

# Revenue Metering Standing Committee



## Minutes of Meeting

| <b>Date held:</b> <i>Oct. 27, 2011</i> | <b>Time held:</b> 09:00 am        | <b>Location held:</b> Crowne Plaza, Toronto Airport              |
|--|-----------------------------------|--|
| <b>Invited/Attended:</b>               | <b>Company name:</b>              | <b>Attendance Status:</b><br>(A)ttended; (R)egrets; (S)ubstitute |
| Ralph Stefano                          | Brookfield Power                  | A  |
| JoAnn Turner                           | Brookfield Power                  | A  |
| Vito Genovese                          | Horizon Utilities Corporation     | A  |
| Domenic Consorti                       | Hydro One Networks Inc.           | A  |
| Peter Ziebart                          | Hydro One Networks Inc.           | A  |
| Xenia Kant                             | Hydro One Networks Inc.           | S  |
| Alex Lunycz                            | Rodan Energy Solutions Inc.       | A  |
| Luc Van Overberghe                     | Measurement Canada                | A  |
| Geetika Tandon                         | Veridian Connections Inc.         | A  |
| Francois Abdelnour                     | Ivaco Rolling Mills               | R  |
| Graham Henderson                       | Hydro One Networks Inc.           | R  |
| Paul Szymanski                         | Hydro One Networks Inc.           | R  |
| Matt Weninger                          | Guelph Hydro                      | R  |
| Mark Simpson                           | Brantford Power                   | R  |
| Adam White                             | AMPCO                             | R  |
| Bunli Yan                              | E4 Inc.                           | R  |
| Tom Wasik                              | Enersource Hydro Mississauga Inc. | R  |
| Mark Passi                             | Xstrata Canada Corporation        | R  |
| Heather Sears                          | Enermajica                        | R  |
| Gord Roberts                           | Wardrop Engineering Inc.          | R  |
| Zoran Stojanovic                       | Utilismart                        | R  |

| <b>IESO Staff :</b> |      |   |
|---------------------|------|---|
| Richard Zaworski    | IESO | A |
| Neill Wong          | IESO | A |
| Doug Thomas         | IESO | A |
| Susan Harrison      | IESO | R |
| Elizabeth Morris    | IESO | R |

**Scribe:** *Neill Wong*

Please report any corrections, additions or deletions e-mail to [neill.wong@ieso.ca](mailto:neill.wong@ieso.ca)

All meeting material is available on the IESO web site at: [http://www.ieso.ca/imoweb/consult/revMetering\\_sub.asp](http://www.ieso.ca/imoweb/consult/revMetering_sub.asp)

**Agenda item below:**

**Item 1 – Items from last meeting**

- 1.1 IESO business to review the use of TLF factor to Delivered and Received power in embedded generation facilities has been deferred. Measurement Canada under Legal Units of Measure (LUM) will be reviewing the application of fixed factor to meter readings.
- 1.2 IESO offered a revised format to combine the future RMSC meeting with the MSP User Group meeting on the same day. RMSC business will be conducted in the morning, to be followed with MSP User Group meeting in the afternoon. The proposed format was carried with no objections, and therefore the Spring, 2012 meetings will be held on this basis.

**Item 2 – Status of Metering Registration**

Presentation by Hydro One Networks Inc. (IT List Update.pdf)

Presentation by the IESO (Metering Installations Update.pdf)

- 2.1 78 metering installations with 2003-2010 seal expiry remain to be upgraded. 4 metering installations continue to utilize legacy type meters (PSI-100/200 recorders)
- 2.2 134 metering installations have Measurement Canada IT Temporary Permission program expiry in December 31, 2013.
  - The annual Hydro One Networks Inc. update report was provided to MC for July, 2011.
  - Domenic Consorti provided a tracking summary as follows: Initially 3300 meter points on the list; Peaked at 4200 meter points in Jan. 2006; Remainder of 96 meter points to Oct. 2011.
  - Domenic provided a 2011 year-end forecast for 48 customer upgrades plus 19 HONI upgrades to total 67 meter point upgrades. HONI resources are expected to be freed up and made available for future customer upgrades.
  - In 2012, HONI will undertake to communicate with their customers those metering installations where the IT Temporary Permission has expired. IESO also requested to compare the meter registry information.
  - Luc Van Overberghe stated that the HONI mid-year update was exactly what is required. With the 2011 progress as charted, MC will be able to project expected results into 2012.
- 2.3 476 meters interrogated via TCP/IP. This reflects HONI and HESI expanded number of meter points.
- 2.4 600 meter replacements per annum due to MC reseal program are projected based on 3600 registered meters with a 6 year seal period.
- 2.5 2085 metering installations have been registered from market opening consisting of 1957 physical meters and 128 virtual meters. Virtual meters include estimated station services and embedded generation using Form 1563 for Transmission Connection charges.
- 2.6 1159 metering installations have been registered under 'Declaration of Compliance' (DOC) and 798 metering installations registered under 'Alternative Metering Installation Standard' (AMIS).
- 2.7 2163 delivery points have been registered consisting of 940 energy delivery points and 1223 transmission tariff delivery points.

### **Item 3 – 2011 Initiatives - Update**

Presentation by the IESO (2011 Initiatives - Update.pdf)

#### **3a. RMS Upgrade Project**

- 3.1 Request for Information (RFI) was completed in September, 2011. Of the five (5) respondents, two (2) were meter vendors; two (2) were service providers; and one (1) performed both meter vendor/service provider roles.
- 3.2 The visioning process allowed for a 'problems and opportunities' analysis to address issues as highlighted below:
  - Measurement Canada proposed requirements (e.g. Legal Units of Measure)
  - 'Critical change' parameters and the need to re-register a metering installation
  - Changes to the Compliance Aggregation Model without the need to re-register
  - Losses under: (i) bi-directional power flow conditions and under no-load conditions, and (ii) apportionment of losses for common section of radial line under a FIT (Feed-In-Tariff) contract
  - Validation of meter data capability with elimination of EUCT (End-Use-Computing-Tools)
  - Incorporate tertiary meter data source (e.g. operational SCADA data) for decision making and VEE purposes (e.g. power outage related to load transfers)
  - Improvements to meter polling functionality, reporting and analysis, and data import
  - MVWEB GUI (graphical user interface) data retrieval enhancements
- 3.3 The project plan at its current development phases are:
  - Project 1 - MV90, MVSTAR and MVWEB
  - Project 2 – MTR and Workflow Management SystemAnalysis of business process and identification of business requirements will target the RFP for Q2 2012
- 3.4 One MSP questioned how a non-MV90 vendor 'error codes' might be handled? Potentially this may be addressed through an open exchange data format, such as XML.
- 3.5 Next steps will include a regulatory review for:
  - IESO to initiate a market rule amendment to remove Main/Check metering provisions
  - Physical Allocation Data (PAD) processing
  - MSP performance requirements
- 3.6 RFP will be issued under Ontario provincial tender guidelines. This process must balance customization vis-à-vis 'off-the-shelf' systems.
- 3.7 One committee member questioned if there was a driving factor behind any change away from MV90. Will the RFP review process also consider the financial cost and impact to market participant systems?

#### **3b. CDMS Enhancement Project**

- 3.8 Decommissions PLC (Participant Life Cycle) system; creates a credential rights management system
- 3.9 Cutover of IT systems from PLC to CDMS (Customer Data Management System) and from MRC (Meter Registration Catalog) to CDMS
- 3.10 Metering registry information will now be contained within CDMS
- 3.11 Target date is for mid-December, 2011

#### **3c. Registration Automation Project**

- 3.12 Improves enrollment efficiency and the quality of customer data submissions
- 3.13 Includes Connection Assessments, Market Entry, Metering, Finance and Customer Relations sections

3d. Other

- i. S.5970 Audit of Settlements, Operations – This is external audit of settlement controls, processes and procedures. The audit resulted in an unqualified opinion for the period January 1, 2011 through June 30, 2011.
- ii. Automation of 2 Day Communication MTR Process – This is an automation of internal settlement processes. MTRs will be issued by 7 AM each business day. Target is for Q4, 2011.
- iii. Post Registration Commissioning Reports – This program was implemented for June, 2010 baseline.
  - 73 commissioning reports were completed from June-December 2010
  - 94 commissioning reports were completed year-to-date 2011
  - 68 commissioning reports were completed September, 2009 to June 2010
  - 235 total commissioning reports have been processed. This is the equivalent of conducting 235 field audits through the MSP's own commissioning process.

**Item 4 – Metering Installation Sealing Requirements**

Presentation by HONI (Meter Enclosure Requirements.pdf)

4a. HONI Presentation

- 4.1 HONI's metering installation upgrade practice has been based on own interpretation of the market rule in Wholesale Revenue Metering Standard – Hardware, Section 10.1.2 – Meter Enclosure Requirements.
- 4.2 Clarification is being sought for requirements listed under Section 10.1.2.d and 10.1.2.e.
- 4.3 HONI's understanding is that compliance with either Section 10.1.2.d and/or 10.1.2.e can meet the security and sealing requirements.
- 4.4 HONI is seeking consensus on the most practical and cost effective method of providing security and sealing of meter enclosures and components within.
- 4.5 HONI's sealing practice is to seal only at the 'sealing ring'. HONI meter test blocks do not have any sealing provisions.
- 4.6 However, the meter enclosure is locked and sealed. No one except for the HONI MSP has authorized access to the meter enclosure. Detection of any unauthorized access to the enclosure or any components within is ensured and traceable.
- 4.7 HONI has a written procedure in place regarding meter point access to only one meter point in a cabinet. The procedure incorporates a warning label placed on the meter cabinets.

Presentation by IESO (Metering Installation Sealing Requirements – Proposed Changes)

4b. Proposed Changes

- 4.8 Market Rules Chapter 6 Section 9.1.1 mandates MMP and MSP obligations to secure and seal each metering installation's associated links, circuits and information storage and processing systems, and the *meter* box
- 4.9 In the WRMS-Hardware:
  - Sections 6.2.1, 6.2.2 and 6.2.3 prescribe instrument transformer security, sealing and recording requirements
  - Section 6.7.2 prescribes security and sealing for VT Primary Switching Devices and Rack-Out Mechanisms
  - Section 7.5 prescribes security and sealing for Secondary Cabling – Existing Installations
  - Sections 10.1.1 and 10.1.2 prescribe security and sealing for Meter Enclosure and Meter Enclosure Requirements in New Installations
- 4.10 The Circuit Access Points (CAP) categories are broadly classed under:
  - Instrument Transformer (IT) box and terminal cover
  - Mechanical (MECH) box and cover

- Conduit/Raceway
  - Meter Enclosure
- 4.11 Section 10.1.2.d and Section 10.1.2.e are mutually exclusive requirements.
- Section 10.1.2.d requires sealing of the meter enclosure
  - Section 10.1.2.e requires sealing of the meter sealing ring, meter terminal cover and meter test block
- 4.12 A dedicated meter room and a dedicated meter shed is considered a meter enclosure, subject to the conditions in RMSC presentation “Meter Enclosures” dated March 8, 2005
- 4.13 RMSC stakeholders/IESO expressed the following issues/concerns associated with sealing at the meter enclosure door only:
- Maintenance for modem contained in meter enclosure balanced against not failing any audit for security and sealing
  - Forensics associated with the meter enclosure door seal missing; with the door lock found cut or the security key discovered missing; with the meter seal log audited and found to be not accurate
  - Continuous data monitoring will be required to detect unauthorized access to, or malicious intentions towards, the metering installation
  - Where the meter room or meter shed may contain metering equipment for two or more metering installations, individual meter components must also be sealed with the enclosure door
- 4.14 It was agreed to begin a draft for: (i) proposed sealing requirements for meter components inside an enclosure; (ii) maintaining meter seal logs; (iii) MSP security controls “procedure” for access to metering installation; and (iv) requirements when a security breach of meter seals is discovered.

## **Item 5 – Station Service Metering – Audit Results**

### Presentation by the IESO (Station Service Metering.pdf)

- 5.1 Station Service (SS) is means *energy* withdrawn from the *IESO-controlled grid* to power the on-site maintenance and operation of *transmission facilities, generation facilities and connection facilities* located within the *IESO control area*.
- 5.2 Market Rules permit SS to be estimated if unmetered (e.g. not captured by RWM), and either directly connected or upstream of the meter point
- 5.3 Market Rules permit SS to be allocated between market participants (e.g. connected to a common connection facility). The allocation is based on an agreement. Participants must: (i) agree to be estimated; and (ii) agree to the percentage allocation of SS consumption.
- 5.4 Of 95 metering installations registered with estimated SS, 58 MIs have unmetered SS and 37 MIs are classified with ‘metered SS’.
- 5.5 Market Manual 3.7 Sec 2.3.1 provides for estimated unmetered SS to be based on equipment loading.
- 5.6 Market Manual 3.7 Sec 2.3.2 provides for estimated unmetered SS to be based on a retail meter. The SS factor is submitted using Form 1311 – “Connection Facility Station Service – Not metered by a RWM”.
- 5.7 An audit of those metering installations registered since market opening revealed that the annual check of estimated unmetered SS was not being performed. Some estimates did not meet the market manual requirements which elicited IESO concerns. The market participant must develop a compliance plan to report into MACD.
- 5.8 For a typical 200 kVA station service transformer, the registered SS factor is 20 kW to 30 kW.
- 5.9 In HONI’s rationalization, installing a retail meter will enable the annual check requirement via remote interrogation.

## Item 6 – Measurement Canada and the IESO Administered Market

Presentation by the IESO (Measurement Canada and the IESO Administered Market.pdf)

- 6.1 An amended EGIA (Electricity and Gas Inspection Act) will result in proposed changes to:
- EGIA Regulations in support of Bill C-14
  - Implementation of LUM (Legal Units of Measure) JWG recommendations establishing LUM for use outside of an approved meter
  - Implementation of VA (VoltAmpere) JWG recommendations establishing standards for VA and demand measurement
- 6.2 Uniformity of enforcement is a primary mandate of MC enforcement actions. To date, MC has had very little involvement in the IESO-Administered Market.
- 6.3 The use of LUM outside of an approved meter is founded on interval meter data and establishing PLUM (Processed Legal Units of Measure) data for settlements. Of concern are: meter standards; settlement systems; processes and procedures; totalization tables; aggregation process; calculation and validation of PLUM data; time synchronization.
- 6.4 MC does not recognize deductive metering and ‘after-the-fact’ calculations.
- 6.5 VA calculation methods and demand measurement will be standardized.
- 6.6 IESO will address these issues by: Engaging in ongoing discussions with MC; participating in the CEA Metering Task Group; and participating in MC stakeholder consultations.

## Item 7 – Walk-in Item

- 7.1 With respect to Instrument Transformer Checks, an independent confirmation of primary current and voltage is not possible without a high voltage reference source. However, a kWh comparison based on ‘power in equals power out’ principle, and utilizing current and voltage signals at a transformed voltage level, could be considered as an alternative methodology.

| Action Item Summary |              |  |                      |          |
|---------------------|--------------|--|----------------------|----------|
| #                   | Date         | Action   | Status               | Comments |
| 1                   | Apr 20, 2011 | Item #1.1 action: IESO to meet with Hydro One Networks Inc. to review reverse power flow and losses  | Deferred             |          |
| 2                   | Oct 27, 2011 | Item #1.2 action: IESO to draft proposal to address: sealing requirements of meter components inside meter enclosure; seal log maintenance; metering installation access; and breach of security seal. | Proposal draft stage |          |