



# Bulletin

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## Reverification periods for electricity meters and metering installations

### 1.0 Purpose

The purpose of this bulletin is to communicate the reverification periods for electricity meters and metering installations, as established pursuant to the *Electricity and Gas Inspection Act*, and to provide associated policies.

### 2.0 Authority

**2.1** The reverification periods set out in this bulletin have been established in accordance with section 12 of the *Electricity and Gas Inspection Act*.

**2.2** No requirement in this bulletin shall be construed as limiting the powers of the President in his capacity as Director under the *Electricity and Gas Inspection Act and Regulations*.

### 3.0 References

**3.1** LMB-EG-04 - Statistical Sampling Plans for the Verification and Reverification of Electricity and Gas Meters

**3.2** Specification S-S-06 - Sampling Plans for the Inspection of Isolated Lots of Meters in Service

**3.3** Specification S-EG-01 - Electricity and Gas Meter Pattern Approval Applications - Quality and Measurement Reliability Information Requirements

**3.4** Specification S-S-05 - Performance Requirements Applicable to Meters Granted a Conditionally Lengthened Initial Reverification Period under S-EG-01

**3.5** Bulletin E-28 - Electricity Meters Qualified for a Lengthened Initial Reverification Period

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**3.6** Bulletin GEN-24 - Verification, Reverification and Sealing of Electricity and Gas Metering Installations

**3.7** Bulletin GEN-33 - Conditional Permission for using Electricity and Gas Telemetering Devices and Systems in Service without Verification and Sealing.

**3.8** *Electricity and Gas Inspection Act* (R.S. 1985, c. E-4), s. 12.

**3.9** *Electricity and Gas Inspection Regulations* (SOR/86-131), ss. 3(1), s. 19.

## **4.0 Terminology**

### **4.1 Extension to a reverification period**

An amount of time added to the reverification period of a meter or lot of meters which has or have already been in use for a period of time upon determining that the meter or lot of meters conforms to legal requirements. The meter or lot of meters may have been 100%-inspected or inspected by authorized statistical sampling methods, as the case may be.

### **4.2 Initial reverification period**

The period within which a new or renewed meter shall be submitted to reverification or alternatively removed from service.

### **4.3 New meter**

A meter newly produced by a manufacturer under the controlled conditions and documented procedures of the manufacturer's quality management system. This includes newly produced and verified meters which have been in storage for a period of up to 24 months where: it can be demonstrated that the meter has never been placed into service and that the meter manufacturer's storage specifications have been met as concerns new meter equivalency status.

### **4.4 Renewed meter**

A previously-used meter restored to the technical and metrological state of a new meter, as performed and attested to by the meter manufacturer; or a meter which is restored to the technical and metrological state of a new meter in accordance with the meter manufacturer's specifications and procedures as concerns meter renewal, where the subject procedures form part of a Measurement Canada accredited organization's quality management system.

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#### **4.5 Reserviced meter**

A previously-used meter subjected to calibration or light repair under the controlled conditions and documented procedures of an accredited organization's quality management system recognized by Measurement Canada.

#### **4.6 Reverification**

Any subsequent confirmation of a meter's conformance to legal requirements following its initial verification of conformance with those same requirements.

#### **4.7 Reverification period**

The period within which a meter shall be submitted to reverification or alternatively removed from service.

### **5.0 Policy**

#### **5.1 General**

**5.1.1** The President of Measurement Canada, in his capacity as director under the *Electricity and Gas Inspection Act*, will make determinations of meter reverification periods and extensions thereto.

**5.1.2** Meters shall be reverified within appropriate periods, established on the basis of their stability of performance, application, and usage. Reverification periods shall be established such that meter inspection or removal is carried out prior to any probable change in accuracy that is of significance in the course of the meters' use.

**5.1.3** The meters to which this bulletin applies shall remain subject to all relevant requirements of the *Electricity and Gas Inspection Act and Regulations*, including the provisions for measurement dispute investigation testing and device performance limits of error. Measurement Canada may inspect these devices for compliance with the requirements through performance monitoring in accordance with current work instruments and at times arranged by Measurement Canada regional/district management and contractors.

#### **5.2 Initial reverification periods**

**5.2.1** For a meter type set out in an item of column I of the table in the Annex, each new meter of such type or sub-type shall be submitted to reverification, together with resealing or marking, or to cancellation of the seal or mark, as the case may require, within the period set out in column II of that item from verification.

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**5.2.2** For a meter type not set out in an item of column I of the table in the Annex, the meter's reverification period shall be established in accordance with clause 3.8 and 5.1.

### **5.3 Extensions to reverification periods**

**5.3.1** For a homogeneous lot of meters in service, which is inspected by the compliance sampling methods authorised under clause 3.9 and which meets reverification requirements established for this purpose, the reverification period of the meters in the lot shall be extended by an amount of time based on the extent of the lot's compliance, not to exceed the applicable reverification period set out in Column III of the table in the Annex.

**5.3.2** For a meter, which is recalled per its initial or a subsequent reverification period, which is not part of lot under clause 5.3.1 and which is reserviced to meet reverification requirements, but not renewed, the reverification period of the meter shall be extended by an amount of time equal to the applicable period set out in Column III of the table in the Annex.

**5.3.3** For a meter, which is recalled per its initial or a subsequent reverification period, which is not part of a lot under clause 5.3.1 and which has been *renewed* to meet reverification requirements, the reverification period of the meter shall be extended by an amount of time equal to the applicable period set out in Column II of the table in the Annex.

### **5.4 Lengthening of initial reverification periods**

**5.4.1** A reverification period for a particular meter, class, type, or design shall be considered as conditionally lengthened when:

- a) the requirements of the documents referred to in clause 3.3 and 3.4 have been met and the specific meter type, class, make, model, configuration, rating or capacity has been identified and formally communicated by Measurement Canada (see reference 3.5) as one to which a lengthened initial reverification period may be applicable; and,
- b) national meter performance results from preceding reverification inspections, including interim inspections performed under designed experiments, do not exist, are not available in required quantities or do not reflect the required in-service duration periods needed to support the granting of an unconditionally lengthened initial reverification period.

**5.4.2** Conditionally lengthened initial verification periods may be limited in their application (for example; to meters which are initially verified after a certain date). Meters to which a conditionally lengthened initial reverification period applies, will typically be subjected to further in-service testing and performance criteria as an interim measure prior to the expiry of the initial reverification period.

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**5.4.3** A lengthened reverification period will be considered unconditional and retroactive to all approved meters covered by an approval applicant's attestation, regardless of a meter's verification date or other criteria, where:

- a) the lengthened initial reverification period is stated in the meter's Notice of Approval; or,
- b) the performance results at preceding reverification inspections, including interim inspections performed under designed experiments, provide evidence that the lengthened reverification period has not adversely affected confidence in the accuracy of the meters as concerns their continued compliance with the requirements of the *Electricity and Gas Inspection Act*.

**5.4.4** Where the evidence submitted in accordance with clause 5.4.3 (b) is deemed to meet the applicable specification requirements, the lengthened initial reverification period's unconditional application will be formally communicated by Measurement Canada (reference 3.5).

## **5.5 Shortening of reverification periods**

A reverification period for a particular meter class, type, or design may be formally shortened to ensure continued accuracy and compliance with legal requirements, if results at preceding, interim or future inspections are unsatisfactory.

## **5.6 Reverification periods for combination meters**

In the case of a combination meter that performs, under one cover, the functions of more than one of the meters set out in column I of the table in the Annex, the reverification period for the combination meter shall be that of the individual metering function with the shortest reverification period.

## **5.7 Reverification date calculations**

**5.7.1** Subject to clause 5.7.2, a meter shall be considered due for reverification on or before December 31 of the calendar year calculated as the sum of the meter's verification year or reverification year, as the case may be, and the period set out in column II or column III of the table in the annex, as applicable.

**5.7.2** Subject to clause 5.7.3 and 5.7.4, for a reverification performed in accordance with clause 5.3.1, the meters in the lot, less any nonconforming meters, shall be considered due for reverification on or before December 31 of the calendar year calculated as the sum of the year in which the first sample meter was removed from service and the extension referred to in clause 5.3.1.

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**5.7.3** Where a lot of meters fails to meet the requirements for an extension of its reverification period, the meters in the lot shall be considered due for reverification on the date established by the previous verification or reverification, as the case may be, unless the President so determines otherwise.

**5.7.4** Where a lot of in service meters is inspected under the compliance sampling specification referenced in section 3.2 of this document, the requirements of section 5.7 are not applicable and all reverification date calculations shall be established as per the requirements of the referenced specification.

## **5.8 Implementation**

**5.8.1** Subsequent reverification periods granted to previously verified (or reverified) meters, ancillary devices or metering installations in accordance with clause 5.3.1 or 5.3.2, remain valid until their expiration.

**5.8.2** Subject to any applicability limitations or conditions (as stated in reference 3.5), lengthened initial reverification periods are retroactively applicable to in-service meters.

## **6.0 Revisions**

The purpose of this revision is to:

- Amend Annex 1 to include the subsequent reverification periods granted under S-S-06.
- Amend policy to address when the subsequent reverification periods granted under S-S-06 are applicable.

The purpose of Revision 4 was to:

- Amend the definitions of “New meter” and “Renewed meter” for the purposes of clarity.
- Amend Policy on lengthening of initial reverification period so that it is not restricted to a specific meter type and to amend the language for the purposes of clarity.
- Amend the Annex so that subsequent reverification periods are stated.
- Make minor housekeeping and format amendments.

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**Annex - Table 1**

<b>Electro-mechanical induction-type</b>				
<b>Column I</b>	<b>Column II</b>		<b>Column III</b>	
<b>Type</b>	<b>Initial Reverification Period</b>		<b>Subsequent Reverification Period</b>	
<b>1. Electrical Energy Meters</b> – watt-hour, reactive-volt-ampere-hour, volt-ampere-hour, or Q-hour, including those with integrated pulse initiators, multi-tariff registers, remote-meter-reading or automatic-meter-reading (AMR) features.				
	<b>Disk-suspension type</b>			
	<b>Magnetic</b>	<b>Other</b>	<b>Magnetic</b>	<b>Other</b>
a) 1- or 1½-element, standard A or S base	12 years	6 years	10 years	4 years
b) 2-, 2½-, or 3-element	8 years	6 years	6 years	4 years
c) Totalizing types	6 years	6 years	4 years	4 years
<b>2. Loss meter</b>				
a) A <sup>2</sup> -hour	6 years		4 years	
b) V <sup>2</sup> -hour	6 years		4 years	
<b>3. Electrical Demand (Power) Meters</b> – watt, reactive-volt-ampere or volt-ampere including those with integrated energy meters and associated functions				
a) Mechanical block-interval	6 years		4 years	
b) Thermal or recti-thermal	6 years		4 years	
<b>4. Other meters</b>				
a) Magnetic-tape Pulse-recorder	8 years		5 years	
b) Punched-paper Pulse-recorder	8 years		5 years	
c) Electronic Pulse-recorder	6 years		4 years	
d) Thermal converters	8 years		6 years	
e) Transducers	8 years		6 years	
f) Electronic Instrument Transformers	8 years		6 years	

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**Table 2**

<b>Electronic-type</b>				
<b>Column I</b>	<b>Column II</b>		<b>Column III</b>	
<b>Type</b>	<b>Initial Reverification Period</b>		<b>Subsequent Reverification Period</b>	
<b>5. Electrical Energy Functions</b> – watt-hour, reactive-volt-ampere-hour, volt-ampere-hour, Q-hour, A <sup>2</sup> hour, V <sup>2</sup> hour including those with integrated pulse initiators and/or receivers, multi-tariff registers, remote-meter-reading or automatic-meter-reading (AMR) features.				
	<b>Qualifying under clause 5.4</b>	<b>All Others</b>	<b>Qualifying under clause 5.4</b>	<b>All Others</b>
a) single-phase types	10 years	6 years	8 years	4 years
b) polyphase types	10 years	6 years	8 years	4 years
<b>6. Electrical Demand (Power) Functions</b> – watt, reactive-volt-ampere or volt-ampere including those with integrated energy meters and associated functions				
a) single-phase types	10 years	6 years	8 years	4 years
b) polyphase types	10 years	6 years	8 years	4 years

**Table 3**

<b>Column I</b>	<b>Column II</b>	<b>Column III</b>
<b>Type</b>	<b>Initial Reverification Period</b>	<b>Subsequent Reverification Period</b>
<b>7. Instrument transformers</b> - other than those identified in 4( f )	Refer to clause 3.9	Refer to clause 3.9
<b>8. Metering Installations</b>	Refer to clause 3.6	Refer to clause 3.6
<b>9. Telemetry Device or System</b>	Refer to clause 3.7	Refer to clause 3.7