

Smart Meter National Programme (SMNP)

March 9, 2020

Source: PIB & EESL

Recently the Minister of State (IC) for Power has announced the successful installation of 10 lakh smart meters across India, under the Government of **India's Smart Meter National Programme (SMNP)**. The Minister also launched the dashboards of Smart Meter National Programme (SMNP), **National Electric Mobility Programme** and solar initiatives to transparently monitor the real-time progress of the programmes and its impact. The Hon'ble Minister **also launched an integrated mobile application – EK EESL-** where all the dashboards of all the programmes being implemented by EESL will be accessible and anyone can monitor their real-time progress.

Smart Meter National Programme (SMNP)

- The Smart Meter National Programme is being implemented to deploy smart meters across the country. **The scheme is being implemented by Energy Efficiency Services Limited (EESL), a JV of PSUs under the Ministry of Power.**
- With electricity demand expected to rise by 79 percent in the next 10 years, India is on a path of transforming its energy mix with innovation. Along with enhancing energy production, the nation also needs to cut Aggregate Technical and Commercial (AT&C) losses to below 12% by 2022, and below 10% by 2027.
- Enabling India to achieve this imperative is the **smart grid, the first step of which is the creation of Advanced Metering Infrastructure.** A new range of 'smart meters' can bring efficiency to how India manages its electricity, by checking data-entry errors and billing efficiencies and cutting the costs of manual meter

reading through the web-based monitoring system.

- With its pioneering role in India's energy efficiency journey, **EESL's Smart Meter National Programme (SMNP) is working to eventually replace 25 crore conventional meters with smart meters across India.**

What is the Advanced Metering Infrastructure(AMI)?

- Advanced Metering Infrastructure **is the collective term to describe the whole infrastructure from Smart Meter to two way-communication networks to control center equipment and all the applications that enable the gathering and transfer of energy usage information in near real-time.**
- AMI makes two-way communications with customers possible and is the backbone of the smart grid.
- **The objectives of AMI can be remote meter reading** for error-free data, network problem identification, load profiling, energy audit and partial load curtailment in place of load shedding.

Building Blocks of AMI

AMI is comprised of various hardware and software components, all of which play a role in measuring energy consumption and transmitting information about energy, water and gas usage to utility companies and customers. The overarching technological **components of AMI include:**

- **Smart Meters:** Advanced meter devices having the **capacity to collect information about energy, water, and gas usage at various intervals and transmitting the data through fixed communication networks to utility,** as well as receiving information like pricing signals from utility and conveying it to consumers.
- **Two-way Communication Network:** Advanced communication networks that **support two-way communication enables information from smart meters** to utility companies and

vice-versa. Networks such as Broadband over PowerLine (BPL), Power Line Communications, Fiber Optic Communication, Fixed Radio Frequency or public networks (e.g., landline, cellular, paging) are used for such purposes.

- **Meter Data Acquisition System:** Software applications on the Control Centre hardware and the DCUs (Data Concentrator Units) used to acquire data from meters via a communication network and send it to the MDMS
- **Meter Data Management System:** Host system which receives, stores and analyzes the metering information.

About EESL

EESL is a joint venture of four National Public Sector Enterprises – NTPC Limited, PFC, REC and POWERGRID, and was set up under the Ministry of Power. EESL is a Super Energy Service Company (ESCO).

EESL is implementing the world's largest non-subsidized energy efficiency portfolio across sectors like lighting, buildings, e-mobility, smart metering and agriculture at a scale that no organization has been able to achieve. EESL focuses on solution-driven innovation with no subsidy or capital expenditure (CAPEX).