

I/179059/2025



दक्षिण मध्य रेलवे
SOUTH CENTRAL RAILWAY
मुख्यालय कार्यालय, विद्युत शाखा, सिकंदराबाद
Headquarters Office, Electrical Branch,
Secunderabad

सं.No.ई/E. 77/2/16/Specifications

दिनांक/Date: As signed

Sr.DEE/G/SC, HYB, BZA, GTL, GNT & NED
Dy.CEE/S/LGD
ADEE/WWS/GTPL, ADEE/CRS/TPTY

Sub: Guidelines for provision of Smart Meters.

Ref: 1. RB letter No. 2009/Elect(G)/150/7/Pt. dated 03.06.2020.

2. RB letter No. 2022/EEM/150/09 dated 30.12.2022.

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- I.** It has been observed though the smart meter are working satisfactorily, online monitoring facilities are not-operational in most of the Divisions. As a result, manual readings are being taken. Further, Divisions are not maintaining uniformity in stipulating the tender conditions with regard to warranty & subscription charges, prepaid/postpaid mode, web application & mobile apps, training for user & staff., data storage & option for entry of manual reading in application during communication failure/outage.
- II.** Vide RDSO letter No EL/EM/0415/Policy dated 16.03.2020 & 12.02.2020, specifications for 26 number of items including Energy Meter were withdrawn by RDSO. As such there are no guidelines for uniform procurement/maintenance of Energy Meters to cover following aspects:
 1. To ensure on line monitoring is functional till codal life of smart meters.
 2. Web application/ Mobile application is functional throughout codal life.
 3. Specific timeframe to attend failure like attention of failures of online monitoring of smart meter by the agency within a week etc.
 4. Uniform Warranty and subscription charges
 5. Facility to work in Prepaid/postpaid mode
 6. Training of staff/supervisors on smart meter system
 7. Data storage duration and option for manual entry of readings.
 8. Facility for Auto SMS/ Auto Email of Invoice/critical balance alerts
 9. Alert messages to Customer/User/Owner (Depot) in case of any fault/Mal-operation.
- III.** Below are the instructions issued by RB/CEA on smart meters:
 1. Vide Ref(1), had issued policy guidelines for Zonal Railways that existing meters, other than smart meters, should be replaced with Smart Meters with prepayment feature.
 2. Vide para 5.4 of the Energy Efficiency Policy issued vide Ref(2), building level energy metering and sub-metering of major energy loads should be done and these meters should have the ability to communicate as per standard protocols (IS 16444: 2015 and IS 15959 part 2: 2016).
 3. Central Electricity Authority (CEA) Regulations:
 - i. CEA (Installation and Operation of Meters) Regulations, 2006 and latest Amendments (2019 Amendment & 2022 Amendment copies enclosed).
 - ii. CEA Technical Specifications of Single Phase & Three Phase whole current smart meters issued in Feb-2020 (copy enclosed).

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IV. To ensure uniformity, the following guidelines/parameters may be adopted while procuring of Smart Meters through NS Indent/Works Tenders:

1. As per RB letter at Ref.(1), Smart Meters with prepayment feature should be procured so that **smart meters can work in either prepaid mode or postpaid mode.**
2. Appropriate Warranty/guarantee clauses etc., to be incorporated - **minimum warranty/ guarantee as per IRS conditions** (for a period of 30 months after their delivery or 24 months from the date of placement in service whichever shall be sooner) should be ensured.
3. As data retention period as per IS 16444 (Para 6.6 of both Part-1 & Part-2) is 10 years, Divisions/Workshops must ensure procurement/management of **Smart Meter systems along with HES support including cyber security should work for a minimum period of 10 years** till uniform Codal life is specified by RDSO/Railway Board.
4. As on date, codal life, specifically for smart meters is yet to be issued by RDSO/Railway Board. As such, by Divisions/Workshops, irrespective of codal life of smart meters specified by manufacturer, **life cycle cost including Smart Meter systems along with HES support for atleast 10 years to be factored to evaluate further various offers submitted by all manufacturers/vendors during procurement.**
5. Appropriate Service Level Clauses for Minor/Major repairs/outage along with penalty clauses may be defined by Division/Workshop In-Charge Officer. In any case, it is to be ensured that any **failures, particularly, online monitoring of smart meters are to be attended by the agency within a week without fail.**
6. As per Regulation-14(2) of CEA (Installation and Operation of Meters) Regulations, 2006, the licensee shall provide information to the consumer related to his/her energy consumption through Mobile App or Web application or in home display or any other suitable means. As such:
 - a. **Mobile App for consumers to be provided for ease of access to track their consumption and Admin access to Depot In-Charge Office to be provided through same Mobile App (or) through Web application by OEM/Supplier.**
 - b. **Admin shall have various additional controls** VIZ configuration of device IDs, various report generations as per need, set data storage duration & purging, configuration of meters in prepaid/postpaid mode etc.
 - c. **Smart Meter System must have option for manual entry of readings in case of communication failure/outage.**
7. **Training of staff on smart meter infrastructure** to be done by the vendor to enable basic troubleshooting as being done for Lifts/Escalators.
8. **Triggering of Auto SMS/ Auto Email of Monthly Invoice/critical balance alerts** (for prepaid configuration) to bring in more transparency.
9. **Alert messages to Customer/User/Owner (Depot) in case of any fault/Mal-operation/over current/load control limit/disconnection/any other pre-programmed event conditions to be provided.**
10. Further, in line with Action Point 2 of IR Energy Efficiency Policy circulated vide Ref.(2), communication between cloud server and smart systems is to be done via

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standard, common and open-source protocol such that installed IOT devices/smart devices by Railways are integrable with CRIS/Railway application platform. Hence, **provision for data sharing from Smart metering infrastructure as per adopted protocols of CRIS/ Railway Cloud/ any other Railway application for seamless integration at later stage to be incorporated** in procurement document and after supply same to be ensured.

11. As per Regulation-21 of Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 & latest amendments, **during warranty/maintenance period, the OEM/Supplier shall be responsible for maintenance & upgradation of complete smart metering system including Cyber Security issues** based on guidelines issued by the Central Government, from time to time, and the technical standards for communication system in Power Sector laid down by the Central Electricity Authority.
 12. **For existing smart meters, instructions have been issued vide Para 1.11 of this Office letter No. 134/2/31 dated 29.04.2025 to ensure AMC of Smart meters till it is working/repairable condition.**
 13. Governing BIS/IEC Specifications for Smart Meters VIZ IS-16444, IS-15959, IS-15884, IS-13779 etc., with latest revisions & amendments should be adopted.
 14. Guidelines of CEA (Installation and Operation of Meters) Regulations, 2006 and subsequent Amendments shall also to be incorporated.
 15. BIS/IEC Test reports/Certifications as deemed appropriate may be sought to ensure quality.
- V.** The above guidelines are not exhaustive and may be amended or supplemented by the Division/Workshop, as deemed appropriate, in accordance with operational requirements, site-specific conditions, and overall suitability. Specifications of similar products available in GeM and latest BIS/IEC Specifications may also be referred before finalizing & issuing NIT document.

This issues with the approval of PCEE/SCR.

Encl.: As above.

(Vishnu Kant)
CEGE/SCR
for PCEE/SCR

C/- SDGM/SCR – for kind information please.