

# Smart Electric Meter Market Report by Type (Advanced Metering Infrastructure (AMI), Automatic Meter Reading (AMR)), Phase (Single Phase, Three Phase), End User (Industrial, Commercial, Residential), and Region 2024-2032

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# **Abstracts**

The global smart electric meter market size reached US\$ 25.6 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 47.1 Billion by 2032, exhibiting a growth rate (CAGR) of 6.9% during 2024-2032. The increasing demand among consumers for real-time data and the rapid modernization of aging electrical infrastructures are bolstering the market.

## Smart Electric Meter Market Analysis:

Major Market Drivers: The rising emphasis of individuals on efficient energy consumption and sustainability is driving the overall market. Additionally, the inflating popularity of smart meters as a modern solution for grid management is also acting as another significant growth-inducing factor.

Key Market Trends: Continuous advancements in wireless communication technologies are among the emerging trends in the market. Besides this, the increasing inclination among consumers towards more interconnected and smart energy management is further bolstering the global market.

Geographical Trends: Asia Pacific exhibits a clear dominance in the market. This can be attributed to the rising awareness among individuals towards energy conservation, which is escalating the demand for smart meters across the region to monitor and control electricity usage.

Competitive Landscape: According to the smart electric meter market overview, some of the prominent companies include ABB Ltd., Aclara Technologies LLC (Hubbell Incorporated), Genus Power Infrastructures Ltd., Holley Technology Ltd., Honeywell



International Inc., Iskraemeco Group, Itron Inc., Jiangsu Linyang Energy Co. Ltd., Landis+Gyr, Microchip Technology Inc., Schneider Electric SE, and Wasion Group, among many others.

Challenges and Opportunities: The elevating concerns related to data privacy and cybersecurity are hampering the global market. As smart meters collect and transmit detailed energy usage data in real-time, they pose potential privacy risks. However, the implementation of stringent data protection laws by government bodies is expected to fuel the market over the forecasted period.

Smart Electric Meter Market Trends: Favorable Regulatory Support

The implementation of various regulations by government bodies that mandate the installation of smart meters to meet sustainability objective and modernize grid infrastructures is strengthening the market. As of December 2022, according to the National Smart Grid Mission (NSGM) dashboard, a total of 222 million smart meters were sanctioned in India, with 7.9 million already installed. Moreover, regulatory bodies also offer financial incentives, such as grants or tax breaks, to expedite the adoption of smart meter technology. This, in turn, is propelling the smart electric meter market demand. For instance, in June 2022, the Ministry of Power in India launched the Revamped Distribution Sector Scheme (RDSS) initiative, which aims to improve the operational efficiency and financial sustainability of discoms. The scheme incorporates all projects sanctioned under programs, such as the Deendayal Upadhyay Gram Jyoti Yojana, the Integrated Power Development Scheme, the Prime Minister's Development Package 2015, etc. Additionally, the main objectives of smart metering initiatives under the RDSS are to reduce AT&C losses to 12 to 15%, lower the average cost of supplyaverage revenue realized gap to zero by the financial year 2024-25, enhance the reliability, quality, and affordability of power supply to consumers by creating a financially sustainable and operationally efficient distribution sector, etc. In line with this, they are also collaborating with utility companies to initiate large-scale smart meter rollouts, thereby aiming to replace outdated meters with smart ones. For instance, in September 2023, the Union Minister for Power and New & Renewable Energy in India informed that the RDSS guidelines mandated the roll-out of smart meters via publicprivate partnership (PPP) on total expenditure (TOTEX) mode to provide support to DISCOMS and avoid post-implementation operational issues. Apart from this, in June 2023, the Ministry of Energy launched a pilot program with the support of the United Nations Development Programme to install smart meters for measuring electricity consumption in Moldova, Europe.



# Continuous Technological Advancements

The increasing integration of machine learning (ML) algorithms and Internet of Things (IoT) technology to enhance the capabilities and reliability of smart electric meters is positively influencing the smart electric meter market outlook. Additionally, these innovations offer predictive maintenance, provide real-time data analytics, even adapt to changing usage patterns, etc., which is acting as another significant growth-inducing factor. For example, in July 2023, Bern-based BKW announced the deployment of a meter data management platform across their meter network in Switzerland. Besides this, the introduction of comprehensive energy management systems is also contributing to the market growth. For instance, in December 2023, Vector Technology Solutions (VTS) and Amazon Web Services (AWS) developed the platform named Diverge that optimizes high-frequency data from smart electricity and gas meters in businesses and homes and assists energy companies in managing renewable power sources. Furthermore, the elevating popularity of wireless communication technologies has made the operation and deployment of smart meters more practical and less expensive, which is stimulating the market. For example, in December 2023, Bharti Airtel, one of the telecom operators, entered into a strategic partnership with IntelliSmart Infrastructure to connect up to 2 crore smart meters with the Internet of Things technology.

#### Need for Real-Time Data

The growing consumer requirement for transparency in billing is fueling the smart electric meter market revenue. Apart from this, these meters offer customers with detailed insights into their energy consumption patterns, thereby encouraging them to make informed decisions. For instance, in March 2024, GB distribution company Scottish and Southern Electricity Networks (SSEN) made its full smart meter half-hourly consumption datasets available as open access. Moreover, SSEN became one of the first network operators in Britain to make such data available, having pioneered the development of an open data portal for the distribution of data in the country. Besides this, key companies are focusing on improving customer satisfaction by investing more in smart electric meter technology, which is elevating the smart electric meter market's recent price. For example, in October 2023, Data Communications Company (DCC) and the UK's Energy Systems Catapult accelerated access to smart meter data for greater transparency. Additionally, the inflating demand for data-driven insights that are mutually beneficial for customers and utility providers is expected to drive the market in the coming years. For instance, in February 2024, GE Vernova introduced GridOS Data Fabric, which is specifically designed to help utilities in operating smart grids.



Smart Electric Meter Market Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the market, along with the smart electric meter market forecast at the global, regional, and country levels for 2024-2032. Our report has categorized the market based on the type, phase, and end user.

Breakup by Type:

Advanced Metering Infrastructure (AMI)
Automatic Meter Reading (AMR)

Advanced metering infrastructure (AMI) dominate the market

The report has provided a detailed breakup and analysis of the market based on the type. This includes advanced metering infrastructure (AMI) and automatic meter reading (AMR). According to the report, advanced metering infrastructure (AMI) represented the largest segment.

Advanced metering infrastructure (AMI) is dominating the market as it allows real-time data collection, thereby providing immediate insights into energy consumption patterns. Besides this, AMI systems assist in minimizing the chances of billing errors and disputes. Apart from this, they allow two-way communication between the central system and the meter, thereby facilitating remote monitoring and even firmware updates. Furthermore, advanced metering infrastructure aids in detecting and isolating outages quickly, thereby improving the overall reliability and efficiency of the electric grid. Consequently, it is gaining extensive traction across the globe. For example, in November 2023, Trilliant, one of the leading international providers of advanced metering infrastructure (AMI), announced the collaboration with IntelliSmart Infrastructure Private Limited, one of the prominent digital solutions providers in India, as one of its software partners for its Head-end System (HES) cellular implementations.

Breakup by Phase:

Single Phase

Three Phase

The report has provided a detailed breakup and analysis of the market based on the phase. This includes single phase and three phase.



As per the smart electric meter market statistics, single-phase smart electric meters are mainly used in residential settings, which represent most electricity consumers. In line with this, the operation of single-phase meters is relatively straightforward, making them easier to maintain, and use. Three-phase smart electric meters are widely adopted in both commercial and industrial settings, which often have higher power requirements. Moreover, they allow more efficient and balanced power distribution, particularly in settings with variable loads or heavy machinery, making them the preferred choice for industries.

Breakup by End User:

Industrial Commercial Residential

Residential hold the largest smart electric meter market share

The report has provided a detailed breakup and analysis of the market based on the end user. This includes industrial, commercial, and residential. According to the report, residential represented the largest market segmentation.

The growth in this segmentation is propelled by the inflating need for real-time data on electricity usage, which enabled consumers to understand consumption patterns better and initiate steps to minimize wastage. Apart from this, the automated nature of smart meters eliminates the need for manual meter readings, making the billing process more efficient and accurate. For instance, in October 2023, Eversource installed smart meters for its more than 1.2 million residential and small business customers in Connecticut, U.S. Moreover, in December 2023, Xylem introduced a novel residential electric meter with advanced grid edge capabilities.

Breakup by Region:

North America
United States
Canada
Asia-Pacific
China
Japan



India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

Asia Pacific exhibits a clear dominance in the market

The market research report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Europe (Germany, France, the United Kingdom, Italy, Spain, Russia, and others); Latin America (Brazil, Mexico, and others); and the Middle East and Africa. According to the report, Asia Pacific accounted for the largest market share.

The rising investments by utility companies in novel smart meter infrastructures represent the smart electric meter market's recent opportunities. For instance, in February 2024, Salzer established a smart meter manufacturing business in India, which will have an annual production capacity of 4 million smart energy meters. In line with this, in February 2024, IGL Genesis Technologies signed a deal with China-based Hangzhou Beta Meter to buy smart meter manufacturing technology for about Rs 20 Crore to enhance the energy infrastructure in India with advanced metering solutions. Apart from this, the increasing number of tech hubs that provide a strong foundation for the development and adoption of advanced technologies, including smart electric meters, will continue to bolster the regional market over the forecasted period. For example, in March 2023, JioThings, one of the leading Internet of Things (IoT) solution



providers, partnered with EDF, an electric utility firm in France, and Energy Efficiency Services Limited (EESL) to deploy one million smart prepaid meters in the state of Bihar. In line with this, in September 2023, HPL Electric and Power Ltd entered into a strategic partnership with Wirepas Oy to launch smart metering projects in India.

## Competitive Landscape:

Leading companies are incorporating real-time tracking and advanced analytics to enhance the features, reliability, and efficiency of smart electric meters. Furthermore, they are expanding geographically by adapting products to meet local regulations and consumer preferences. In addition, several key players are entering into strategic alliances with utility companies, tech firms, and local governments to accelerate the adoption of smart meters. Besides this, smart electric meter market companies are investing in secure data encryptions to protect user data from unauthorized access. Additionally, they are adhering to international and local regulations, such as energy efficiency standards and data protection laws, to ensure that their products meet or exceed these standards. Moreover, major players are developing user-friendly interfaces and mobile apps that allow consumers to monitor their energy consumption in real-time, thereby promoting responsible energy usage.

The market research report has provided a comprehensive analysis of the competitive landscape. Detailed profiles of all major companies have also been provided. Some of the key players in the market include:

ABB Ltd.

Aclara Technologies LLC (Hubbell Incorporated)

Genus Power Infrastructures Ltd.

Holley Technology Ltd.

Honeywell International Inc.

Iskraemeco Group

Itron Inc.

Jiangsu Linyang Energy Co. Ltd.

Landis+Gyr

Microchip Technology Inc.

Schneider Electric SE

Wasion Group

(Please note that this is only a partial list of the key players, and the complete list is provided in the report.)



Smart Electric Meter Market Recent Developments:

May 2024: Oakter, one of the leading consumer electronics brands, introduced Oakmeter, which is a smart energy meter with real-time data and Internet of Things capabilities.

March 2024: The Maharashtra State Electricity Distribution Company Limited (MSEDCL) launched pre-paid smart electricity meters in Nagpur as a part of the Revamped Distribution Sector Scheme (RDSS).

January 2024: Adani Energy Solutions Limited (AESL), a private transmission and distribution company, formed a joint venture with Esyasoft Holdings to implement smart metering projects in India and other countries.

# Key Questions Answered in This Report

- 1. What was the size of the global smart electric meter market in 2023?
- 2. What is the expected growth rate of the global smart electric meter market during 2024-2032?
- 3. What are the key factors driving the global smart electric meter market?
- 4. What has been the impact of COVID-19 on the global smart electric meter market?
- 5. What is the breakup of the global smart electric meter market based on the type?
- 6. What is the breakup of the global smart electric meter market based on the end user?
- 7. What are the key regions in the global smart electric meter market?
- 8. Who are the key players/companies in the global smart electric meter market?



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