

# **India Smart Meter Market Assessment, By Product Type [Smart Electric Meters, Smart Water Meters, Smart Gas Meters], By Phase [Single-phase, Three-Phase], By Technology [Advanced Metering Infrastructure (AMI)], [Automated Meter Reading (AMR)], and End-user [Residential, Commercial, and Industrial], By Region, Opportunities, and Forecast, FY2017-FY2031F**

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## **Abstracts**

The India Smart Meter market is projected to reach USD 763.2 million by FY2031 from USD 250.71 million in FY2023 with a CAGR of 14.93% for the forecast period between FY2024 and FY2031 mainly driven by a rise in the installation of smart meters in the country, benefiting both consumers and the energy sector. These meters enable real-time monitoring, efficient energy management, and remote meter reading, promoting energy conservation and sustainability. They also facilitate the integration of renewable energy sources into the grid for better power supply control and operational efficiency.

Factors fostering the growth rate of India's Smart Meter Market also include the need for accurate billing, efficient energy management, enhanced consumer awareness, remote monitoring capabilities, and the integration of renewable energy sources. These factors drive the adoption of smart meters, promoting a modernized and sustainable energy infrastructure in the country.

The integration of renewable energy sources in smart meters in India enables effective management and utilization of clean energy, promoting sustainability and reducing reliance on fossil fuels for a greener and more resilient energy system. For instance, the

adoption of Time-of-Day Tariff (ToD) in solar energy involves adjusting power tariffs based on specific hours of the day. During designated 'solar hours', the tariff is set at least 20% lower than the normal rate, incentivizing consumers to use solar power. To facilitate ToD tariffs, smart meters will be compulsory for commercial and industrial consumers with a maximum demand of 10 KW or more from April 1, 2024. By April 1, 2025, all consumers except agricultural ones will be required to install smart meters to benefit from ToD tariffs.

### Rise in the Adoption Rate of Smart Meters

The adoption rate of smart meters in India has been rising due to several factors, including the efficacy of government initiatives, the increasing demand for energy efficiency, and the declining prices of smart meter advanced technologies. Smart meters offer several benefits, including improved energy efficiency, reduced power theft, and enhanced customer service. As a result, they are becoming increasingly popular with both consumers and utilities. In June 2023, 22.98 million smart consumer meters have been approved, with Uttar Pradesh having the most installed. The Indian government has sanctioned 204.62 million prepaid smart meters, 5.41 million distribution transformer meters, and 198,826 feeder meters under the Revamped Distribution Sector Scheme (RDSS). The total cost is estimated to be around USD 16.88 billion. Tenders for smart metering works have already been issued.

### The Advent of Highly Advanced Technologies

The smart meter market in India is rapidly evolving, and there is a need for highly advanced technologies to meet the growing demand. These technologies should be able to provide real-time data, improve efficiency, and reduce costs. Moreover, the advent of these technologies will help to make the Indian smart meter market more competitive and efficient. For example, in April 2023, Bharti Airtel and Secure Meters collaborated to install 1.3 million smart meters in the Indian state of Bihar. The smart meters will utilize NB-IoT services, which is for the very first time in the country for the implementation of this technology with a fail-safe option to assure ongoing communication. Moreover, the Indian telecom giant also announced a collaboration with smart metering startup Secure Meters to implement Narrow Band Internet of Things (NB-IoT) services that would power 1.3 million households in Bihar via a smart metering solution.

### Government Regulations

Government regulations ensure standardized implementation, encourage market competition, and safeguard consumer interests. Regulations can establish technical specifications, certification requirements, and interoperability standards to ensure seamless integration. They can also enforce data privacy and cybersecurity measures to protect consumer information. Additionally, regulations can promote renewable energy integration, energy efficiency, and demand response programs, leading to sustainable and reliable electricity distribution.

For example, The Electricity (Rights of Consumers) Rules, 2020 issued by the Ministry of Power India, delineated that smart meters will be read remotely once a month, and other pre-payment meters will be read by a representative of the distribution licensee at least once every three months. Moreover, the data on energy consumption will be made available to consumers through a website, mobile app, or SMS. Furthermore, consumers with smart pre-payment meters may also be given access to real-time data on their consumption.

### Impact of COVID-19

The COVID-19 pandemic had a significant impact on the smart meter market in India, both before and after the outbreak. Pre-COVID, the market was witnessing steady growth driven by government initiatives, regulatory mandates, and utility modernization efforts. However, the pandemic caused disruptions in the supply chain, delayed installations, and restricted movement, resulting in a temporary slowdown.

Post-COVID, the market is experiencing a shift in demand due to increased awareness of the benefits of smart meters, such as remote monitoring and contactless operations. The need for accurate billing, reduced manual interventions, and enhanced energy management is becoming more evident. This, in turn, has led to a gradual recovery in the market, with government initiatives and investments in smart grid infrastructure playing a crucial role. Overall, the long-term outlook for the Indian smart meter market remains positive.

### Key Players Landscape and Outlook

The Smart Meter Industry in India is experiencing remarkable growth, with Indian companies focusing on international collaborations, research, and development to create advanced technologies. They are also expanding their distribution networks and engaging in mergers and partnerships to strengthen their market position.

In July 2023, Genus Power Infrastructure, an Indian meter manufacturer, entered into agreements with a subsidiary of Singapore's sovereign wealth fund GIC to establish a funding platform for smart metering projects. The initial commitment for this collaboration is set at USD 2 billion. The company will serve as the sole provider of smart meters and related services for the platform, as stated in a filing with the exchange. Additionally, it was announced that GIC will have a majority stake of 74% in the platform, while Genus will hold a minority stake of 26% in the partnership.

In May 2023, HPL Electric and Power Ltd (HPL) secured smart meter contracts worth USD 25 million from customers across India. The company efficiently fulfilled these orders, benefiting from the government's smart metering initiatives and the growing demand for such technologies in the country. HPL's strong business prospects in the smart meter sector are evident from its order book exceeding USD 156 Million, reflecting its strong business prospects in this field.

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\*Companies mentioned above DO NOT hold any order as per market share and can be

changed as per information available during research work

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