



ORCP -WM-26-04

**Call for Comments to the Proposed General Amendments to the WESM Manual on
Metering Standards and Procedures regarding Metering Installation Requirements
(ORCP- WM-26-04)**

The Rules Change Committee (RCC) is inviting all WESM Members and interested parties to submit comments to *Proposed General Amendments to the WESM Manual on Metering Standards and Procedures regarding Metering Installation Requirements (ORCP- WM-26-04)*.

The Proponent, NGCP, seeks to improve the clarity, consistency, and practical implementation of the WESM Metering Standards and Procedures without altering the fundamental objectives of metering accuracy, security, and integrity. The amendments:

1. Incorporate the Philippine Electrical Code (PEC) and other applicable codes and standards under the general requirements for metering installations.
2. Adopt technology-neutral terminology to accommodate evolving technologies and compliant installation methods.
3. Introduce controlled flexibility for installations where compliance with certain physical requirements is impracticable due to installation constraints, subject to determination by the Metering Service Provider (MSP).
4. Strengthen metering security through documented verification requirements and recognition of equivalent tamper-evident measures.
5. Remove redundant requirements relating to secondary terminal box sealing.
6. Revise meter enclosure access provisions to allow controlled access by authorized personnel under MSP supervision while maintaining security controls.

The WESM document/s for amendment are the following:

1. [WESM Manual on Metering Standards and Procedures Issue 16.0](#)

DOCUMENTS:

Provided below are relevant materials for your reference and perusal:

- [Overview, Discussion Paper, and Matrix of Proposed Amendments](#)
- [Presentation of the Proposed Amendments](#)
- [RCC Form3 Matrix of Proposed Amendments for Comments - Annexes of this document](#) *(Please write your comments in the proper columns in the matrix.)*

Kindly submit your comments (in Word format) through the [File a Submission](#) webpage no later than **05 October 2026** or 30 working days from the date of publication (20 August 2026). We recommend using Firefox browser for submitting your comments.

Please ensure that your submission is signed securely by the designated approving authority and/or representative of your company, and input in the proper field the e-mail address of your point person(s) whom we could contact regarding activities related to the processing of the proposal. All comments received shall be published in the PEMC website.

Thank you!



TO BE ACCOMPLISHED BY THE PARTY SUBMITTING THE COMMENTS

[In accomplishing and submitting this form, you give your consent for PEMC to collect, record, organize, and update your personal data as herein provided as part of your information for purposes of rules change process.]

Commenter's Information

Name	[REDACTED]
Designation	PEM Audit Committee Chairperson
Company	Philippine Electricity Market Corporation
Company Address	[REDACTED] [REDACTED] [REDACTED] [REDACTED]
Telephone No.	[REDACTED]
Email Address	[REDACTED]



Proposed General Amendments to the WESM Manual
on Metering Standards and Procedures regarding
Metering Installation Requirements

Comments to the Proposed General Amendments to the WESM Manual on Metering Standards and Procedures regarding Metering Installation Requirements

Commenter	General Comments	Proponent's Response
	Please write your general comment here, if any:	

WESM Manual on Metering Standards and Procedures, Issue No. 16.0							
Title	Section	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	RCC Decision
General Requirements	2.1.1	This standard supplements the minimum requirements of the harmonized standards on the <i>WESM Rules</i> , PGC and PDC for the Grid and Distribution Metering Installations for the WESM. Any <i>Metering Installation</i> of a higher level accuracy or functionality than that by this standard may also be installed.	This standard supplements the minimum requirements of the harmonized standards on the <i>WESM Rules</i> , PGC, ~~and~~ PDC, <u>PEC, and other applicable codes and standards governing</u> Grid and Distribution Metering Installations for the WESM. Any <i>Metering Installation</i> of a higher level accuracy or functionality than that by this standard may also be installed.	The amendment incorporates the Philippine Electrical Code (PEC) and other applicable codes and standards within the general requirements to recognize their relevance to the design, installation, and operation of WESM metering installations. This provides a centralized reference to applicable standards and avoids the need for isolated references in specific	PAC: Agree with the inclusion of the PEC as it is the recognized electrical standard in the Philippines. The PEC is likewise referenced in some portions of the Philippine Grid Code 2016, Philippine Distribution Code 2017, and WESM Manual on Metering Standards and Procedures. However, we would like to recommend the inclusion of a provision		

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				provisions of the Manual.	that clearly establishes the hierarchy of governing documents in case of any inconsistency among applicable requirements.		
Applicability to Equipment	2.3.1	This standard applies to the following metering equipment, devices and accessories: a. xxx b. xxx c. xxx d. xxx e. xxx f. xxx g. xxx h. Rigid Conduit System in accordance with the Philippine Electrical Code (PEC); i. xxx	This standard applies to the following metering equipment, devices and accessories: a. xxx b. xxx c. xxx d. xxx e. xxx f. xxx g. xxx h. Rigid Conduit System in accordance with the Philippine Electrical Code (PEC); i. xxx	The amendment adopts technology-neutral terminology by referring to a "conduit system" rather than a "rigid conduit system," accommodating compliant installation methods while maintaining the required protection of metering circuits (see related proposal for Section 2.9.1.2). It also removes the standalone reference to the Philippine Electrical Code (PEC) from the applicability list, as references to			

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		j. xxx k. xxx l. xxx The equipment is used for the settlement of Philippine WESM administered transactions.	j. xxx k. xxx l. xxx The ~~foregoing~~ equipment, ~~devices, and accessories~~ is are used for the settlement of Philippine WESM-administered transactions.	applicable codes and standards are more appropriately addressed under the general requirements of the Manual, ensuring consistent application across all metering equipment.			
General Requirements for Grounding System	2.5.6.1.	The installation shall be in accordance but not limited to the following provisions of the Philippine Electrical Code: a. xxx b. xxx c. xxx d. xxx e. xxx f. xxx g. xxx h. xxx	The installation shall be in accordance but not limited to the following provisions of the Philippine Electrical Code: a. xxx b. xxx c. xxx d. xxx e. xxx f. xxx g. xxx h. xxx	The amendment updates the reference to the Philippine Electrical Code by replacing the specific edition with the prevailing version of the Code. This ensures continued alignment with the latest applicable electrical safety and installation standards without requiring future amendments to the Manual solely due			

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		i. Connections to all bonded parts shall be made in accordance to Article 2.50.1.8 of the Philippine Electrical Code 2009 Part 1.	i. Connections to all bonded parts shall <u>comply be made in accordance to Article 2.50.1.8 with the applicable provisions of the prevailing version</u> of the Philippine Electrical Code ~~2009 Part 1~~ .	to updates in the Code.			
Codes and Conditions	2.7.3.6.	cabling from the instrument transformers to the meter enclosure shall be routed in dedicated conduit, and the route shall be visually traceable; and"	cabling from the instrument transformers to the meter enclosure shall be routed in dedicated conduit, and the route shall remain visually traceable <u>(see Figure 4), except where impracticable due to physical installation constraints, such as Gas Insulated Substations (GIS) and similar enclosed substation configurations, or due to legacy metering configurations associated with Energy Conversion Agreements (ECA) and other similar pre-WESM contractual arrangements, as</u>	A controlled exemption is provided for installations where visual traceability is inherently impracticable due to physical design constraints, such as Gas Insulated Substations (GIS) and similar enclosed substation configurations, or due to legacy metering configurations associated with Energy Conversion Agreements (ECA) and other similar pre-WESM arrangements.	PAC: Mentioning the ECA may no longer be necessary. During the 4RMIA, NGCP provided a list of metering sites with existing ECA contracts, showing that only 4 of the 19 sites had active contracts remaining, with two expiring on 25 October 2027 and the other two on 30 April 2028. In such cases, physical installation constraints are expected to have		

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			<u>determined by the Metering Service Provider (MSP);</u> and	Such cases shall be subject to determination by the Metering Service Provider (MSP) to ensure that cable security and metering integrity are maintained.	been resolved upon contract expiration.		
Communication Links for the Meter	2.8	The communication link to be installed for <i>metering installations</i> of facilities directly connected to the <i>transmission system</i> shall be a dedicated line for metering purposes (e.g. PLDT, Bayantel, Digitel lines or GSM Modem) of the MSP. The communication link to be installed for <i>metering installations</i> of <i>embedded generators</i> shall comply with the relevant provisions of the <i>Philippine Distribution Code</i>.	The communication link to be installed for <i>metering installations</i> ~~of facilities directly connected to the transmission system~~ shall be a dedicated line for metering purposes (e.g. ~~PLDT, Bayantel, Digitel lines or GSM Modem~~) of the MSP. ~~The communication link to be installed for metering installations of embedded generators shall comply with the relevant provisions of the Philippine Distribution Code~~ and shall <u>use an appropriate communication medium that</u>	The amendment removes references to specific telecommunications providers and legacy communication technologies in favor of technology-neutral language. This ensures that the provision remains applicable regardless of future developments in communication infrastructure while preserving the requirement for a	PAC: Agree with the deletion of references to specific telecommunications providers and legacy communication technologies in favor of more technology-neutral language. However, the term “appropriate communication medium” may be overly broad, as it leaves the determination of what constitutes an	The communication link to be installed for <i>metering installations</i> ~~of facilities directly connected to the transmission system~~ shall be a dedicated line for metering purposes (e.g. ~~PLDT, Bayantel, Digitel lines or GSM Modem~~) of the MSP. ~~The communication link to be installed for metering installations of embedded generators shall comply with the relevant provisions of the Philippine Distribution Code~~ and shall <u>use an appropriate communication medium that</u>	

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			<u>meets the security and reliability requirements of the metering system.</u>	dedicated communication link for metering purposes. It also adopts a uniform requirement for all metering installations, recognizing that the same communication security and reliability requirements apply regardless of whether the facility is directly connected to the transmission system or embedded within a distribution network.	appropriate medium to the MSPs. From an audit perspective, this could create challenges in assessing compliance with the requirement due to the absence of clearly defined criteria. Note: PDC provides protection arrangements, its settings and communication link setup for Embedded Generating Units and other Users.	~~meets the security and reliability requirements of the metering system~~ <u>comply with the applicable provisions of the Philippine Distribution Code.</u>	
Instrument transformers connections	2.9.1.1	Primary and secondary cablings and connections shall be secure, tamper-resistant and compliant with the requirements of the prevailing PGC on security of registered revenue <i>metering installations</i> and metering data. Any ratio-tap changing facility which	Primary and secondary cablings and connections shall be secure, tamper-resistant, and compliant with the requirements of the prevailing PGC on security of registered revenue <i>metering installations</i> and metering data.	The amendment clarifies the application of security requirements to primary and secondary instrument transformer circuits. While primary	PAC: We would like to confirm if NGCP will not pursue its suggestion to purchase in the future CTs with single primary tap facility. The advantage of CTs with primary tap		

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		cannot be secured using a security seal or its equivalent shall not be permitted.	<u>Security of primary connections shall be established and maintained through documented verification during installation, commissioning, and maintenance activities, which may include photographs, inspection records, or other equivalent means.</u> <u>Secondary cabling and associated metering connections shall be provided with appropriate security seals or equivalent tamper-evident measures.</u> Any ratio-tap changing facility which cannot be secured using a security seal or its equivalent shall not be permitted.	connections are generally not suitable for physical sealing, their security may be established and maintained through documented verification during installation, commissioning, and maintenance activities. This provides a basis for detecting unauthorized modifications and verifying the integrity of the metering installation over its service life. The amendment further clarifies that security sealing or equivalent tamper-evident measures	change is that the power plant/directly-connected customer will be ready if there is planned expansion in the future. On the other hand, similar to our comment on the previous item, the phrases “other equivalent means” and “appropriate security seals or equivalent tamper-evident measures” may be overly broad, as they leave the determination of what is considered equivalent or appropriate to the MSPs. From an audit perspective, this may make it difficult to assess compliance with the requirement		

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				apply to secondary metering circuits and associated connections, which are more susceptible to unauthorized access and potential metering interference. The requirement for ratio-tap changing facilities to be sealable is retained to preserve metering integrity and prevent unauthorized changes to metering parameters. Note: The proposed revision also takes into consideration the recommendations of the PEMC Independent Auditors in the 4th Review of Metering Installation Arrangements (RMIA).	due to the lack of clearly defined criteria.		

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Conduit Systems	2.9.1.2	All wiring from the instrument transformers' secondary terminal box to the meter installation enclosure (meter box) shall be placed in a rigid conduit to ensure that the connections to cabling are secure and tamper-resistant. Conduit joints (elbow, T-connector) shall be properly sealed and secured. No secondary cabling shall be exposed and accessible to unauthorized personnel. Rigid conduit used for the instrument transformer shall be surface mounted. See Figure 4.	All wiring from the instrument transformers' secondary terminal box to the meter installation enclosure (~~meter box~~) shall be installed in rigid <u>or flexible</u> conduit to ensure that the connections <u>and</u> to cabling are secure and tamper-resistant. <u>Flexible conduit, where used, shall be of heavy-duty industrial type and installed with appropriate fittings and mechanical protection.</u> Conduit joints (~~elbow, T-connector~~) shall be properly sealed and secured. No secondary cabling shall be exposed or accessible to unauthorized personnel. ~~Rigid conduits used for the instrument transformer secondary wiring shall be surface mounted. See Figure 4.~~	The amendment provides installation flexibility while maintaining the requirements for security, tamper resistance, and protection of metering secondary circuits. Flexible conduit, such as Liquid Flexible Metallic Conduit (FLMC), is commonly used in utility and industrial installations, particularly where rigid conduit is impracticable, including applications involving vibration, equipment movement, retrofit constraints, or limited installation space, provided that suitable industrial-grade materials, fittings, and	PAC: Below are some of the comments from 4RMIA Auditor: The NGCPMSP action plan are accepted including their plan to propose a rules change to allow the use of FLMC as equivalent to RMC as recommended by the Auditor. If installed and used correctly (using a Loctite glue for its fittings), flexible liquid-tight metallic conduit can be considered an equivalent to RMC based on the following features: 1. Flexibility: FLMC is flexible and can be easily bent and routed to accommodate the specific layout and		

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				mechanical protection are used. It is likewise suggested to delete "(meter box)" and "(elbow, T-connector)" to improve clarity, avoid overly prescriptive wording, and maintain a technology-neutral provision. The term "meter installation enclosure" is already sufficiently clear and comprehensive, while "conduit joints" already encompasses the applicable conduit fittings and connection components. It is further suggested to delete "Rigid conduits used for the instrument transformer secondary wiring shall	requirements of metering installations. This flexibility is particularly useful when navigating around obstacles or tight spaces. 2. Corrosion Resistance: Metering installations are often located in diverse environments, and FLMC is resistant to corrosion. This makes it suitable for both indoor and outdoor applications, protecting the secondary wiring and ensuring long-term reliability. 3. Tamper Resistance: Metering installations have secondary wiring running through areas where they could be		

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				be surface mounted. See Figure 4.” since the requirement has already been covered under Section 2.7.3.6, thereby avoiding redundancy within the Manual. Note: The proposed revision also takes into consideration the recommendations of the PEMC Independent Auditors in the 4th Review of Metering Installation Arrangements (RMIA).	subject to tampering. FLMC provides an extra layer of protection against tampering, preserving the physical security of the wiring. 4. Wide Temperature Range: FLMC is designed to withstand a broad temperature range, making it suitable for various climates and environmental conditions where metering installations may be located. In summary, FLMC can serve as an equivalent to RMC and can be adapted in the WESM Manual on Metering Standards and Procedures for		

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					installations with limited space, considering the interruption time typically ranging from five (5) to eight (8) hours at most, allotted to MSPs for the installation of metering facilities.” However, we would also like to note that part of NGCP’s action plan was they mentioned “For new metering facilities, we are using pure/all Rigid Metallic Conduits.”		
Secondary Terminal Box	2.9.1.3	Secondary Terminal Box Secondary terminal boxes of the current transformers and voltage transformers shall be sealed and placed as far as practicable to ensure the detection of unauthorized	~~Secondary Terminal Box Secondary terminal boxes of the current transformers and voltage transformers shall be sealed and placed as far as practicable to ensure the detection of unauthorized~~	The provision is no longer necessary as security requirements for instrument transformer secondary circuits and connections are			

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		access to the instrument transformer connections. See Figure 1.	~~access to the instrument transformer connections. See Figure 1.~~	addressed under Section 2.9.1.1. As secondary terminal boxes form part of the instrument transformer secondary connection assembly, a separate sealing requirement duplicates existing security provisions. Furthermore, the objective of facilitating the detection of unauthorized access is already addressed through the proposed security and tamper-evident requirements under Section 2.9.1.1.			
Meter Enclosure	~~2.9.1.4~~ 2.9.1.3	All meters, test links, and communication equipment shall be contained within a meter enclosure similar to Figure 5.	All meters, test links, and communication equipment shall be contained within a meter enclosure similar to Figure 5.				

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Title	Section	Provision	Proposed Amendment	Rationale	Comments	Proposed Wording based on Comments	RCC Decision
		a. Meter Enclosure Requirements The meter enclosure shall comply with the following requirements: i. xxx ii. xxx iii. Persons other than the meter service provider shall not be given access to the meter enclosure. iv. The meter enclosure shall be padlocked and sealed as far as practicable in a manner approved by the MO. v. xxx	a. Meter Enclosure Requirements The meter enclosure shall comply with the following requirements: i. xxx ii. xxx iii. <u>Access to the meter enclosure by persons other than the Metering Service Provider shall only be allowed under MSP control or supervision.</u> ~~Persons other than the meter service provider shall not be given access to the meter enclosure.~~ iv. The meter enclosure shall ~~be padlocked and sealed as far as practicable in a manner approved by the MO~~ <u>secured using padlocks, security</u>	iii. The amendment introduces operational flexibility while maintaining security control. The original absolute restriction does not account for legitimate access by authorized personnel, such as auditors or regulators, when undertaken under the supervision or control of the MSP. iv. The amendment aligns responsibility for meter enclosure security with the Metering Service Provider, consistent	With proposed wording on item iii. For iv, similar to our comments above, the phrase "or equivalent tamper-evident measures" may be overly broad, as they	<u>iii. Access to the meter enclosure by persons other than the Metering Service Provider shall only be allowed for official and legitimate purposes and shall be under strict MSP control or supervision.</u>	

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			<u>seals, or equivalent tamper-evident measures, as determined by the MSP.</u> v. xxx	with the PGC requirements on security of metering facilities. It also clarifies the requirement by allowing equivalent tamper-evident measures and removing ambiguity regarding requirement for MO approval and method of implementation.	leave the determination of what is considered equivalent or appropriate to the MSPs. From an audit perspective, this may make it difficult to assess compliance with the requirement due to the lack of clearly defined criteria.		
Meter Test Block/Switch	~~2.9.1.5~~ 2.9.1.4	xxx	xxx	Proposed renumbering in line with the proposed deletion of Section 2.9.1.3			
Meter Seals and Padlock	~~2.9.1.6~~ 2.9.1.5	xxx	xxx	Proposed renumbering in line with the proposed deletion of Section 2.9.1.3			

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Metering Perimeter	~~2.9.1.7~~ 2.9.1.6	xxx	xxx	Proposed renumbering in line with the proposed deletion of Section 2.9.1.3			