-2	X				
R1 to R10	X				

[1] Only the Transmission Owners and the Distribution Provider identified in the TOP restoration plan are targeted by the standard. Facilities required to support restoration plan are identified in the Register of Entities.

Standards
EOP-005-2: System Restoration from Blackstart Resources and EOP-006-2: System Restoration Coordination (con't)

- Provisions Specific to Québec
  - No specific provisions.
- Proposed Effective Dates

Standard	Enforcement date in the United-States	Proposed enforcement date in Québec	Justification
EOP-005-2 EOP-006-2	2013-07-01	The first calendar day of the first calendar quarter following the adoption of the standard by the Régie de l'énergie.	Standardisation of practices with other jurisdictions.

Standards
EOP-005-2: System Restoration from Blackstart Resources and EOP-006-2: System Restoration Coordination (con't)

- Impact Summary

EOP-005-2, EOP-006-2	Low	Moderate	Important
Implementation of the standard		X	
Maintenance of the standard		X	
Compliance Monitoring		X	

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.

Standard
EOP-008-1: Loss of Control Center Functionality

- Assesment of relevance

  - The standard provides guidance on the backup functionality process to ensure reliable operation of the Bulk Electric System (BES) in the event that a control center becomes inoperable.
  - The standard requires a current operating plan for all backup functionality, the availability and accessibility of this plan and the specific conditions under which the backup center replace the primary control center.
  - The standard requires conducting periodic testing of the operating plan, a plan that carries the transition between the simulated loss of primary control center functionality and the time to fully implement the backup functionality

Standard EOP-008-1: Loss of Control Center Functionality (con't)

Applicability

Requirements	Applicable functions		
	Reliability Coordinator	Transmission Operator	Balancing Authority
EOP-008-1	X	X	X
R1 and R2	X	X	X
R3	X		
R4		X	X
R5 to R8	X	X	X

Standard
EOP-008-1: Loss of Control Center Functionality(con't)

- Provisions Specific in Québec
  - No specific provisions.
- Proposed Effective Dates

Standard	Enforcement date in the United-States	Proposed enforcement date in Québec	Justification
EOP-008-1	2013-07-01	The first calendar day of the first calendar quarter following the adoption of the standard by the Régie de l'énergie.	Standardisation of practices with other jurisdictions.

Standard
EOP-008-1: Loss of Control Center Functionality (con't)

- Impact Summary

EOP-008-1	Low	Moderate	Important
Implementation of the standard		X	
Maintenance of the standard		X	
Compliance Monitoring		X	

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.

Standard IRO-005-3.1a: Reliability Coordination – Current Day Operations

- Assessment of relevance

  - To ensure that the reliability coordinator is continuously aware of conditions within its reliability coordinator area and ensures that this information is included in the reliability coordinator's reliability assessments
  - To ensure that the reliability coordinator monitors parameters that could potentially have significant impact on the reliability coordinator area and neighbouring reliability coordinator areas.
  - Monitoring of system frequency as well as the coordination of the development and implementation of action plans to mitigate potentiel or acutal SOL, CPS or DCS violations.

Standard IRO-005-3.1a: Reliability Coordination – Current Day Operations (con't)

Applicability

Requirements	Applicable Fonctions						
	Reliabilty Coordinator	Balancing Authority	Tranmission Operator	Transmission Service Provider	Generator Operators	Load-Serving Entities	Purchasing-Selling Entities
IRO-005-3.1a	X	X	X	X	X	X	X
R1 to R8	X						
R9	X		X				
R10		X	X	X	X	X	X
R11				X			
R12	X						

Standard IRO-005-3.1a: Reliability Coordination – Current Day Operations (con't)

- Provisions Specific to Québec
  - This standard applies to the Main Transmission System (RTP) which represents the network monitored by the Reliability Coordinator of Québec.
- Proposed Effective Dates

Standard	Enforcement date in the United-States	Proposed enforcement date in Québec	Justification
IRO-005-3.1	2012-09-13	The first calendar day of the first calendar quarter following the adoption of the standard by the Régie de l'énergie.	Standardisation of practices with other jurisdictions.

Standard IRO-005-3.1a: Reliability Coordination – Current Day Operations (con't)

- **Impact Summary**

IRO-005-3.1a	Low	Moderate	Important
Implementation of the standard	X		
Maintenance of the standard	X		
Compliance Monitoring	X		

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.

Standard MOD-004-1: Capacity Benefit Margin

- Assessment of relevance
  - Essential to the consistency and reliability of the calculation, verification and maintenance of the Capacity Benefit Margin (CBM) among all entities involved.
  - Capacity Benefit Margin (CBM) : The amount of firm transmission transfer capability preserved by the transmission provider for LSEs, to enable access by the LSEs to generation from interconnected systems to meet generation reliability requirements. Preservation of CBM for an LSE allows that entity to reduce its installed generating capacity below that which may otherwise have been necessary without interconnections to meet its generation reliability requirements. The transmission transfer capability preserved as CBM is intended to be used by the LSE only in times of emergency generation deficiencies.

Standard MOD-004-1: Capacity Benefit Margin (con,t)

Applicability

Requirements	Applicable Functions				
	Load-Serving Entity	Resource Planner	Transmission Service Provider	Balancing Authority	Transmission Planner[1]
MOD-004-1	X	X	X	X	X
R1 et R2			X		
R3	X				
R4		X			
R5			X		
R6					X
R7			X		
R8					X
R9			X		X
R10	X			X	
R11			X	X	
R12			X		

[1] Applicable only to Transmission Planners whose associated TSP maintains a CBM.

Standard MOD-004-1: Capacity Benefit Margin (con't)

- Provisions Specific to Québec
  - None.
- Proposed Effective Dates

Standard	Enforcement date in the United-States	Proposed enforcement date in Québec	Justification
MOD-004-1	2011-04-01	The first calendar day of the first calendar quarter following the adoption of the standard by the Régie de l'énergie.	Standardisation of practices with other jurisdictions.

Standard MOD-004-1: Capacity Benefit Margin (con't)

- Impact Summary

MOD-004-1	Low	Moderate	Important
Implementation of the standard	X		
Maintenance of the standard	X		
Compliance Monitoring		X	

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.

Standard PER-003-1: Operating Personnel Credentials

- Assessment of Relevance
  - To ensure that the concerned entities system operators have the necessary competencies to complete their assigned tasks and that they are certified through the relevant NERC program.
  - Standardize the competence level of the system operators of the RC, the BA, and the TOP that are required to coordinate with system operators of neighbouring areas.

Standard PER-003-1: Operating Personnel Credentials (con't)

- Applicability

Requirements	Applicable Functions		
	Reliability Coordinator	Transmission Operator	Balancing Authority
PER-003-1	X	X	X
R1	X		
R2		X	
R3			X

Standard PER-003-1: Operating Personnel Credentials (con't)

- Provisions Specific to Québec
  - None.
- Proposed Effective Dates

Standard	Enforcement date in the United-States	Proposed enforcement date in Québec	Justification
PER-003-1	2012-10-01	The first calendar day of the first calendar quarter following the adoption of the standard by the Régie de l'énergie.	Standardisation of practices with other jurisdictions.

Standard PER-003-1: Operating Personnel Credentials (con't)

- Impact Summary

PER-003-1	Low	Moderate	Important
Implementation of the standard	X		
Maintenance of the standard	X		
Compliance Monitoring	X		

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.

Feedback

- Two forms are available:
  - Standards and supplementary documents
  - Evaluation of the impacts of proposed standards

- The following information must be clearly indicated:
  - Name of person submitting the 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 (to explain the responses and technical aspects of the standards)
- 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

The filing will take place after the standards now being studied by the Régie de l'énergie have been adopted

Questions and discussion


Hydro
Québec