

June 08, 2007

Hydro One Comments to Form 1522 v.3.0 and IESO Response

Hydro One Networks Inc. appreciates the opportunity to provide comments on the proposed changes to the 1522 reporting form.

We offer the following comments:

1. Reporting Period box

The “From” and the “To” dates shown in the form should be reversed so that the reporting period is one year instead of 1 day as it appears in the draft.

[IESO] We agree with Hydro One’s notes – the due dates should be between Nov 1, xxxx and Oct 31, xxxx.

2. Requirement R3 in the Requirements Box

The proposed Requirement R3 reads:

R3. The *transmitter, generator, distributor and wholesale customer* that own a *transmission system* protection system shall each provide to the *IESO*, documentation of its misoperations analyses and corrective action plans according **NPCC Document B-21 - Guide for Monitoring Protection System Misoperations** and **Market Manual 7.7 - Disturbance Reporting** (Ch. 5, S.6.3.5 and S.14.15 of the *market rules* and **Market Manual 7.1 - System Operating Procedures**, S. 3.4). All documentation is to be submitted to the *IESO* through the following e-mail: M&SOMarketAnalysis@ieso.ca.

2.1 The reference to the market rules Ch. 5, S14.15 should be Ch. 5, S14.1.5.

2.2 Requirement R3 is based on the NERC Standard PRC-004-1 “**Analysis and Mitigation of Transmission and Generation Protection System Misoperations.**” Requirement R1 of PRC-004-1 reads:

R1. The Transmission Owner and any Distribution Provider that owns a transmission Protection System shall each analyze its transmission

Protection System Misoperations and shall develop and implement a Corrective Action Plan to avoid future Misoperations of a similar nature according to the Regional Reliability Organization's procedures developed for Reliability Standard PRC-003 Requirement 1.

At this time, the RRO's procedure is the NPCC Guideline document B-21 "**Guide for Monitoring Protection System Misoperations.**" This document states that the documents containing analysis and corrective actions for a given event shall be provided to NPCC following a request. In our experience, the number of protection system misoperations actually reported to NPCC is less than 10% of the total. These are reported to TFSP without a formal request from NPCC as it is judged that they are significant and that there are lessons to be learned when shared with other NPCC members.

Contrary to the above, requirement R3 in the draft states that facility owners shall each provide to the IESO, documentation of its misoperation analyses and corrective action plans. From a practical viewpoint, and given the number of misoperation events that may occur in a year, we request that clarification in the document is provided to establish that provision of these documents is required for those events for which NPCC has requested the alluded documentation.

[IESO] While, it is true that the B-21 document states that upon NPCC request, the Area has 30 days to provide information on the mis-operation and that in the past NPCC may have requested data on only about 10% of the mis-operations;

B-21 also states that: "Each Area shall keep a record of the above information for each misoperation."

It goes on to further state that: "Analyses should be undertaken and recorded within **60 days** of the occurrence of the event in accordance with Area policies. The recorded information shall be maintained such that the Areas can report it to NPCC within thirty days from the date of a request."

The use of the NPCC defined term Area in document B21 clearly places the obligation on the IESO to maintain such information. More importantly, NPCC CBRE has now established the required information that is to be provided at year-end for each mis-operation that may have occurred. Given the above, it is the IESO's view that such information can still be maintained by each market participant, in the format specified by the IESO, and that such information is provided to the IESO at year-end as part of the market participant's submission.

Moreover, that the existing IESO incident event processes, as described by **Market Manual 7.7 – Disturbance Reporting** would initiate specific requests for incidents the IESO deem impactful to the ICG to meet the above event analysis record keeping objective.

Accordingly, we have updated the requirements and measurements pertaining to this standard.

2.3 Requirement R3 makes reference to a number of documents or sections in documents that are not necessarily relevant to Protection System Misoperations:

(a) **Market Manual 7.7 - Disturbance Reporting**

This Manual addresses the procedures to be followed after the occurrence of a “system disturbance” as defined in the Market Manual 7.6 “Glossary of Standard Operating Terms.” It is our view that that most Protection System Misoperations do not result in a system disturbance and therefore the reference should be removed.

[IESO] While we agree with Hydro One’s viewpoint that most protection system misoperations do not result in a system disturbance or abnormal operating conditions, Market Manual 7.7 was also established to review significant events, which is defined as “*a contingency on the bulk electricity system less severe than a system disturbance, but requiring assessment, analysis and special reporting by the IESO and market participants of actual or potential impact on the reliability of the IESO controlled grid*” (emphasis added) for the purposes of complying with NERC standards and NPCC criteria.

Further, the possibility exists that such a misoperation of a BPS protection system could affect the transmission system and the reference is addressing this probability however small it might be and was explicitly established to link existing IESO “incident” event follow-up processes for this reporting requirement.

(b) **Market Rules Chapter 5, Sections 6.3.5 and 14.1.5**

Section 6.3.5 addresses “forced outages” that in the opinion of the IESO has had a significant impact on the reliability of the IESO-controlled grid. Since Form 1522 is about Protection System Misoperations, we believe the reference to forced outages does not belong here.

[IESO] While, we are of the opinion that a “forced outage” of a protection system can be equated to a “misoperation” and hence the inclusion of the reference, we can support Hydro One’s perspective that the reference may be inappropriate. Further, we believe it may be unnecessary since any forced outage that

impacted the ICG would be investigated in accordance with Market manual 7.7, and any mis-operations identified.

Accordingly, we have removed the reference. .

(c) **Market Manual 7.1 - System Operating Procedures, S. 3.4**

Section 3.4 of this Manual addresses “abnormal conditions” that include both *emergency* and *high-risk operating states*, as well as any unusual behaviour of equipment or loads, etc., that is, conditions in which the *IESO-controlled grid* is in a degraded state of *reliability*. As stated above, only a small portion of the Protection System Misoperations actually result in such abnormal conditions.

[IESO] We agree with Hydro One’s viewpoint that most protection system misoperations do not result in a system disturbance or abnormal operating conditions – however there is the possibility that such a misoperation could affect the system and the reference is addressing this probability however small it might be. Moreover, Section 3.4 of the market manual, explicitly states that degradation of “auxiliary equipment” is to be reported. Footnote 3 further qualifies auxiliary equipment as “all protections systems”, special protection systems, etc...

Based on the above, we propose that Requirement R3 is amended as follows:

R3. The *transmitter, generator, distributor* and *wholesale customer* that own a *transmission system* protection system shall each provide to the *IESO*, documentation of its misoperations analyses and corrective action plans. Such documentation shall be provided to the *IESO* following a request from NPCC according **NPCC Document B-21 - Guide for Monitoring Protection System Misoperations** (Market Rules Chapter 5, Section 14.1.5). All documentation is to be submitted to the *IESO* through the following e-mail: M&SOMarketAnalysis@ieso.ca.

3. Measurements Box

Measurement M3 states that each *transmitter, generator, distributor* and *wholesale customer* that owns a *transmission system* protection system, and each *generator* shall have evidence it provided documentation of its protection system misoperations, analyses and corrective action plans to the *IESO* through e-mail: M&SO-MarketAnalysis@ieso.ca.

We suggest that clarification is added to establish what constitutes evidence of provision. This can be obtained by adding:

Accepted evidence is a copy of a sent e-mail or fax.

[IESO] We agree with Hydro One's view and the measurement can be clarified to reflect proof of submissions. The measurement could be written as:

Each *transmitter, generator, distributor* and *wholesale customer* that owns a *transmission system* protection system, and each *generator* shall have evidence it provided documentation of its protection system misoperations, analyses and corrective action plans to the IESO through e-mail: M&SO-MarketAnalysis@ieso.ca. Evidence can be in the form of a transmitted e-mail or facsimile.