CENTRAL ELECTRICITY AUTHORITY

(Installation and Operation of Meters) Regulations, 2006, Dated: 17.03.2006, with amendments Dated: 04.06.2010, 26.11.2014

Sl. No.	Description	Summary
1.	**Applicability**	These Regulations shall be applicable to meters installed and to be installed by all the generating companies and licensees who are engaged in the business of generation, transmission, trading, distribution, supply of electricity and to all categories of consumers.
2.	**Type of Meters**	1. All interface meters, consumer meters and energy accounting and audit meters shall be of static type. 2. The meters not complying with these regulations shall be replaced by the licensee on his own or on request of the consumer. The meters may also be replaced as per the regulations or directions of the Appropriate Commission or pursuant to the reforms programme of the Appropriate Government.
3.	**Standards**	All interface meters, consumer meters and energy accounting and audit meters shall: 1. Comply with the relevant standards of Bureau of Indian Standards (BIS). If BIS Standards are not available for a particular equipment or material, the relevant British Standards (BS), International Electro-technical Commission (IEC) Standards, or any other equivalent Standard shall be followed. 2. Whenever an international Standard or IEC Standard is followed, necessary corrections or modifications shall be made for nominal system frequency, nominal system voltage, ambient temperature, humidity and other conditions prevailing in India before actual adoption of the said Standard.
4.	**Ownership of Meters**	**Interface Meters:** (a) All interface meters installed at the points of interconnection with Inter-State Transmission System (ISTS) for the purpose of electricity accounting and billing shall be owned by CTU. (b) All interface meters installed at the points of interconnection with Intra-State Transmission System excluding the system covered under sub-clause (a) above for the purpose of electricity accounting and billing shall be owned by STU. (c) All interface meters installed at the points of inter connection between the two licensees excluding those covered under sub-clauses (a) and (b) above for the purpose of electricity accounting and billing shall be owned by respective licensee of each end. (d) All interface meters installed at the points of inter connection for the purpose of electricity accounting and billing not covered under sub-clauses (a), (b) and (c) above shall be owned by supplier of electricity. **Consumer meters** (a) Consumer meters shall generally be owned by the licensee.

		(b) The consumer shall claim the meter purchased by him as his asset only after it is permanently removed from the system of the licensee. (c) All consumer meters shall bear BIS mark, meet the requirements of these regulations and have additional features as approved by the Appropriate Commission or pursuant to the reforms programme of the Appropriate Government. **Energy Accounting and Audit Meters** Energy accounting and audit meters shall be owned by the generating company or licensee, as the case may be.
5.	**Locations of Meters**	**Interface Meters:** (a) If the location of main, check and standby meters installed at the existing generating stations shall not be changed unless permitted by the Authority. (b) The generating companies or licensees may install meters at additional locations in their systems depending upon the requirement. **Consumer meters** (a) The licensee installs the consumer meter outside the premises of the consumer then the licensee on a request from consumer shall provide real time display unit at the premises of the consumer for his information to indicate the electricity consumed by the consumer. (b) The location of meter and height of meter display from floor shall be as per Indian Standard on Testing, Evaluation, Installation and Maintenance of ac Electricity Meters – Code of Practice. **Energy Accounting and Audit Meters** The Energy accounting and audit meters shall be installed at following locations to facilitate the accounting of the energy generated, transmitted, distributed and consumed in various segments of the power system and the energy loss, namely • Generating Stations • Transmission system • Distribution system
6.	**Accuracy Class of Meters**	Every meter shall meet the requirement of accuracy class as specified in the standards.
7.	**Installation of Meters**	1. The meter shall be installed at locations, which are easily accessible for installation, testing, commissioning, reading, recording and maintenance. The place of installation of meter shall be such that minimum inconvenience and disruptions are caused to the site owners and the concerned organizations. 2. In case of single phase meters, the consumer shall ensure that there is no common neutral or phase or looping of neutral or phase of two or more consumers on consumers' side wiring. 3. If the earth leakage indication is displayed in the meter the licensees shall suitably inform the consumer through installation report or regular electricity bills or meter test report as applicable. 4. In case CTs and VTs form part of the meters, the meter shall be installed as near the instrument transformers as possible to reduce the potential drop in the secondary leads.

8.	**Operation, Testing and Maintenance of Meters**	The operation, testing and maintenance of all types of meters shall be carried out by the generating company or the licensee, as the case may be.
9.	**Access to Meter**	The owner of the premises where, the meter is installed shall provide access to the authorized representative(s) of the licensee for installation, testing, commissioning, reading and recording and maintenance of meters.
10.	**Sealing of Meters**	**1. Sealing Arrangements** (a) All meters shall be sealed by the manufacturer at its works. (b) Sealing of interface meters, shall also be done by both the supplier and the buyer. (c) Sealing of consumer meters shall be done by the licensee. (d) Seal shall be unique for each utility and name or logo of the utility shall be clearly visible on the seals. (e) Polycarbonate or acrylic seals or plastic seals or holographic seals or any other superior seal shall be used. **2. Removal of Seals from Meters** **(a) Interface Meters** Whenever seals of the interface meters have to be removed for any reason, advance notice shall be given to other party for witnessing the removal of seals and resealing of the interface meter. **(b) Consumer Meters** Seal of the consumer meter shall be removed only by the licensee. No consumer shall tamper with, break or remove the seal under any circumstances. Any tampering, breaking or removing the seal from the meter shall be dealt with as per relevant provisions of the Act. **(c) Energy Accounting and Audit Meters** Seal of the energy accounting and audit meter shall be removed only by the generating company or the licensee who owns the meter.
13.	**Safety of Meters**	1. The supplier or buyer in whose premises the interface meters are installed shall be responsible for their safety. 2. The generating company or the licensee who owns the energy accounting and audit meters shall be responsible for its safety.
14.	**Meter Reading and Recording**	It shall be the responsibility of the Appropriate Transmission Utility or the licensee or the generating company to take down the meter reading and record the metered data, maintain database of all the information associated with the interface meters and verify the correctness of metered data and furnish the same to various agencies as per the procedure laid down by the Appropriate Commission.
15.	**Meter Failure or Discrepancies**	1. **Interface meters** Whenever difference between the readings of the Main meter and the Check meter for any month is more than 0.5%, follow the procedure as per the regulation. **2. Consumer Meters** In case the consumer reports to the licensee about consumer meter readings not commensurate with his consumption of electricity, stoppage of meter, damage to the seal, burning or damage of the meter, the licensee shall take necessary steps as per the procedures given in the Electricity Supply Code of the Appropriate Commission

<table>
<tr><td></td><td></td><td colspan="2">read with the notified conditions of supply of electricity.
3. Energy Accounting and Audit Meters
Energy accounting and audit meters shall be rectified or replaced by the generating company or licensee immediately after notice.</td></tr>
<tr><td>16.</td><td>Anti-tampering Features of Meters</td><td colspan="2">The meters shall be provided with anti-tampering features as per the Standards.</td></tr>
<tr><td>17.</td><td>Quality Assurance of Meters</td><td colspan="2">The distribution licensee shall put in place a system of quality assurance and testing of meters with the approval of Appropriate Commission.</td></tr>
<tr><td>18.</td><td>Calibration and Periodical Testing of Meters</td><td colspan="2">1. The testing of consumer meters shall be done at site at least once in five years.
2. Interface Meter
At the time of commissioning, each interface meter shall be tested by the owner at site for accuracy using standard reference meter of better accuracy class than the meter under test.
3. Consumer Meters
(a) The licensee may instead of testing the meter at site can remove the meter and replace the same by a tested meter duly tested in an accredited test laboratory.
(b) The standard reference meter of better accuracy class than the meter under test shall be used for site testing of consumer meters up to 650 volts. The testing for consumers meters above 650 volts should cover the entire metering system including CTs, VTs.
4. Energy Accounting and Audit Meters
The testing must be carried out without removing the CTs and VTs connection.</td></tr>
<tr><td>19.</td><td>Standard Reference Voltage</td><td colspan="2">As per Indian Standard for ac Static watt-hour meters, Class 1 and 2, and Indian Standard for ac Static transformer operated watt-hour and VAR-hour meters, class 0.2S, 0.5S and 1.0S.</td></tr>
<tr><td>20.</td><td>Voltage Range</td><td colspan="2">As per Indian Standard for ac Static watt-hour meters, Class 1 and 2, and Indian Standard for ac Static transformer operated watt-hour and VAR-hour meters, class 0.2S, 0.5S and 1.0S.</td></tr>
<tr><td>21.</td><td>Standard Frequency</td><td colspan="2">As per Indian Standard for ac Static watt-hour meters, Class 1 and 2, and Indian Standard for ac Static transformer operated watt-hour and VAR-hour meters, class 0.2S, 0.5S and 1.0S.</td></tr>
<tr><td>22.</td><td>Standard Basic Current</td><td colspan="2">As per Indian Standard for ac Static watt-hour meters, Class 1 and 2, and Indian Standard for ac Static transformer operated watt-hour and VAR-hour meters, class 0.2S, 0.5S and 1.0S.
(Current range of consumer meters shall be so chosen as to record the load current corresponding to the sanctioned load)</td></tr>
<tr><td rowspan="5">23.</td><td rowspan="5">Accuracy Class</td><td colspan="2">Meters shall meet the following requirements of Accuracy Class:</td></tr>
<tr><td>Interface meters</td><td>0.2S</td></tr>
<tr><td colspan="2">Consumer meters</td></tr>
<tr><td>Up to 650 volts</td><td>1.0 or better</td></tr>
<tr><td>Above 650 volts and up to 33 kilo volts</td><td>0.5S or better</td></tr>
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		Above 33 kilo volts	0.2S
24.	**Starting Current and Maximum Current**	As per Indian Standard for ac Static watt-hour meters, Class 1 and 2, and Indian Standard for ac Static transformer operated watt-hour and VAR-hour meters, class 0.2S, 0.5S and 1.0S.	
25.	**Power Factor**	As per Indian Standard for ac Static watt-hour meters, Class 1 and 2, and Indian Standard for ac Static transformer operated watt-hour and VAR-hour meters, class 0.2S, 0.5S and 1.0S.	
26.	**AC Voltage Test**	As per Indian Standard for ac Static watt-hour meters, Class 1 and 2, and Indian Standard for ac Static transformer operated watt-hour and VAR-hour meters, class 0.2S, 0.5S and 1.0S.	
27.	**Impulse Voltage Test**	As per Indian Standard for ac Static watt-hour meters, Class 1 and 2, and Indian Standard for ac Static transformer operated watt-hour and VAR-hour meters, class 0.2S, 0.5S and 1.0S.	
28.	**Power Consumption**	As per Indian Standard for ac Static watt-hour meters, Class 1 and 2, and Indian Standard for ac Static transformer operated watt-hour and VAR-hour meters, class 0.2S, 0.5S and 1.0S.[5]][A]	
29.	**Sealing Points**	1. Meter body or cover 2. Meter terminal cover 3. Meter test terminal block 4. Meter cabinet	