

RULES GOVERNING THE TYPE APPROVAL OF SMART METERS

These Rules shall be known as RULES GOVERNING THE TYPE APPROVAL OF SMART METERS TO BE USED IN ADVANCED METERING INFRASTRUCTURE (AMI) SYSTEM OF DISTRIBUTION UTILITIES AND ERC-AUTHORIZED ENTITIES.

ARTICLE I

GENERAL PROVISIONS

Section 1.1 Objectives

- 1.1.1 To ensure that Smart Meters installed by Distribution Utilities and ERC-Authorized Entities conform to standards and requirements adopted by the ERC in order to guarantee the proper functioning of said meters under normal working conditions; and
- 1.1.2 To protect the public interest as the watt-hour meter serves as the basis for customer billing.

Section 1.2 Applicability

- 1.2.1 These Rules shall apply to all type of Smart Meters intended for use as customer revenue meters by Distribution Utilities and ERC-Authorized Entities in its Advanced Metering Infrastructure System.

Section 1.3 Definitions of Terms

“AMI” or “Advanced Metering Infrastructure” refers to an integrated system that is typically comprised of smart meters and other related devices, communication platforms and/or a combination thereof, and meter data collection and management systems. AMI is a component of a smart grid in which metering data is transported via wired or wireless means at a defined interval from the consumer smart meter to the distribution utility’s AMI.

“ANSI” or “American National Standards Institute” refers to a private non-profit organization that oversees the creation, promulgation, and use of voluntary consensus standards for products, services, processes, systems, and personnel in the United States.

“Communication Platform” refers to a combination of network elements that enable two-way communication to and from the meter and the data center.

“Customer” refers to any person, natural or juridical, who is the registered customer of the DU or any person authorized by the registered customer to occupy the premises and enjoy electric service being supplied with electricity by the concerned DU or RES.

“DU” or “Distribution Utility” refers to any electric cooperative, private corporation, government-owned utility or existing local government unit which has exclusive franchise to operate a distribution system in accordance with its franchise and R.A. 9136.

“HAN” or “Home Area Network” refers to a voluntary program to provide customers with the ability to manage and control their connected loads through a system provided by the DU.

“IEC” or “International Electrotechnical Commission” refers to a worldwide organization for International Standards and Conformity Assessment for all electrical, electronic and related technologies also known collectively as electrotechnology.

“ILAC” or “International Laboratory Accreditation Cooperation” refers to an international cooperation of laboratory and inspection accreditation bodies formed to help remove technical barriers to trade.

“Meter Type” refers to the designation assigned to a meter by the manufacturer for the purpose of distinguishing its particular design and construction from other designs, models or patterns. Such type designation shall embrace only those ranges in ratings that are essentially similar in appearance.

An approved type of meter product whose construction has been changed, such that the accuracy and/or mechanical operation of the

meter has been affected, shall be considered a new meter type and shall be subjected to a new type approval.

An approved meter type with improvements introduced, such as activation of certain features or additional reading parameters that were already present at the time of its type approval shall also be subjected to a new type approval.

“PAO” or “Philippine Accreditation Office” refers to the agency under the Department of Trade and Industry which operates a laboratory accreditation wherein laboratories are accredited for their testing and calibration competence.

“Prescribed Standards” refers to the minimum values of test levels recommended by IEC 62052 and IEC 62053 or ANSI C12 in relation to type approval that guarantees the proper functioning of a meter product.

“Re-validation” refers to the process of determining whether or not a meter product that was already issued a Certificate of Approval (CA) is still in compliance with the Prescribed Standards in relation to type approval and with the specifications as contained in the Applicant’s submitted Specimen. Re-validation shall entail the conduct of evaluation tests on the new sample of the approved product to determine conformance with the Prescribed Standards.

“Smart Meter” or “Advance Meter” refers to an advanced technology electric meter capable of two-way communication that can measure, record, and transmit time-varying energy usage data and its components, derivatives, and events/logs. It includes a communications module for remote access function (e.g., remote disconnection, remote reconnection) and may also serve as a gateway between the utility, customer site, and customer’s Home Area Networking devices and/or load controllers.

“Specimen” refers to a sample of a meter product being applied for type approval which shall be sealed by the ERC after issuance of the CA, shall be kept by the Applicant as a proof of certification, and shall be made available during the Re-validation.

ARTICLE II

APPROVAL REQUIREMENTS FOR SMART METERS

Section 2.1 Meter Type Approval Application

2.1.1 A manufacturer or its authorized dealer, before it can offer to a DU or an ERC-authorized entity a new type of meter to be used as customer revenue meter, shall file an application in writing with the ERC for the approval of said new type of meter.

The notarized application form shall include the following:

- 2.1.1.1 Name and address of applicant;
- 2.1.1.2 Samples of the type of meter for approval **that are likewise being referred to in Section 2.1.2 hereof;**
- 2.1.1.3 Name and address of the meter manufacturer or its authorized dealer;
- 2.1.1.4 Meter brand, type, voltage, ampere, and frequency rating, wiring form, mounting arrangement, and a brief description of the general and physical characteristics of the meter;
- 2.1.1.5 Proof of Meter Type Approval granted by the regulatory **body** of the country where the product was imported from, if available;
- 2.1.1.6 Meter Type Approval Certificate obtained from a testing laboratory affiliated with the Philippine Accreditation Office (PAO) or a Regional Cooperation Body which is a signatory to the ILAC arrangement, dated and signed by the laboratory head or his authorized representative, or any officer authorized by the said laboratory to sign certifications issued by it, certifying that the meter under consideration complies with all standards of IEC 62052, IEC 62053, or ANSI C12;

The certification shall include the following:

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- a. Statement that the test equipment employed in these tests conforms to the applicable requirements of IEC or ANSI standards;
 - b. For ANSI meters, Certificate of calibration of reference standard traceable to the National Standards and Technology (NIST) or its equivalent;
 - c. For IEC meters, Accreditation Certificate of the certifying laboratory issued by the Regional Accreditation Body duly certified by the Philippine Consulate of the country where the Accreditation Certificate was issued from; and
 - d. Test Report documenting the complete performance testing of all the required tests, test results and appropriate charts, graphs and data recording during testing.
- 2.1.1.7 Written descriptions of the type and features of communication platforms to be used;
- 2.1.1.8 Certification issued by National Telecommunication Commission (NTC) that the **Smart** Meter can operate at NTC-authorized open and unprotected radio frequency specifically 915MHz to 918 MHz, **as may be applicable**; and
- 2.1.1.9 Meter Type approval application processing fee of **Ten Thousand Pesos (PhP10,000.00)**, which is non-refundable.
- 2.1.2 Prior to application for type approval, three (3) sample meters shall be evaluated inside the ERC Laboratory. The said sample meters **should** pass the tests listed in the table below. An evaluation fee amounting to **PhP10,000.00** shall be paid by the applicant. The same sample meters shall be submitted to the ERC upon application for Type Approval;

No.	Test Description
2.1.2.1	No Load
2.1.2.2	Starting Load
2.1.2.3	Load Performance
2.1.2.4	Effect of Variation of Power Factor
2.1.2.5	Effect of Variation of Voltage
2.1.2.6	Effect of Variation of Frequency
2.1.2.7	Effect of Current Circuits
2.1.2.8	Stability of Performance

2.1.3 The applicant shall be required to demonstrate to the Commission, the following:

- 2.1.3.1 The two-way communication capabilities of the smart meter subject of the type approval;
- 2.1.3.2 The capability of the disconnecting device of the subject smart meter to perform remote connection, remote disconnection and remote reconnection; and
- 2.1.3.3 The ability of the meter to interface with a Home Area Network (HAN) when the DU or RES opted to provide such program.

Section 2.2 Conditions for the Issuance of a Certificate of Approval (CA) and Revalidation of Approved Types of Smart Meters

- 2.2.1 The approved meter type shall be subject to re-validation every five (5) years to determine if it continues to conform to the prescribed standards in relation to type approval.
- 2.2.2 Submission of a meter type for re-validation should be made at least sixty (60) days prior to the end of the five year period from the ERC's issuance of the CA.
- 2.2.3 The specifications of the approved meter type, based on the specimen kept by the Applicant, and specified in the CA issued by the ERC should remain the same. **An approved type of meter product whose construction has been changed, such that the accuracy and/or mechanical operation of the meter has been**

affected, shall be considered a new meter type and shall be subjected to a new type approval.

An approved meter type with improvements introduced, such as activation of certain features or additional reading parameters that were already present but not disclosed in the application at the time of its type approval shall also be subjected to a new type approval.

2.2.4 The Applicant shall be required to properly secure the ERC sealed Specimen of the Approved type of meter. This sealed specimen shall be made available to the ERC during the Applicant's submission for re-validation, together with a newly produced meter of the same type.

Section 2.3 Undertaking

Upon the approval of the application but prior to the issuance of the Certificate of Authority, the applicant shall execute an Undertaking expressing that he shall maintain in his custody the Specimen Meter, duly sealed by the ERC, intended for presentation at the time of re-validation. He shall undertake that the ERC-sealed specimen meter shall not, in any way, be altered or tampered with by the applicant and/or its representatives. Any alteration or tampering shall tantamount to the rejection of the meter type re-validation application. This may also be ground for the imposition of fines and penalties upon the said applicant.

ARTICLE III

FINAL PROVISIONS

Section 3.1 Assistance from Other Government Agencies

To achieve the objectives of these Rules, the ERC may coordinate with other government agencies, including but not limited to National Telecommunication Commission, Department of Trade and Industry and Bureau of Customs, for additional assistance.

Section 3.2 Imposition of Fines and Penalties

Violation of any of these Rules shall be subject to the imposition of fines and penalties in accordance to the "Rules to Govern the Imposition of

Administrative Sanctions in the Form of Fines and Penalties Pursuant to Section 46 of Republic Act No. 9136, As Amended.”

Section 3.3 Cancellation or Revocation of CA

A certificate of Approval may be cancelled or revoked on any of the following ground:

- 3.3.1 The approved type of meter product's construction has been changed, such that the accuracy and/or mechanical operation of the meter has been affected;
- 3.3.2 The Applicant of a type approved meter has violated a condition in the CA; or
- 3.3.3 The Applicant failed to submit the specimen of the approved meter type upon its re-validation.

Section 3.4 Exception Clause

Where good reason appears, the ERC may allow an exception from any provision of these Rules, if such exception is found to be in the public interest and is not contrary to law or any other pertinent rules and regulations.

Section 3.5 Separability Clause

If any of the foregoing part or section of these Rules is declared unconstitutional or invalid, the other provisions which are not affected thereby shall remain in force and effect, unless such declaration would render the whole rules unenforceable or non-implementable.

Section 3.6 Repealing Clause

All Rules and Guidelines, or portion thereof, issued by the ERC, which are inconsistent with these Rules are hereby repealed or modified accordingly.

Section 3.7 Effectivity

These Rules shall take effect fifteen (15) days after its publication in a newspaper of general circulation in the country.

Pasig City, _____, 2017

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