ISO Rules
Part 500 Facilities
Division 502 Technical Requirements
Section 502.10 Revenue Metering System
Technical & Operation Requirements

Applicability
1 Section 502.10 applies to:
   (a) the legal owner of a revenue meter
   (b) the ISO.

Requirements

Successor to Prior Requirements
2(1) This section 502.10 succeeds and replaces the Measurement System Standard, which came into effect as of September 18, 2007.

(2) The Measurement System Standard referred to in subsection 2(1), together with any other prior standards or drafts of standards on the subject matter, will no longer will be in force and effect as of the effective date of this section 502.10.

Functional Specification
3(1) The ISO must approve of a functional specification containing further details, work requirements and specifications for the design, construction and operation of a revenue meter for a facility.

(2) The functional specification referred to in subsection 3(1) must be generally consistent with the provisions of this Section 502.10, but may contain material variances the ISO approves of based upon its discrete analysis of any one (1) or more of the technical, economic, safety, operational and reliability requirements of the interconnected electric system related to the specific facility.

Measurement Point Definition Record
4(1) The legal owner of a revenue meter must, where such legal owner requires a new measurement point definition record or an amendment to an existing measurement point definition record, apply to the ISO no later than 30 days prior to the first day of the month in which the legal owner of the revenue meter proposes to energize the new or altered revenue metering system for the first time.

(2) The legal owner of a revenue meter must submit to the ISO the information prescribed by the ISO when applying for a new or amended measurement point definition record in accordance within subsection 4(1).

(3) The ISO must issue a measurement point definition record for a measurement point to the legal owner of the revenue meter, or to a person designated by the legal owner of the revenue meter, if the information submitted in accordance with subsection 4(2):
   (a) is complete;
   (b) allows for the proper measurement of metered energy, metered demand and metered apparent power in accordance with ISO rules and the ISO tariff, as applicable; and
   (c) avoids a metering configuration that results in a deductive totalizing calculation for the measurement point.

(3) The legal owner of a revenue meter must install and operate a revenue meter in accordance with measurement point definition record issued by the ISO in accordance with subsection 4(3).
Revenue Meter

5(1) The legal owner of a revenue meter must ensure that the revenue meter is approved, verified, sealed, re-verified and sealed, as applicable, in accordance with the Electricity and Gas Inspections Act, RSC 1985 c E-4, as amended.

(2) The legal owner of a revenue meter must ensure that the revenue meter has an accuracy class rating that is less than or equal to 0.2% for Watthour measurement if:
   (a) the capacity of the metering point of the revenue meter is greater than or equal to 1.0 MVA; and
   (b) the revenue meter is not the subject of a dispensation under the Electricity and Gas Inspection Act, RSC 1985 c E-4, as amended.

(3) The legal owner of a revenue meter must ensure that the revenue meter has an accuracy class rating that is less than or equal to 0.5% for Varhour measurement if:
   (a) the capacity of the metering point of the revenue meter is greater than or equal to 1.0 MVA; and
   (b) the revenue meter is not the subject of a dispensation under the Electricity and Gas Inspection Act, RSC 1985 c E-4, as amended.

Measurement Transformer

6(1) The legal owner of a revenue meter must ensure that the measurement transformer has an accuracy class rating less than or equal to 0.3% if:
   (a) the capacity of the metering point of the revenue meter is greater than or equal to 1.0 MVA; and
   (b) the revenue meter is not the subject of a dispensation under the Electricity and Gas Inspection Act, RSC 1985 c E-4, as amended.

(2) The legal owner of a revenue meter must, unless the ISO approves otherwise, ensure that the measurement transformer:
   (a) is located and connected without compensation methods;
   (b) produces a real metering point; and
   (c) has a dedicated current transformer core for measurement.

Metering Data Services

7(1) The legal owner of a revenue meter must retain metering data from the revenue metering system, including a record of final estimates and adjustments and the method used to perform the estimates or adjustments, in the electronic format specified in the Commission’s Rule 021: Settlement System Code Rules for a period of at least 8 years.

(2) The legal owner of a revenue meter must process metering data for each measurement point in accordance with the algorithm in the measurement point definition record issued in accordance with subsection 4(3).

(3) The legal owner of a revenue meter must, within 30 days of energizing the revenue meter for the first time, validate the metering equipment and the metering data using reasonable methods and alternative data sources.
Revenue Meter Testing and Reporting

8(1) NOTE TO DRAFT: The AESO is continuing to assess the minimum requirements for in-situ testing for proposed new Section 502.10. At the upcoming December 11, 2019 Stakeholder consultation session, the AESO will be seeking specific input from stakeholders on:

- the methodology for determining MW class;
- the in-situ test frequency for each MW class; and
- the requirements and process for test frequency change when the MW class is changed for a meter.

Prior to the Stakeholder consultation meeting, stakeholders are encouraged to review section 6.4.3 and Appendix 5 of the Measurement System Standard, and the June 29, 2017 Working Group Meeting Notes.

(2) The legal owner of a revenue meter must provide the results of the in-situ test performed in subsection 8(1) to ISO if the test resulted in an error measurement of +/- 3%.

(3) The legal owner of a revenue meter must, at the request of the ISO:

(a) undertake and complete in-situ tests for the metering equipment within a mutually agreed time frame; and

(b) report the results to the ISO within 30 days of receiving the ISO’s request.

Measurement Data Corrections

9(1) The legal owner of a revenue meter must, if the legal owner discovers an error in measurement data that has been submitted to the ISO for financial settlement, notify the ISO of the error as soon as practicable in the form the ISO specifies.

(2) The legal owner of a revenue meter must include the following information in the notice referred to in subsection 9(1):

(a) the reason for the error; and

(b) the correct measurement data.

(3) The ISO must review the information submitted in the notice referred to in subsection 9(1) and confirm whether the previously submitted measurement data is erroneous.

(4) The legal owner of a revenue meter must submit the correct measurement data to the ISO as soon as practicable if the ISO’s review in subsection 9(3) confirms that the previously submitted measurement data was erroneous.

Restoration

10(1) The legal owner of a revenue meter must, upon becoming aware of a failure of the revenue metering system that may result in a restatement of measurement data that has been submitted to the ISO, notify the ISO in writing of the failure.

(2) The legal owner of a revenue meter must, within 30 days of providing the notification under subsection 10(1):

(a) investigate and determine the nature and extent of the failure;
(b) provide the ISO with written notification detailing the nature and extent of the failure; and
(c) submit to the ISO a plan to restore the revenue metering system.

(3) The ISO must:

(a) approve the restoration plan submitted in accordance with subsection 10(2)(c) if the ISO is satisfied that the restoration plan will resolve the failure within a reasonable amount of time; or
(b) direct the legal owner of the revenue meter to amend the restoration plan in a manner that will resolve the failure within a reasonable amount of time.

(4) The legal owner of a revenue meter must amend the restoration plan in accordance with the ISO’s direction provided in subsection 10(3)(b).

(5) The legal owner of a revenue meter must restore the revenue metering system in accordance with:

(a) the restoration plan approved by the ISO pursuant to subsection 10(3)(a); or
(b) the restoration plan amended in accordance with subsection 10(4).

Revision History

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