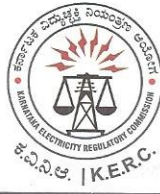


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KARNATAKA ELECTRICITY  
REGULATORY COMMISSION

ಸಂಖ್ಯೆ : 16 ಸಿ-1, ಮಿಲ್ಲರ್ಸ್ ಟ್ಯಾಂಕ್ ಬೆಡ್ ಏರಿಯಾ,  
ವಸಂತನಗರ, ಬೆಂಗಳೂರು - 560052.

No. 16 C-1, Millers Tank Bed Area,  
Vasanthanagara, Bengaluru-560052.

No/S/03/01

Date:17.04.2024

Public Notice

**Sub: Issue of Karnataka Electricity Regulatory Commission (Smart Modules for Existing Digital/Static Meters) Guidelines, 2024 -Invitation to public for filing Views/Comments/Objections/Suggestions if any-reg.**

The Commission has issued a Karnataka Electricity Regulatory Commission (Smart Modules for Existing Digital/Static Meters) Guidelines, 2024 for eliciting Views/Comments/Objections/Suggestions from the Stakeholders/interested persons/public.

The Guidelines are available on KERC Website <https://kerc.karnataka.gov.in>. Written Views/Comments/Objections/Suggestions, if any, may be submitted to the Secretary, KERC on or before 15.05.2024

  
Secretary

KERC, Bengaluru

**KARNATAKA ELECTRICITY REGULATORY COMMISSION**

**No. 16, C-1, Millers Tank Bund Road, Yellappa Garden, Bed Area, Vasanth Nagar,  
Bengaluru, Karnataka 560052**

**DRAFT GUIDELINES**

Dated: 17.04.2024

The Karnataka Electricity Regulatory Commission (KERC), in exercise of the power conferred under Section 181 read with Section 50 and Section 86(k) of the Electricity Act, 2003, CEA Metering Regulations, CEA Communication Regulations and all other powers enabling it in this behalf, hereby issues Karnataka Electricity Regulatory Commission (Smart Modules for Existing Digital/Static Meters) Guidelines, 2024.

**1. Short Title and Commencement:**

- (1) These Guidelines may be called Karnataka Electricity Regulatory Commission (Smart Modules for Existing Digital/Static Meters) Guidelines, 2024
- (2) These Guidelines shall come into effect from the date of uploading on KERC website and shall be in force till further amendments thereof.

**2. Introduction:**

The Commission notes that whenever phasing out of existing digital/Static meter conforming to IS15884 is not viable due to the residual life and to explore the feasibility of upgrading existing digital meters to function as integrated metering network conforming to IS 16444 by using suitable add-on modules and software. The specification of modules and connected software has to be compatible to integrate meters of different manufactures.

While upgrading the metering system conforming to IS15884 with the smart modules, it has to comply with the IS 16444. These modules typically enable digital/static meters to communicate with systems, collect and transmit data remotely, and support advanced metering functionalities such as real-time monitoring and energy management/audit.

By adhering to this outlined guidelines, Distribution Licensees can effectively implement

smart modules with existing meters, enabling enhanced metering capabilities, improved operational efficiency, compliance with the standards, cost considerations, interoperability, and data security are paramount to the successful integration of smart modules and the modernization of energy distribution infrastructure.

**3. Implementation Arrangements:**

Distribution Licensee shall adhere to the following while implementing the smart modules with the existing meters.

a. Residual Life of the Meter:

Distribution Licensees must conduct a thorough assessment of the residual life of existing meters before integrating smart modules. This assessment ensures that the existing meters have sufficient operational life left to justify the investment in smart module integration. Factors such as meter age, condition, and technological obsolescence should be considered during this evaluation.

b. Upgradation Cost:

A comprehensive cost-benefit analysis should be conducted to evaluate the economic feasibility of integration. This analysis should consider factors such as installation costs, maintenance expenses, and potential revenue gains from the improved metering accuracy and data analytics.

c. Compliance with IS 16444:

Smart modules integrated with existing meters conforming to IS 15884 must comply with the standards set forth by IS 16444. This standard ensures the interoperability, reliability, and safety of smart modules in energy distribution systems. Distribution Licensees should verify that the smart modules meet the technical specifications and requirements outlined in IS 16444.

d. Universal Compatibility of Add-On Modules:

Distribution Licensees must ensure that any add-on modules used for integration with the existing meter are universally compatible within their operational area. Compatibility with the existing infrastructure and systems is essential to facilitate seamless integration and minimising disruptions to the distribution network. Compatibility testing and validation should be conducted to ensure interoperability and functionality across different

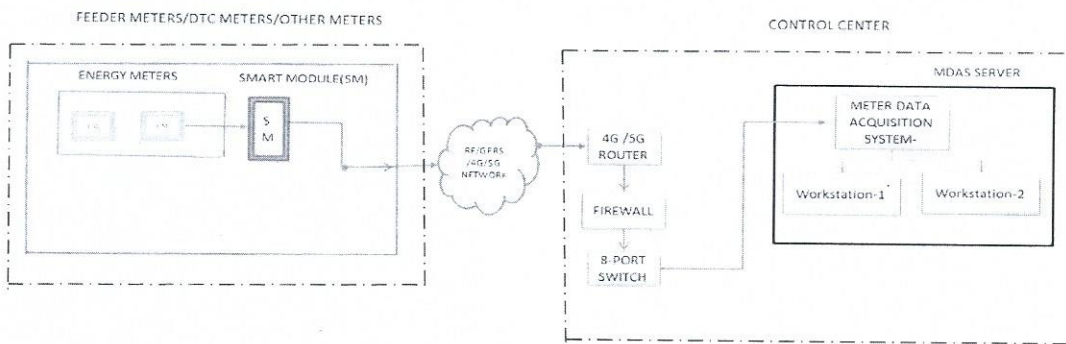
metering systems.

e. Data Safety Protection:

Provision for robust data safety measures is essential to protect against data theft and unauthorized access. Distribution Licensees should implement encryption protocols, access controls, and cybersecurity measures to safeguard sensitive metering data. Compliance with CEA Regulations for data protection and best practices should be prioritized to mitigate the risk of data breaches and ensure privacy.

4. Operational components and support:

The Commission also proposes a detailed schematic diagram with the following operational components with defined application layer protocol and standards for metering application, telemetry application and control applications, having the following features:



- a) Metering System: Retrofitting of existing digital/static energy meter with smart read module to read meter data and shall be equipped with advanced measurement capabilities, allowing for accurate monitoring and recording of energy consumption patterns with feature essential functionalities such as interval data recording, tamper proof and basic communication capabilities.
- b) Communication System: Effective communication is essential for transmitting metering data to utility providers and enabling remote monitoring and control functionalities. Low-cost smart modules shall utilize cost-effective communication technologies such as RF (Radio Frequency) or cellular networks for data transmission as the case may be.

These communication systems should be optimized for reliability and efficiency while minimizing infrastructure costs.

c) HES (Head-End System): The HES serves as the central data management platform for aggregating, processing, and analyzing metering data collected from smart modules. In low-cost implementations, HES functionalities shall be streamlined to focus on essential data processing tasks, such as data validation and basic analytics. HES solutions shall offer scalability and affordability, making them suitable for low-cost metering deployments.

d) Operational Support: Shall contain the meter data management information system for generating the report and alerts.

**5. Reading a meter:**

Distribution licensee shall conduct meter readings once every six months to ensure that energy consumption data is regularly updated, allowing for more precise energy audit and monitoring of usage patterns.

**6. Powers to relax:**

The Commission may by general or special order, for reasons to be recorded in writing may relax any of the provisions of these Guidelines on its own motion or on an application made before it by an interested person.

**7. Powers to amend:**

The Commission may from time to time add, vary, alter, suspend, modify, amend or repeal any provision of these Guidelines.

By the Order of the Commission

  
Secretary

Date :17.04.2024

Place: Bengaluru