Implementation of Recommendations on Volt-amperes and Legal Units of Measure

1.0 Purpose

This bulletin outlines Measurement Canada’s (MC) policy and schedule for the implementation of the recommendations on Volt-amperes (VA) and Legal Units of Measure (LUM) Outside a Meter. Grandfather clauses for existing meters/installations as established in those recommendations are further elaborated herein.

2.0 References

2.1 Recommendations of the VA Joint Working Group - Report to Measurement Canada for Consideration (June 17, 2008) [link 1].

2.2 Recommendations for Establishing Electricity LUM Outside an Approved Meter – Final Report (July 25, 2008) [link 2].

2.3 Measurement Canada Decisions - VA JWG and LUM JWG Recommendations (November 28, 2008).

2.4 Information Bulletin - Publication of Recommendations Concerning the Establishment of Volt-ampere and Demand Measurement, and the Establishment of Electricity Legal Unit of Measure Outside of an Approved Meter (2009-04-09).


3.0 Terminology

Processed LUM (PLUM) means a legal unit of measure that has been derived outside an approved and verified meter from one or more SLUM, recognized units of measure, metrology constants or multipliers (as applicable), through a mathematical algorithm.

Source LUM (SLUM) means an approved and verified legal unit of measure extracted from an approved and verified meter. Examples: Wh, varh, Vah, joule, W, var, VA.

Source Meter means a meter approved and verified to provide SLUM for the purposes of creating PLUM.
4.0 Implementation Policy

4.1 VA Recommendations

In accordance with the VA recommendations, all new meters submitted for pattern approval shall comply with revised approval specifications established pursuant to those recommendations. Upon review of various factors which impact or are impacted by the transition to new or revised VA approval requirements, MC has amended the mandatory implementation date of applicable requirements (originally set for January 1, 2012) to January 1, 2013.

4.2 Recommendations on LUM Outside a Meter

In accordance with the LUM recommendations, all new meters submitted for pattern approval which are designated by the applicant as intended for use as a source meter in applications involving the establishment of LUM outside of an approved electricity meter, shall comply with applicable approval specifications established pursuant to those recommendations.

Upon review of various factors which impact or are impacted by the transition to new LUM approval requirements, MC has amended the implementation date of applicable requirements (originally set for January 1, 2012) to January 1, 2013 for mandatory validation of installations containing meters and devices which are not approved and verified pursuant to the applicable specifications. The implementation policy further requires that as of January 1, 2014, all meters and devices subsequently placed into service (either new installations, or replacement of meters and/or devices in existing installations) be approved and verified pursuant to the applicable specifications.

5.0 Implementation Schedule for Standardized VA Measurement

5.1 Approval

5.1.1 Applicable approval specifications will be authorized and made available for use by April 1, 2012.

5.1.2 Effective January 1, 2013, all electricity meters evaluated to be approved for VA and VA-h units of measurement will be required to comply with the applicable approval specifications.

5.2 Verification

5.2.1 New Electricity Meters - Effective January 1, 2013, new (previously unverified) meters submitted for verification of VA and VA-h will be required to comply with the amended verification specifications.

5.2.2 In-service Electricity Meters - Meters in service on January 1, 2013 will be allowed to remain in service until the end of their current and subsequent reverification periods. As such meters will not have been approved for compliance with the applicable specifications for approval of electricity VA/VA-h meters, they may continue to be reverified for compliance with the verification specifications which existed prior to the newly applicable verification specifications.

5.3 Compliance Monitoring

Compliance monitoring will be performed in accordance with Measurement Canada’s Marketplace Monitoring Program.
6.0 Implementation Schedule for the Determination of Legal Units of Measure Outside of an Approved Electricity Meter

6.1 Approval

6.1.1 Applicable approval specifications for meters and ancillary devices will be authorized and made available for use by April 1, 2012.

6.1.2 Effective January 1, 2013, all electricity meters and ancillary devices which are intended to be approved as, or in conjunction with, a source meter for the purposes of performing LUM determinations outside of an approved meter will be required to comply with the applicable approval specifications.

6.2 Verification

6.2.1 Applicable verification specifications for meters and ancillary devices will be authorized and made available for use by May 1, 2012. Meters and ancillary devices which are not approved to be used as, or in conjunction with, a source meter need not comply with such specifications.

6.2.2 New Electricity Meters and Ancillary Devices - New (previously unverified) meters approved as a source meter, and devices approved to be used in conjunction with a source meter, submitted for verification as of January 1, 2013 will be required to comply with the applicable LUM verification specifications.

6.2.3 In-service Electricity Meters and Ancillary Devices - Meters and devices in service on January 1, 2013 and being used as, or in conjunction with, a source meter, will be allowed to remain in service until the end of their current reverification period. As such meters and devices will not have been approved for compliance with the applicable specifications for approval of source meters and devices, they may continue to be reverified for compliance with the verification specifications which existed prior to the newly applicable verification specifications.

6.3 Installation and Use

6.3.1 Applicable installation and use specifications for installations will be authorized and made available for use by May 1, 2012. Installations which are not used as a source for establishing PLUM outside of a meter need not comply with such specifications.

6.3.2 Electricity metering installations which are comprised of meters and ancillary devices already in service on January 1, 2013 will be allowed to remain in commission until all the subject meters and devices have been replaced (pursuant to section 6.2.3) by meters and/or devices approved and verified in accordance with the applicable specifications. Such installations will be subject to validation requirements to be established by means of additional installation and use specifications until such time as they are fully comprised of meters and devices which are approved and verified as source meters in accordance with the applicable specifications.

6.3.3 Effective January 1, 2013, new installations intended to be used in providing SLUM data for purposes of establishing PLUM outside of a meter shall be either:

(a) fully comprised of meters and devices which are approved and verified as source meters in accordance with the applicable specifications, or

(b) subject to validation requirements to be established by means of additional installation and use specifications.
6.3.4 Effective January 1, 2014, all meters and devices placed into new or existing installations and intended to be used in providing SLUM data for purposes of establishing PLUM outside of a meter, shall be approved and verified as source meters or devices in accordance with the applicable LUM approval and verification specifications.

6.3.5 Once an installation is comprised completely of meters and devices which have been approved and verified as source meters and/or devices in accordance with the applicable new approval and verification specifications, the installation shall no longer be required to comply with the validation requirements referred to in clauses 6.3.2 and 6.3.3 b). Once fully converted, the installation shall be required instead to comply with the installation and use specifications referred to in clause 6.3.1 and shall be regarded as a form of telemetering system which is subject to the policies of bulletin Gen-33. In case of a disagreement between the reading established and recorded in the source meter's register and the reading obtained through the use of telemetering devices and systems, the source meter's register reading will be deemed to be correct.

6.4 Establishment of PLUM Outside of a Meter

Effective January 1, 2013, the establishment of PLUM outside of an approved and verified source meter shall only be permitted where source data is obtained from an electricity metering installation which conforms to one of the policies outlined in clauses 6.3.2, 6.3.3 and 6.3.4.

6.5 Compliance Monitoring

Compliance monitoring will be performed in accordance with Measurement Canada’s Marketplace Monitoring Program.

7.0 Revision

The purpose of this revision is to further elaborate on the distinction between mandatory implementation of installation and use requirements, and mandatory validation requirements. Important revisions have accordingly been made to clauses 4.2, 5.2.2, 6.2.3, former 6.2.4 (rescinded), 6.3.2, 6.3.3, and a new clause 6.3.4 has been added.

8.0 Additional Information

For additional information regarding this bulletin, please contact the Senior Program Officer responsible for electricity. For more information regarding Measurement Canada and its programs, visit our Web site [link].

Gilles Vinet
Vice-President
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