

Québec Interconnection: BES Approach and Implementation Status

NPCC Governmental/Regulatory
Affairs Advisory Group

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Regulatory framework in Québec

- The *Régie de l'énergie du Québec* (Québec Energy Board) has exclusive jurisdiction over the entities and the framework of the Québec Interconnection and:
 - Has designated HQT's *Direction Contrôle des mouvements d'énergie* as the Reliability Coordinator (RC) for the Québec control area
 - Adopts reliability standards filed by the RC
 - Approves the Register identifying entities subject to reliability standards
 - Monitors and enforces compliance
 - Has the power to levy important fines
 - Has put in place consultation mechanisms in which NERC and NPCC can participate
- The *Régie de l'énergie* signed MOUs with NERC and NPCC to assist in these functions

Regulatory framework in Québec

- **CMÉ (System Control), as the designated Reliability Coordinator for Québec, must:**
 - File NERC's reliability standards with Régie for adoption.
 - File associated appendices that include specific provisions for application in Québec (« applicability matrix »)
 - Submit to the Régie, for approval, a register identifying the entities that are subject to the reliability standards.

Impacts of the new BES definition on the Québec Interconnection

- The new BES definition filed with FERC includes transmission elements operated at 100 kV or higher
- Of the 474 substations that are part of our local transmission subsystems, a majority would be included in the BES
- **No measurable impact on bulk power system reliability;** however, increased burden for the RC and TOP
- Subsystem transmission projects would be required to comply with TPL-003-1a:
 - SPS additions
 - New lines, breaker additions to existing substations, etc.
- Many of the subsystem SPS additions would have no impact on service continuity

Quick cost estimate for these projects: > \$850 million

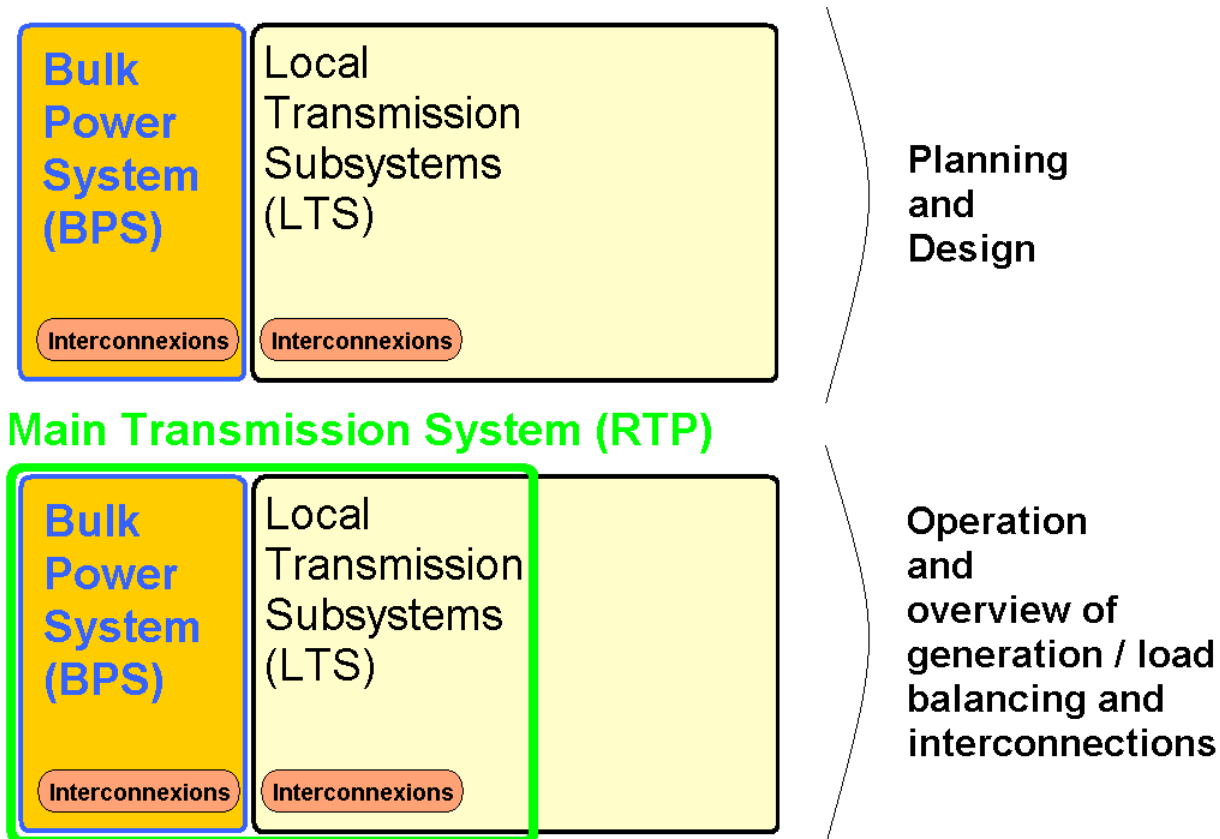
Reliability framework in Québec: tiered approach to application of standards - definitions

- Bulk power system (BPS)
 - Mainly 735-kV and 450-kV DC substations with their connecting lines and transformers
 - Re-evaluated when significant changes occur on the system
- Main transmission system (RTP)
 - Facilities required for generation/load balancing, frequency reserve, voltage control, interchange transactions, black start and restoration, etc.
 - Includes some LTS facilities
 - Includes generation assets above 50 MVA
 - The RC has full control and visualization over RTP
- Local transmission subsystems (LTS)
 - Operate at lower voltage levels and are connected to 735-kV substations
 - Feed industrial clients and load substations and connect local generation and some interconnections

Reliability framework in Québec: a tiered approach to application of standards

- BPS
 - All standards adopted by the *Régie de l'énergie* applied
- RTP
 - Most standards applied, excluding TPL and some PRC standards
- LTS
 - No NERC standards for the bulk system applied
 - Design criteria equivalent to TPL-001 and TPL-002 applied

Reliability framework in Québec: a tiered approach to application of standards



Reliability Framework – Status

- As of today, CMÉ filed the following with the Régie:
 - 92 NERC Reliability Standards and 92 associated appendices that include specific provisions for application in Québec (tiered approach)
 - A Register identifying the entities and facilities that are subject to Reliability Standards
 - A glossary of the terms used in the Reliability Standards (based on NERC glossary)
 - A Sanctioning Guidelines document (Guide des sanctions)
- The Régie issued an order on October 30th (D-2013-176) approving 35 of the standards with their associated appendices. (Effective dates have yet to be determined by the Régie)

Reliability Framework – Next steps

- Next Steps:
 - Adoption of the 57 remaining standards and their respective appendix
 - Approval of the associated documents (Register of entities, Glossary)
 - Approval of the Sanctioning Guidelines document (« Guide des sanctions »)
 - Determination of the effective dates of the adopted standards
- CMÉ is expecting a decision from the Régie by the end of this year on the remaining standards
- CMÉ is expecting the standards to become effective in late 2014

Conclusion

- HQT has been complying with the current version of NERC standards and NPCC Criteria on a voluntary basis since 1999 and will continue until the Régie establishes mandatory and enforceable standards for Québec.
- Régie's decisions endorses the tiered approach to standards



Questions? Comments?

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