

Presentation to

IESO Revenue Metering Sub-Committee

1. ALT Meter Power Supply Sources
2. Colour Coding of IT Secondary Wires
3. Loss Factors for De-energized Power Transformers

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ALT Meter Power Supply Sources

- Not a Power Switching issue
- Repeated outages during IESO dial-up period (00:00 to 06:00 hrs)
- VTs unable to supply *phase-power* to ALT meter
- IESO issues MTRs, although
 - MAIN meter is communicative
 - MAIN meter data corroborates site outage conditions
 - MSP and RMP/MMP confirm Power Outage
 - **Case #1 from *Power Outage MTRs***



ALT Meter Power Supply Sources

- Options for MTR Resolution:
 - Not practical to request Exemption for ALT meter's de-energized state since day-time access available
 - Allow ALT meter to remain on phase power
 - apply Case #1 of Power Outages
 - IESO call ALT meter during *business hours*
 - *Not an IESO-MR supported option*
 - Do NOT issue MTRs



ALT Meter Power Supply Sources

- There are many sites where the IESO, MMP, RMP and MSP would benefit from having ALT meter's auxiliary power supplied from source other than phase power, at time of upgrade or installation.
 - As long as it is not the same as that for the MAIN meter
 - 125 VDC or alternate UPS-backed 120 VAC
 - Although a benefit, is this interpreted by the IESO as a deficiency? Ref 5.4.2
 - What aspects of DEC are to be changed?



ALT Meter Power Supply Sources

Issue for RMSC to vote on:

- Accept non-blade powered ALT meter as “compliant” as long as MAIN and ALT auxiliary sources are NOT the same.



Colour Coding of IT Secondary Wires

- 7.4.1 (b) Codes and Conditions:
“Measurement Canada colour coding (where appropriate, permanent tagging/labeling may be used);”
- MC colour code restrictive and impossible to attain in many industrial settings.
- Arc-resistant certification is compromised if certain conductor types are used.



Colour Coding of IT Secondary Wires

- Specially coated conductors cannot be economically justified with MC Colours in the small amounts required.
- Cost-prohibitive to purchase colour-coded #6 or #8 AWG in 1000m lengths when only 200m is needed. This applies to Teck cable and individual conductors.
- **RMSC vote:** Revise 7.4.1 (b) wording to...
“Measurement Canada colour coding **or**, where appropriate, permanent tagging/labeling may be used;”



Loss Factors for De-energized Power Transformers

- Present interpretation of the IESO Settlements Process is that a **de-energized** power transformer with MAIN meter indicating zero for energy, voltage and current, has the V^2/R losses applied based on the nominal voltage in the TT.
- “Market shall be held harmless...” fails the test:
 - Charges are *punitive* through no fault of MMP
 - Workaround of cyclic De-registration/Re-registration of MI or resubmission of TT to avoid charges is costly to MMP and IESO Settlements and Operations
- On this premise, we wish to propose changes to MV-Star so that V^2/R loss charges are only applied to energized power transformers.



Loss Factors for De-energized Power Transformers

Proposed changes to MV-Star:

- *IESO Operations* can substantiate "status" of transformer isolation device (breaker or disconnect) from *Chapter 4 Data* via IESO FRAD or HONI-Hosted real-time data
- Enhance MV-Star to accept logic from IESO Operations to supervise the V^2/R loss calculation in TT so that these charges are only applied to energized power transformers.
- Zero Voltage sensing on MAIN meter is not reliable due to possible Power Switching of VTs that may mask an energized source
- **RMSC Vote:** IESO to review process and report at next meeting.

Thank you



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