

Notes from the June 20, 2007 Reliability Standards Standing Committee Meeting

9:00 am to 3:30 pm
Monte Carlo Airport Hotel, Derry Road, Mississauga, Ontario

Attendees:

Name	Company
Chun Hung Ngai	Toronto Hydro
Milan Bolkovic	PowerStream Inc.
Rob Cary	Cardinal Power
Shawn C. Filice	ENWIN Utilities Ltd.
Barry Green	OPG
Tracy Brason	Brookfield Power
Alex Lee	Great Lakes Power
Dave Abbott	Bruce Power
David Kiguel	Hydro One
Emilija Stupar	Hydro One
Damian Opel	Direct Energy
Don Robinson	AESI
Doug Westlund	N-Dimension Solutions Inc.
Ron Falsetti (Chair)	IESO
George Fatu	IESO
Carmela Phillips	IESO
Drew Phillips	IESO
Biju Gopi	IESO
Kim Warren	IESO
Guy Springgay	IESO
John MacKenzie (via phone)	IESO

Agenda Item 1 – Session Start

The second RSSC meeting started at 9:00 am with the Chair leading the introduction of those present for the meeting at the Monte Carlo Airport Hotel located at Mississauga, Ontario.

Agenda Item 2 – Administration/Operational Issues

The chair covered the administration of the Reliability Standards Standing Committee (RSSC). Highlights of the comments and discussions that followed include:

- The minutes of the first meeting could not be approved due to an incorrect version in the package sent out to the members. Final meeting minutes of the first meeting will be re-circulated to the members and will be considered “approved” if there are no concerns or issues associated.
- Face to face meetings will be held in September and in early December. Ad-hoc conference calls and web sessions could be facilitated by the IESO as and when required. Members were encouraged to provide future agenda material on any issue or concern they want discussed at these meetings.
- CIP (Critical Infrastructure Protection) standards are part of a separate ruling by FERC and some of the members indicated that they expect a ruling from FERC sometime this month.
- Questions were raised by some members regarding the difference in survey forms for CIP standards, between the IESO and NPCC. The chair assured all members that the IESO survey is a simplified version as compared to the NPCC one and is less cumbersome to complete.
- The chair also walked through the membership list and indicated that there are no additional entities registered, but additional staffs of RSSC member organizations have joined the committee.

Agenda Item 3 – Current NERC / NPCC Activities

IESO staff provided a brief presentation of the on-going activities for NERC and NPCC along with the planning objectives of these organizations. Discussed topics include:

- NERC has developed a standards development work-plan. The objectives of these plans are driven by FERC rulings, industry inputs during the commenting process, removing “fill-in-the-blank” requirements, providing missing measures & compliance levels, and recommendations from the 2003 blackout.
- NERC has a number of standard authorization requests (SARs) that are due for comments or have been already commented on by the IESO. SARs include Transmission Vegetation Management SAR, Generator Verification SAR, Reliability-based Control SAR and Real-Time Operations SAR.

- The applicability of the NERC definition of Bulk Electric System (BES) and NPCC Bulk Power System (BPS) were discussed in detail.

The NERC definition of BES is:

“as defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighbouring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.”

NPCC defines BPS as:

“The interconnected electrical systems within north-eastern North America comprised of system elements on which faults or disturbances can have a significant adverse impact outside of the local area.”

It was noted by some attendees that the application of a voltage threshold as the only test is less useful in the US where some systems have 46 kV or 69 kV circuits paralleled to the high voltage system.

- The revised NPCC A-10 document provides criteria used to establish BPS facilities. IESO staff indicated that it is planning to comment against the subjective nature of the term “local area” and replace it with a more measurable and tangible term. It is currently working towards defining the concept of a “localized impact.”
- IESO staff discussed the A-10 implementation schedule and the deadlines associated with the schedule. The revised A-10 criteria must be used to identify BPS facilities. This process must be completed by the end of 2007. If facilities are identified that are not presently BPS, the respective Transmission Owner is to develop an implementation plan to ensure that the newly identified facility is compliant with BPS requirements (redundancy of protection systems etc.). All implementation plans must be completed by the end of 2008. The progress of all plans and projects must be reported to the NPCC every six months.
- IESO staff noted that NPCC will be conducting an off-site audit of Ontario’s planning functions – resources, transmission, and reliability, in November 2007. It was indicated that the Ontario Power Authority (OPA) will not be audited during this audit and that delegation agreements with the OPA would be provided to NPCC along with any additional documentation that might be required from the IESO.

Agenda Item 4 – Cyber Security Implementation Plan

IESO staff provided an overview of the criteria used to identify market participants that are responsible for complying with CIP standards (CIP-002 through CIP-009). CIP standards set out

requirements for cyber and physical security which must be met by all applicable entities. The criteria for identification of Critical Assets as per the CIP Standards are under discussion with asset owners. Highlights of the discussions include:

- Series elements on cranking paths used in system restoration are part of the critical assets list.
- Only generator facilities (single or multiple units) greater than 300 MW will be considered. There is no definitive formula around this criterion but historical reasoning based on the fact that disturbances associated with generators below the specified threshold would not cause any serious system impacts.
- IESO staff explained that the CIP standards are not applicable to nuclear generating facilities. Nuclear facility regulations in Canada are regulated by the Canadian Nuclear Safety Commission and in the US these are regulated by the Nuclear Regulatory Commission.
- Many RSSC members expressed concern over the fact that facilities might be protected as a result of implementation of the CIP standards but telecommunication links between facilities, owned by telecommunication companies like Bell, would not be protected and this could render the CIP standards ineffective. IESO staff pointed out that these companies are establishing similar surveys and processes but cannot be regulated by NERC due to lack of jurisdiction over telecommunication companies. However, some coordination between utilities and telecommunication companies is taking place.
- There was some discussion regarding IESO's plans to put in a second Type I Special Protection Scheme (SPS) in place though the details were not discussed.
- IESO staff noted that there are 6 or 7 market participants subject to the CIP standards obligations. The IESO is working with the affected entities.
- IESO staff indicated that maintaining the reliability and security of the grid was paramount and market operations are considered non-essential in the event of a cyber attack or failure. Important aspects of protecting the interconnected system from failure include understanding the vulnerabilities of the system, using appropriate business judgement in deciding what is critical and developing processes and appropriate facilities for risk management.
- In response to a question from a distribution company representative, IESO staff indicated that local distribution companies (LDC) and connected wholesale customers (CWC) are not considered as applicable entities for the purpose of implementation of these standards. Although it is highly unlikely that an LDC or CWC could cause system-wide impact, they are encouraged to use the CIP standards as a benchmark when developing risks assessments and mitigation for their IT assets.

It was acknowledged by distribution representatives that although the distribution electrical facilities do not fall specifically under the obligations of the CIP standards,

- it is prudent business practice to assess and address the risks to business continuity and service posed by cyber threats.
- IESO indicated that IT staff of all affected entities would work with the IESO IT staff to share challenges, solutions and best practices in order to comply with the CIP standards through formation of a working group under the IT Standing Committee.
 - The Chair discussed the NERC implementation schedule for CIP standards and how the phased compliance of the standards is expected to work¹.

Agenda Item 5 – Commercially Available Compliance Tracking Tools

IESO staff presented commercially available compliance tracking tools and the need for having such tools in place, especially for the larger market participants. Highlights include:

- Due to the complexity of trying to be compliant with NERC and NPCC standards, it is essential that compliance tracking tools are available to market participants. These tools can help entities with their compliance submissions, tracking compliance schedules, and auditing of submissions and associated timelines.
- Cost-effectiveness of the tool should be considered.
- IESO staff indicated that it is planning to implement a web-based tool, which would enable market participants to submit their compliance certifications and associated documentation.
- Several participants suggested that the proposed tool must provide market participants with alerts as to submission obligations. IESO staff indicated that issuing notifications and reminders would be part of the application.
- The IESO staff clarified that it is not trying to duplicate the existing NPCC CBRE web based tool as it feels that the NPCC CBRE tool is incomplete and may not offer the best solution for Canadian requirements.
- Implementation of such a tool by the IESO would increase its effectiveness in monitoring and auditing market compliance. The Ontario compliance framework also helps reduce NPCC and NERC membership costs for the IESO.

Agenda Item 6 – Ontario Compliance Framework for 2007

- IESO staff provided an overview of the 2007 compliance framework and the role of MACD in investigating breaches and levying sanctions (monetary or not) for non-compliance. Highlights of the discussion included:
- The Chair walked through the 2007 NPCC CBRE compliance schedule. The Chair highlighted certain standards that were being met through the current IESO market rule processes like Connection Assessment Agreements, Network Model Build schedules, etc. It was also noted that NPCC updates its compliance schedule on a regular basis and

¹ The various stages of work include: BW (Begin Work), SC (Substantially Compliant), C (Compliant), and AC (Audit ably Compliant)

the IESO will communicate any schedule changes through the weekly communication e-mails to market participants.

- It was noted that the IESO had recently stakeholdered some of its compliance certification forms including FAC-008 (Establishing a methodology for facility ratings), FAC-009 (Communication of facility ratings to the IESO), and PRC-004 (Protection System Misoperations). Additional details on the stakeholdering process can be obtained at: http://www.ieso.ca/imoweb/ircp/emerging_Reliability_Standards.asp
- The IESO actively monitors compliance to NPCC A-4 criteria, which provides timelines for protection system maintenance. Even though the certification of A-4 is in June 2007, there are two follow-ups carried out by the IESO – one in the beginning of the reporting year followed by another one in June of the reporting year, for those who indicated non-compliance during the first early-year follow-up. This two-phased follow-up process provides sufficient time for non-compliant market participants to establish mitigating plans in place so as to be compliant to NPCC A-4 and associated NERC PRC standards.
- The IESO and the NPCC are of the view that standards related to SPS misoperations should be applicable only to Type I SPS facilities as only these are BPS-impactive.
- The IESO will include Purchasing-Selling Entities (PSEs) in its mapping exercise so that PSEs understand their obligations in the Ontario market.
- The chair provided an outline of the applicability criteria, which would be used by the IESO in conjunction with the NERC applicability registry in order to determine the applicability of standards and associated requirements to market participants – “mapping exercise.”
- RSSC members were encouraged to review the applicability criteria and provide their feedback and comments. These would serve as useful inputs in developing the mapping matrix.
- It was clarified that, in the IESO’s opinion, there are no LSEs in Ontario but only Distribution Providers (DPs) and Connected Wholesale Customers (CWCs). The concept of an “LSE” is vague and more prevalent in the US.
- The IESO noted that even though certain requirements are met through existing market rule processes, like Connection Assessment Agreements (CAA), it might still require market participant certification to these, as and when deemed required and necessary by the IESO.
- Both, the IESO and Hydro One indicated that their readiness audits were a success, with the audit teams identifying a number of examples of excellence for both entities.

MACD

- MACD indicated that they have an informal approach in place for initially working with alleged breaches of market rules by market participants. During this stage, MACD gathers relevant information regarding the alleged breach of a reliability standard or a market rule and discusses remedial actions that could be undertaken by the affected entity. Failure to comply with the initial MACD requirements could lead to a formal non-compliance

process and it is during this process that penalty sanctions could be imposed on non-compliant market participants.

- MACD also establishes a due date for compliance to a particular standard or market rule. Sanctions are imposed only if the market participant is found to be non-compliant after the due date.
- MACD investigates all breaches of the market rules. Breach history of a market participant is considered during the sanction determination.
- There are two levels of fines – below \$10,000 for small incidents or minor impacts and above \$10,000 for major incidents or impacts.
- MACD will use a penalty matrix to determine the amount of a monetary sanction. The parameters to be used in the matrix are the Impact Level² on the vertical axis and the Non-Compliance Level³ (Severity and Breach History) on the horizontal axis.
- Penalties are levied in two steps. Step 1 determines the range of the penalty based on the impact level and non-compliance level. The non-compliance level is higher for the breach history or severity plus any increasing adjustments. Increasing adjustments can be due to lack of due diligence, benefits obtained by the market participant, and any corporate practices deemed unhealthy for market or reliability operations. Step 2 determines the final penalty amount and combines the base amount determined in Step 1 and any aggravating or mitigating factors observed during the breach. The final penalty will always be in the range or bandwidth established by Step 1.
- IESO staff clarified that according to the Memorandum of Understanding between the IESO, NERC and NPCC, signed on November 2006, the signatories acknowledged that NERC, NPCC CBRE and NPCC Inc. will not impose financial penalties on the IESO for violations in Ontario of NERC reliability standards or NPCC Inc. regional reliability criteria.
- It was clarified that, at this point, there are no plans to “wipe clean” the breach history of market participants – past violations history will stay for the time being, i.e. as of now; there is no sunset clause in the non-compliance history of a market participant.

NERC Data Requests and Funding Issues

- IESO staff offered clarity on the issues behind section 1600 of the NERC Rules of Procedures, which deals with handling of data requests from NERC.
- Historically, the IESO has provided data for reliability standards, event analysis, and disturbance reporting. Data requests by a third party like FERC or DOE, for other purposes, through NERC, is voluntary and will be provided only after looking at confidentiality issues and resources.
- One market participant suggested that any request that goes beyond standards and event analysis should be considered only on a case by case basis. In response, IESO staff

² The Impact Level can be correlated to the NERC’s Violation Risk Factor and has the three levels: Low, Medium, and High.

³ The Non-Compliance Level can be loosely correlated to the NERC’s Violation Severity Levels and has the four levels of non-compliance: Low, Moderate, High, and Severe.

pointed out that there are other regional considerations like regional assessment studies, resource planning studies, and the IESO's involvement in working groups and task forces which requires regular submission of operational, market, and planning data.

- IESO staff also touched upon the issue of NERC and NPCC funding⁴. There has been a substantial increase in NERC and NPCC funding requests⁵. The IESO has argued against the lack of transparency in the budgeting principles of these organizations and the increases⁶ themselves, especially after the 2003 blackout incident.
- The IESO successfully presented its case for reduction of NERC and NPCC funding contributions, arguing that compliance monitoring and enforcement, the primary reasons for budget increases of these organizations, is handled by the IESO when it comes to Ontario (Ontario compliance framework). This resulted in a proposed net reduction in funding contribution of about \$0.5 million USD for the IESO. These reductions must now be approved by the respective Boards of NERC and NPCC.

Agenda Item 7 – Technical Panel Updates

IESO staff presented an update on the issues in front of the IESO Technical Panel.

- MR-00326: Reliability – OEB Review of New Reliability Standards
 - IESO Exemption Process to be followed as an interim mechanism until OEB legislation comes into effect.
 - MACD statement to Market Participants – allaying fears in case of OEB Denials on IESO Board Exemption Rulings
 - Penalties are not retro-active unless the case is found to be frivolous in nature
 - Time provided to Market participants in order to meet their compliance requirements unless the case is found to be frivolous in nature
 - MR-00326 will remain open for future review.
- MR-00330: Reliability – Mapping NERC Functional Model and Reliability Standards to the Ontario Market
 - Rule proposal to move forward as it helps Market Participants assess their compliance requirements
 - The IESO will identify, in consultation with market participants, each market participant's reliability standards' obligations or requirements;
 - IESO will help Market Participants understand their obligations and responsibilities and will clarify reliability-related information reporting requirements;
 - Use the RSSC as a forum for applicability discussions

⁴ IESO funding contributions to NERC and NPCC are based on Net Energy to Load (NETL) principles – The IESO comprises about 3% of NERC's load and about 30% of NPCC load.

⁵ Last year, 2006, the IESO paid about \$750,000 USD to NERC and about \$1.7 Million USD to NPCC.

⁶ NERC's budget for 2007 has gone up by 26.5% and NPCC's budget has gone up by 11% - primarily due to the addition of tools and resources for compliance monitoring and enforcement.

- The IESO's determination of the applicability of reliability standards' obligations or requirements is subject to the dispute resolution process.

Agenda Item 8 – Future Agenda Items

IESO staff presented the principles around stakeholdering. The stakeholdering process is transparent and all market participants will be made aware of issues that will be addressed by the RSSC – issues like the “mapping exercise”⁷, which will enable market participants to understand their compliance obligations better. This gives an opportunity for market participants not involved with the RSSC to provide their comments and concerns.

Adjourn

The meeting was adjourned at 3:30 pm.

⁷ A stakeholdering effort SE-44, is currently been implemented for working with market participants on the mapping exercise. Additional details on this effort are located at: http://www.ieso.ca/imoweb/consult/consult_se44.asp

Summary of Action Items

Index	Date	Action	Comments	Status
1	June 20, 2007	Add "Export to Excel" feature to RSSC web pages.	The IESO will meet with internal IT staff to discuss timelines for implementation.	Open Issue with limited IT resources for non-operational requirements.
2	June 20, 2007	Develop processes to enable Market Participants understand their compliance obligations.	The IESO has provided applicability matrices and functional model mapping documents to help MPs understand the various requirements and compliance obligations. Going forward, the IESO will work with individual MPs in this area.	Open On-going Process – mapping timelines provided by the Chair to RSSC members.
3	June 20, 2007	Additional vendors involved in developing compliance tracking tools.	IESO to get in touch with Hydro One for additional vendors involved in developing compliance tracking tools.	Open
4	June 20, 2007	NPCC CBRE compliance schedule updates.	The IESO will provide a schedule update through the weekly communication process.	Open
5	June 20, 2007	IESO to update mapping matrix with PSE (purchasing-Selling Entities) requirements.	The IESO will incorporate PSE requirements and obligations into its mapping matrix.	Open
6	June 20, 2007	Develop Meeting schedules for the remainder of 2007.	Participants have expressed an interest in scheduling quarterly meetings.	Closed
7	June 20, 2007	Follow-up with the IESO Technical Panel on the interim remand mechanism.	Participants prefer a simple and practical approach – the IESO exemption process seems to be preferred.	Closed
8	June 20, 2007	Provide an update on NPCC-CBRE regional standards.	The IESO will follow up with NPCC in order to obtain information on the development of regional standards and how these would be implemented.	Closed NPCC has no formal plans in place on the development of Regional Standards as of yet.