GOVERNMENT OF ODISHA
OFFICE OF THE ENGINEER-IN- CHIEF ELECTRICITY-CUM-
PRINCIPAL CHIEF ELECTRICAL INSPECTOR, ODISHA,
UNIT-V, POWER HOUSE SQUARE, BHUBANESWAR
Tel.-0674-2394873, Fax-0674-2391255
e-mail: eic-epcei@nic.in

Office Order

Order No 7756 Date 29-11-2025

The following protocol shall be adhered by the inspecting officer during new energy meters installation or replacement of Energy Meter/CT/PT with respect to all type of Generators including Turbo Generators (TG), Diesel Generators (DG), or Solar/Renewable Generator: -

1.New Meter installation

- The test reports of the energy meter, Current Transformer (CT), and Potential Transformer (PT) must be verified. The meter multiplication factor should also be reconfirmed before the installation of energy meter to ensure appropriate setting.
- The accuracy class of all metering components must comply with CEA (Installation and Operation of Meters) Regulations, 2006.
- The next due date for testing of the metering system should be recorded and communicated to the industry in advance.
- Any intermediate terminal/junction boxes should be properly verified for connection and sealed and should be indicated in the SLD.
- The CT output current should be measured using a calibrated multimeter, following all prescribed safety precautions and verified with energy meter reading, instantaneous generation parameter.
- The industry must submit the Single Line Diagram (SLD) of the metering system, including details of the meter, CT, PT, and ratings with physical location Details and seals used must also be included for reference.
- Photographs of the meter installation should be taken for reference.
- Upon completion of meter installation and sealing, all metering parameters must be recorded. A meter data dump should also be taken at this stage.
- The industry should be advised to submit monthly meter readings along with date-stamped photographs.
- Meter dump data should be collected at least quarterly or at lower interval if felt necessary, for load survey analysis and to validate the accuracy of the data submitted by the industry.
- During the annual inspection, all the above procedures must be followed to ensure continued accuracy, compliance, and integrity of the metering system.

2. Meter /CT/PT Replacement-

- In cases of defective or damaged meters, invisible displays, or CT/PT failures requiring replacement, all existing seals must be carefully verified with existing record and removed thereafter. A meter data dump must be taken **both before**

and after the replacement of any metering component (meter, CT, or PT), without exception.

- If the meter is not receiving supply, relevant entries from the logbook should be verified and recorded. The subsequent meter reading must be verified during the next submission, supported by meter photograph.
- For the duration during which the meter or CT, or PT was non-functional, assessment should be carried out based on the dump data taken along with other relevant details.
- In case of meter replacement, the defective or old meter shall be removed by removing the terminal block seal , while ensuring that the meter body seals remains intact. The meter shall then be taken into the custody of inspecting officer and must be submitted to the Standard Testing Laboratory (STL) for testing and extraction of dump data. During replacement ,all such procedures should be recorded in shape of MOM.
- STL shall share the dump data to the concerned zone on priority.
- After necessary analysis by STL, reports shall be shared to the concerned inspecting officer under intimation to this office.
- **The meter can be handed over to the consumer concerned only after obtaining prior written approval from this office.**

N.B.

1. Meter installation or replacement shall be initiated with prior written **intimation** to this office by email.
2. Replacement of energy meter including the associated CTs, PTs must be compliant to CEA Metering Regulation. Upon replacement, the removed meter shall be taken into custody for further action as mentioned above.
3. If any discrepancies are found in the dump data, the inspecting officer shall first verify the integrity of the metering arrangement and address any issues identified. Subsequently, the officer must conduct a proper assessment of Electricity Duty as per the provisions of the OED Act and issue the demand for payment on priority.
4. In case of faulty PT, CT or energy meter, the inspecting officer shall conduct an assessment of Electricity Duty receiving reports from STL, as applicable. The final assessment shall be communicated to the consumer as per prescribed format of the Act and to be updated in the online ED platform accordingly.
5. All energy meters are to be replaced with meters having automatic remote meter reading facility or Smart Meters as per relevant IS.
6. The sample formats to be used during verification are enclosed herewith as Annexures.

CEIs may suggest formats if any. However, till such time the proposed formats shall be adopted.

This protocol is suggestive in nature. Any modifications can be recommended by the Inspecting Officer and be communicated to this office for incorporation.

This shall come into force with immediate effect.

29.11.2025

E.I.C (Elecy.)- Cum-PCEI (O)

Memo No. 7757 / Dtd. 29-11-2025 /

Copy forwarded to FA-cum-Additional Secretary to Govt, Energy Department, Odisha for information and necessary action.

C.E.(PMS)-cum-C.E.I.

Memo No. 7758 / Dtd. 29-11-2025 /

Copy forwarded to all CE-Cum-CEIs/all ACE-Cum-EIs/SE-cum-DEIs/ACE-Cum-EI,STL, for information and necessary action. They are instructed to adhere to the above protocol without fail.

C.E.(PMS)-cum-C.E.I.

Memo No. 7759 / Dtd. 29-11-2025 /

Copy forwarded to NIC Bhubaneswar for information and necessary action. It is requested prepare a format for integration in upgraded ED web portal.

C.E.(PMS)-cum-C.E.I

Memo No. 7760 / Dtd. 29-11-2025 /

The CE (T,L&EC)-cum-CEI may convene a meeting at their level to sensitize the field offices for compliance.

C.E.(PMS)-cum-C.E.I

Data Verification Sheet for New Energy Meter Installation

Name of Generating plant -

TG /DG capacity	
Make	
Serial no	
Date of intial inspection	
Meter location	
Meter Installation date	
Meter Sl no	
Meter Make	
Accuracy class	
voltage	
Current	
Meter CT ratio	
Meter PT ratio	
Meter reading (in KWH/MWH)	
Meter Testing date	
Meter reading after testing	
Next due date of testing of meter	

CT& PT details-

CT make	
CT Serial No	
CT ratio	
Accuracy class	
CT testing date	
Next Due date of testing	

PT make	
PT Serial No	
PT ratio	
Accuracy class	
PT testing date	
Next due date of testing	

Multiplication factor =

MF= (External CT Ratio/Meter CT Ratio)×(External PT Ratio/Meter PT Ratio) x 1 if meter reading in KWH

= (External CT Ratio/Meter CT Ratio)×(External PT Ratio/Meter PT Ratio) x 1000 if meter reading in MWH

Seal details -

Sealing point	Seal nos
meter body with cover	
meter terminal cover	
meter test terminal block	
meter cabinet/panel	
CT terminal box	
PT terminal box	
Junction box if any	
Any other	

After installation of meter the readings of the following parameter are -

Parameter	At the time of Generator start running	After one hour
Meter reading (in KWH/MWH)		
V1 in KV		
V2 in KV		
V3 in KV		
I1 in Amp		
I2 in Amp		
I3 in Amp		
PF 1		
PF2		
PF3		
Generation in one hour in MWH		
Demand in MW		

Whether Dump data is collected – yes/no

- ✓ The generating plant will provide accurate monthly reading data along with the date stamped photograph.
- ✓ The SLD of metering system with all details will be submitted to the office of inspecting authority.
- ✓ The Meter, CT, and PT will be tested before the due date by submitting a requisition to the STL team, under intimation to your office.

NOTE:

a. Electricity Duty is levied and paid to State Government on the energy consumed by a consumer as per Section 3 of Odisha Electricity Duty Act, 1961.
b. Rule 7(2) of The Odisha Electricity (Duty) Rules, 1961: A person who generates energy for his own use or consumption shall submit the monthly return in duplicate in Form-J annexed thereto, within 7 days from the date of expiry of the preceding month to the concerned Inspecting Officer.
c. Rule 3(7) of The Odisha Electricity (Duty) Rules, 1961: The Electricity Duty shall be deposited within 30 days of expiry of the month of generation in the Government Treasury under the head "0043-00-101-0034-01006-000" by the person who generates such electricity and he shall send a copy of e-challan to the concerned Inspecting Officer.
d. As per Section 5 of the said act, where Electricity Duty is not paid to the State Government with the prescribed period the licensee or such person shall be liable to pay interest at the rate of 18 percent per annum after expiry of the prescribed period on the amount of the ED remaining so unpaid until the payment thereof is made.

Signature of inspecting officer

Signature of Plant Authority

Data Verification Sheet for replacement of energy meter/CT/PT of metering System

(To confirm the verification of metering system)

Name of Generating plant -

Reason for replacement of Meter/CT/PT (tick whichever is applicable)- Meter/CT/PT failure

Date of Meter/CT/PT failure -

Date of replacement -

TG /DG capacity		
Make		
Serial no		
Date of last visiting date		
Date of replacement		
For meter Replacement		
	Details of Old Energy Meter	Details of New Meter
Meter Installation date		
Meter Sl no		
Meter Make		
Accuracy class		
voltage		
Current		
Meter CT ratio		
Meter PT ratio		
Meter reading (in KWH/MWH)	Last reading before defective	After functional
Defective period generation (from log book)		NA
Meter Testing date	Last testing date of old meter	
Meter reading after testing		
Next due date of testing of meter	NA	

For CT Replacement -

	Old one	New one
CT make		
CT Serial No		
CT ratio		
Accuracy class		
CT testing date		
Next Due date of testing	NA	

For PT Replacement -

	Old one	New one
PT make		
PT Serial No		
PT ratio		
Accuracy class		
PT testing date		
Next due date of testing	NA	

Multiplication factor =

Before replacement	**After replacement**

Seal details -

	BEFORE REPLACEMENT	AFTER REPLACEMENT
Sealing point	Seal nos	
meter body with cover		
meter terminal cover		
meter test terminal block		
meter cabinet/panel		
CT terminal box		
PT terminal box		
Junction box if any		
Any other		

After replacement of meter/CT/PT the readings of the following parameter are -

Parameter	At the time of Generator start running	After one hour
Meter reading (in KWH/MWH)		
V1 in KV		
V2 in KV		
V3 in KV		
I1 in Amp		
I2 in Amp		
I3 in Amp		
PF 1		
PF2		
PF3		
Generation in one hour in MWH		
Demand in MW		

The removed meter has been taken into custody for testing and extraction of the dump data. Based on the retrieved data, the assessment of Electricity Duty for the faulty period will be carried out, and the corresponding duty will be payable.

After completion of all applicable procedures, the meter will be handed over to you.

Signature of inspecting officer

Signature of Plant Authority

Quarterly Data Verification Sheet of Metering System(Energy meter/CT/PT) for the Fy-------

Name of Generating plant -

TG /DG capacity		
Make		
Serial no		
Date of last visiting date		
Periodical visit date(1^{st}/2^{nd}/3^{rd}/4^{th} quarter)		
	Details of Energy meter during last visit	Details of Energy meter on the date of visit
Meter Installation date	-	-
Meter Sl no		
Meter Make		
Accuracy class		
voltage		
Current		
Meter CT ratio		
Meter PT ratio		
Meter reading (in KWH/MWH)		
Last Meter Testing date (within due date or not)		
Meter reading after testing		
Next due date of testing of meter		

CT details-

	Details during last visit	On the date of visit
CT make		
CT Serial No		
CT ratio		
Accuracy class		
CT testing date		
Next Due date of testing		

PT details -

	Details during last visit	On the date of visit
PT make		
PT Serial No		
PT ratio		
Accuracy class		
PT testing date		
Next due date of testing		

Seal details -

	Details during last visit	On the date of visit
Sealing point	Seal nos	Seal nos
meter body with cover		
meter terminal cover		
meter test terminal block		
meter cabinet/panel		
CT terminal box		
PT terminal box		
Junction box if any		
Any other		

The readings of the metering parameter are -

Parameter	during last visit	On the date of visit
Meter reading (in KWH/MWH)		
V1 in KV		
V2 in KV		
V3 in KV		
I1 in Amp		
I2 in Amp		
I3 in Amp		
PF 1		
PF2		
PF3		
Generation in one hour in MWH		
Demand in MW		

The meter dump has been taken on dated in (1st/2nd/3rd/4th quarter) for the FY_____.

In the event that any discrepancies are identified in the dump data, the matter will be investigated. If necessary, an assessment of Electricity Duty will be conducted in accordance with the provisions of the OED Act, and a demand notice will be issued. The plant shall be liable to make the payment.

Signature of inspecting officer

Signature of Plant Authority