

Smart Meter Market Assessment, By Product Type [Smart Electricity Meters, Smart Water Meters, Smart Gas Meters], By Phase [Single-phase, Three-Phase], By Technology [Advanced Metering Infrastructure (AMI), Automated Meter Reading (AMR)], End-user [Residential, Commercial, Industrial], By Region, Opportunities and Forecast, 2017-2031F

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Abstracts

Global smart meter market has witnessed substantial growth and is anticipated to sustain this robust expansion rate in the foreseeable future. Having reached an estimated value of around USD 20,783.7 million in 2023, the market is projected to achieve a value of USD 44,880.4 million by 2031, demonstrating a steady CAGR of 10.14% between 2023 and 2031.

The global smart meter market continues to grow steadily, driven by increasing emphasis on energy efficiency and grid modernization initiatives. Smart meters enable utilities to remotely monitor, control, and optimize energy consumption, improving operational efficiency and reducing costs. Factors, such as government mandates, rising energy consumption, and the integration of renewable energy sources, further propel market growth. Advancements in technology, including the Internet of Things (IoT) and data analytics, enhance smart meter capabilities, fostering widespread adoption. Key players in the market include industry leaders such as Landis+Gyr, Itron, and Siemens AG, shaping the landscape with innovative solutions and strategic partnerships.

The market growth is attributed to the modernization of existing energy management systems in regions such as North America, Europe, and the Middle East, where

governments are investing heavily in modernizing the existing systems. For instance, Western regions prioritize net zero emissions by 2050, making smart meters crucial to provide detailed usage data that can help utilities better understand and predict customer demand through data analytics.

Furthermore, smart grids are being introduced to enhance the efficiency of electrical networks. As part of these smart grids, smart electricity meters are being deployed globally. Also, these meters enable two-way communication allowing both utility suppliers and consumers to track utility usage in real time. Additionally, the deployment of smart meters facilitates the implementation of Home Energy Management Systems (HEMS) and Building Energy Management Systems (BEMS). These systems allow visualization of electric power usage in individual homes or entire buildings. Therefore, as digitization accelerates, energy efficiency measures are modernized, further driving the adoption of smart grids.

Utility System Monitoring is Augmenting the Market Growth Extensively

Utility system monitoring plays a pivotal role in driving the adoption and implementation of smart meters, revolutionizing the energy sector. Smart meters are increasingly being deployed to monitor utility systems in real time, offering various benefits that enhance operational efficiency and grid reliability. These devices enable seamless communication with utility companies, providing accurate and up-to-date data on energy consumption. This real-time monitoring capability empowers utility providers to manage the power grids more effectively, detect outages promptly, and respond efficiently to disruptions, ultimately improving grid reliability and customer services. India is regarded as one of the most prominent areas of this market. Utility system monitoring in India plays a crucial role in balancing the rapid growth of smart metering by providing real-time insights into electricity consumption patterns.

For instance, according to the recent data published by the National Smart Grid Mission, Ministry of Power, Government of India, in the FY 2021, the installation of smart meters in India was 623,112 units, and in FY 2022, it increased to 1,745,479 units. However, the growth deteriorated abruptly in COVID-19 but eventually rose by a huge margin in the following years. By monitoring the quality of power supply, predicting maintenance needs, and identifying infrastructure gaps, utility monitoring enables efficient planning, load management, and infrastructure strategies. This proactive approach addresses challenges such as rising demand, ensuring reliable power supply, and optimizing the deployment of smart meters effectively.

Emerging Regulatory Trends Driving Smart Meter Installations

The increasing regulatory initiatives to install smart electricity meters by governments worldwide are playing a pivotal role in driving the growth of the smart meter market. These regulatory policies, supported by financial incentives and national energy policies, are creating a conducive environment for the widespread adoption of smart meters, leading to significant market expansion and technological advancements. These technological features enhance accuracy, efficiency, and transparency in energy consumption monitoring, aligning with the objectives of regulatory policies promoting smart meter installations.

For instance, the Energy Act 2023 in the United Kingdom signified a critical juncture for the smart meter rollout, positioning smart meters as essential components of the country's energy transition. Enacted in October, this legislation introduced new powers aimed at ensuring the completion of the smart meter rollout by 2028. The government foresees substantial benefits from this initiative, estimating total bill savings of USD 7.1 billion for households. This strategic move underscores the significance of smart meters in modernizing the energy system, enhancing energy efficiency, and empowering consumers to manage their energy consumption effectively. This legislative framework supports the transition to a more sustainable and flexible energy system and aligns with the government's broader objectives of achieving a cleaner, more affordable, and secure energy landscape for the nation. Moreover, the Energy Act 2023 empowers the government to continue steering the smart meter rollout across Great Britain, ensuring that the Smart Metering Implementation Programme progresses successfully. By extending the powers until 2028, the government aims to drive the successful delivery of smart meters to homes and small businesses, enabling consumers to benefit from enhanced energy management, cost savings, and a more efficient energy system.

Different regions exhibit varying levels of smart meter adoption based on regulatory frameworks and market maturity. For instance, North America, Europe, and East Asia have more advanced markets due to regulatory policies and energy initiatives. In contrast, regions such as Southern Asia, Latin America, and Africa present high-growth potential for smart meters, driven by regulatory support and the need to upgrade the grid infrastructure.

Asia-Pacific Dominates Owing to Modernization of Electricity Infrastructure

Asia-Pacific has a leading position in the smart meter industry. The prime determinants, such as recently launched power generation facilities, development of new smart

meters, increasing adoption in commercial facilities, and increasing sustainability targets for reducing carbon emission, are driving the adoption of smart meters across Asia-Pacific countries, including India, Japan, China, and South Korea, among others.

For instance, in April 2019, the Government of India (GoI) announced its target to install 250 million smart meters by the end of 2025. Similarly, the Japanese government announced the installation of 80 million smart meters by the end of 2025. Therefore, the increasing installation of smart meters in the Asia-Pacific region will create a lucrative opportunity for market growth during the projected forecast period.

Future Market Opportunities (2024–2031F)

Government schemes to foster the adoption of smart electricity meters, robust demand from the residential sector, increasing infrastructure development of smart grids, and others, are the prominent factors boosting the demand for smart meters at the global level. This, in turn, is anticipated to lead to extensive opportunities for market expedition in the future.

Smart meters offer sustainability, superior potential in enhancing energy efficiency, and modernized energy grids, which represent the prime factors influencing their deployment across various industrial facilities, including oil and gas, energy and power, base stations, power stations, manufacturing hubs, and utility centers among others. This, in turn, can result in ample possibilities for market expedition in the future.

Moreover, an increase in industrial production activities at the global level is accelerating the deployment of smart meters to ensure reduced operational costs, enhanced energy contour forecasting, and improved energy production planning, thereby leading to limitless possibilities for market growth in the future.

Key Players Landscape and Outlook

The global smart meter market has grown substantially, with prominent companies emphasizing collaborations to drive technological advancements and enhance their services. These companies are investing significantly in developing advanced smart meters to ensure safety and improved electricity monitoring in residential, commercial, and industrial sectors. Additionally, they actively engage in notable mergers, acquisitions, and joint ventures to effectively pursue their smart meter industry

objectives.

In March 2024, Itron expanded its network expertise and improved network design and operations with the acquisition of Elpis Squared. This move allowed utilities to support the energy transition by using data solutions and optimized solutions to improve cost-effective management.

In November 2023, ABB secured a USD 543 million financing agreement with the European Investment Bank (EIB) to bolster its research and development efforts in the electrification business area. The funding will be utilized to develop next-generation electrical distribution solutions, including solid-state circuit breakers and eco-friendly switchgear, aimed at driving the energy transition and improving efficiency. This collaboration aligns with the European Green Deal's goal of achieving net zero greenhouse gas emissions by 2050, emphasizing the importance of green innovation in creating a sustainable economy and combating climate change.

Landis+Gyr Group– The Prominent Market Leader

Landis+Gyr is a leading provider of smart metering services, delivering innovative technology to support applications in Europe and Middle East and Africa (EMEA). The company is focused on driving digital transformation in energy, providing advanced metering equipment, energy distribution, and customer service. The company's comprehensive services include analytics, customer solutions, distribution of electronic devices (DA), electronic devices, control load, and a variety of advanced equipment analysis (AMI). It optimizes its operations, improves grid reliability, and increases customer satisfaction.

Landis+Gyr is at the forefront of creating a green energy future partnering with Google Cloud, allowing the company to deliver unprecedented growth in business management, further giving clients more ways to effectively deal with the evolving electricity and energy landscape. The company's comprehensive offerings include innovative products, services, and solutions tailored to meet the unique needs of each market with a focus on empowering utilities and consumers.

In February 2024, MJM Electric Co. of Carlinville, Illinois, partnered with Landis+Gyr to install the Gridstream Connect cellular AMI system to improve grid management. The solution provides customers with detailed energy information and advanced energy management. Landis + Gyr's cost-effective cellular network allows utilities to improve connectivity and access meter data.

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