



# **Meter Enclosure Requirements**

Hydro One presentation to:  
Revenue Metering Standing Committee  
Oct 27, 2011

# Why are we here ?



- Clarify the intent and request a revision of Wholesale Revenue Metering Standard – Hardware Manual, Rule “Hwd. Std. 10.1.2 Meter Enclosure Requirements”.
- Come to a consensus on the most practical and cost effective method of providing security and sealing of meter enclosures and components within.



# Why an issue ?

- HONI's upgrade practice since 2003 has been based on our understanding of the market rule "Hwd. Std. 10.1.2 Meter Enclosure".
- Recently however, it has come to light there is a difference of interpretation between HONI and the IESO regarding this market rule.

# What is the market rule in question ?



## Hwd. Std. 10.1.2 Meter Enclosure Requirements

The *meter* enclosure shall comply with the following requirements:

- a. the *meter* enclosure shall be secured by the *metering service provider*, in a manner approved by the *IESO*;
- b. the *metering service provider* shall have access to the *meter* enclosure at all times;
- c. persons other than the *metering service provider* shall not be given access to the *meter* enclosure;
- d. the *meter* enclosure shall be sealed as far as practicable in a manner approved by the *IESO*;
- e. seals shall be placed to ensure the detection of unauthorized access to the *instrument transformer* connections, *meter*, test links, test-link cover and fuses;
- f. seals shall be individually numbered; and
- g. seals shall be traceable to the *metering service provider*.



# HONI's Understanding



- Either item "d" and / **or** "e" can meet the sealing requirement.
- The enclosure is locked and sealed.
- No one but the MSP has authorized access to the meter enclosure.
- Therefore detection of unauthorized access to the enclosure or any components within is guaranteed and traceable.

# HONI's Understanding *continued ...*



- HONI has executed its upgrade program since 2003 on its interpretation that locking and sealing of the meter enclosure is sufficient to meet the requirements of Hwd. Std. 10.1.2.
- Test blocks do not have a cover or sealing provisions.
- The result of today's review of this market rule and subsequent decision could impact HONI up to \$1M in additional sealing requirements.

# HONI Meter Point Access Policy



- HONI has a written procedure (Wholesale Revenue Metering Security Sealing Requirements - SP 0210 R3) in place regarding Meter Cabinet access.
- This procedure includes the following warning label on meter cabinets:





# The IESO's Understanding:



- The IESO interprets Hwd. Std. 10.1.2. to mean both item "d" and "e" always apply.
- In addition to sealing of the metering enclosure, sealing of devices (meter ring, test-block, etc) within the cabinet is required.



# Maintenance Reduction



- Typical Seal Maintenance Log can have 13 sealing points.
- With the proposed sealing of the cabinet only, a minimum reduction of 6 seals can be realized ((Meter Sealing Ring (2), Test Blocks (2) and Terminal Covers (2)).
- Seals needing to be maintained and audited down from 13 to 7 – a 46% reduction going forward.



# Summary – HONI Viewpoint

- Meter cabinets are to be locked and sealed.
- No one but the MSP has authorized access to the meter enclosure. HONI will continue to enforce procedures related to authorized access.
- Therefore detection of unauthorized access to the enclosure or any components within is guaranteed and traceable.

# Recommendation



- Amend market rule “Hwd. Std. 10.1.2 Meter Enclosure Requirements” to clearly indicate that a locked and sealed meter cabinet meets the requirements for security and detection of un-authorized access to the meters and components within. e.g.:
  - the *meter* enclosure shall be locked and sealed in a manner approved by the IESO;
- This benefits all MMP’s as it reduces the cost to the market place now and reduces the upgrade and maintenance costs going forward.



Questions ?

