

Smart Metering and Advanced Metering Infrastructure Market Forecasts to 2034 – Global Analysis By Component (Hardware, Software and Services), Meter Type, Communication Technology, Application, End User and By Geography

<https://marketpublishers.com/r/S1786F04F629EN.html>

Date: June 2026

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: S1786F04F629EN

Abstracts

According to Statistics MRC, the Global Smart Metering and Advanced Metering Infrastructure Market is accounted for \$24.9 billion in 2026 and is expected to reach \$63.8 billion by 2034 growing at a CAGR of 12.5% during the forecast period. Smart metering and Advanced Metering Infrastructure (AMI) are advanced utility technologies that allow two-way data exchange between consumers and energy providers. They rely on smart digital meters to gather real-time information on electricity, gas, and water consumption, enhancing billing precision and system monitoring. AMI helps utilities identify faults, lower transmission losses, and improve overall grid efficiency. Customers gain detailed insights into their usage patterns, supporting energy saving and reduced costs. By connecting meters with communication systems, automated data transfer and remote operations become possible. Ultimately, smart metering improves reliability, efficiency, and sustainability in residential, commercial, and industrial energy management systems.

According to the U.S. Energy Information Administration (EIA), by 2021, more than 111 million smart meters had been installed across the United States, covering approximately 70% of electricity customers.

Market Dynamics:

Driver:

Rising demand for energy efficiency and cost savings

Growing emphasis on energy efficiency and reducing costs is a key factor fueling the Smart Metering and Advanced Metering Infrastructure market. Both consumers and businesses are increasingly focused on understanding and managing their energy usage to lower expenses. Smart meters offer real-time insights into consumption, helping users adjust behavior and improve efficiency. Utilities also gain advantages through better demand forecasting and lower operational expenses. Rising global energy prices further push households and industries to adopt advanced metering solutions. This strong focus on sustainability and cost optimization is accelerating the deployment of smart metering systems across residential and commercial sectors.

Restraint:

High initial deployment and infrastructure costs

One of the key challenges limiting the Smart Metering and Advanced Metering Infrastructure market is the high upfront cost of deployment and infrastructure development. Installing smart meters involves substantial investment in devices, communication systems, software platforms, and technical expertise. Many utilities, particularly in developing economies, struggle with limited budgets, which delays adoption. Additionally, modernizing existing power grids to support AMI increases overall expenditure. Ongoing maintenance, integration, and operational costs further add to the financial load. Smaller utilities often find it difficult to recover these investments quickly, making high costs a significant barrier to widespread smart metering implementation.

Opportunity:

Technological advancements in IoT and AI integration

Advancements in IoT and artificial intelligence integration present a major opportunity for the Smart Metering and Advanced Metering Infrastructure market. IoT-enabled smart meters facilitate seamless communication and real-time data sharing between utilities and consumers. Artificial intelligence enhances capabilities such as energy demand forecasting, fault detection, and system optimization. These technologies improve efficiency and support predictive maintenance of energy networks. Additionally, cloud computing and big data tools strengthen data analysis and management. As the energy sector undergoes rapid digital transformation, the adoption of intelligent metering

systems is increasing, creating new opportunities for automated and data-driven energy management solutions.

Threat:

Rapid technological obsolescence

Fast technological changes pose a major threat to the Smart Metering and Advanced Metering Infrastructure market. Continuous advancements in IoT, digital systems, and communication technologies can quickly make existing smart metering infrastructure outdated. Utilities investing in current solutions may find them incompatible with newer innovations, leading to expensive upgrades and replacements. Regular improvements in hardware and software are required to maintain system relevance. Companies that are unable to adapt to rapid technological shifts risk losing their competitive position. Overall, the fast pace of innovation creates uncertainty, higher maintenance costs, and financial challenges for stakeholders in the smart metering sector.

Covid-19 Impact:

The COVID-19 pandemic created both challenges and opportunities for the Smart Metering and Advanced Metering Infrastructure market. At the beginning, lockdown restrictions and disrupted supply chains delayed production, installation, and maintenance activities, slowing down global deployments. Utilities also struggled with labor shortages and reduced field operations, which affected smart meter rollouts. However, the crisis accelerated digital adoption in the energy sector. The demand for remote monitoring, automated billing, and contactless energy management increased significantly. Utilities focused more on real-time data and grid reliability. After the pandemic, investments in AMI systems grew, emphasizing their role in building resilient and digital energy networks.

The hardware segment is expected to be the largest during the forecast period

The hardware segment is expected to account for the largest market share during the forecast period. This is mainly because of the large-scale installation of smart meters, communication modules, and essential infrastructure needed for AMI deployment. Hardware acts as the core foundation of smart metering systems by enabling precise data measurement, transfer, and real-time energy monitoring. Utilities consistently invest in modernizing physical metering equipment to enhance grid performance and minimize energy losses. The ongoing replacement of conventional meters with

advanced digital alternatives continues to drive demand. Therefore, hardware remains the leading contributor to market expansion and development.

The cellular segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the cellular segment is predicted to witness the highest growth rate. This rapid growth is mainly supported by the expansion of 4G and 5G networks, which offer dependable and wide-coverage communication for smart metering systems. Cellular technology reduces the need for extensive physical infrastructure, making it effective for both densely populated cities and remote areas. Utilities favour this option due to its scalability, strong security features, and easy integration with existing platforms. Increasing adoption of IoT-enabled devices further boosts demand. Overall, cellular connectivity is becoming a key driver of AMI system expansion.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, driven by rapid urban growth, rising population, and strong government initiatives supporting smart grid development. Major economies like China, India, Japan, and South Korea are investing significantly in upgrading their electricity infrastructure. Large-scale smart meter installation programs and energy efficiency policies are boosting regional demand. Growing power consumption and the need to minimize transmission losses further encourage adoption. Utilities are also focusing on digitalization and renewable energy integration. These combined factors position Asia Pacific as the leading region in the smart metering and AMI market.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR. This rapid growth is supported by extensive smart grid modernization efforts, fast-paced urban development, and rising electricity consumption in emerging economies. Countries such as China, India, and several Southeast Asian nations are investing significantly in digital energy infrastructure and smart meter deployment. Government programs focused on improving energy efficiency and reducing losses are further driving adoption. Moreover, the increasing use of renewable energy and IoT technologies is strengthening demand for advanced metering systems across the region.

Key players in the market

Some of the key players in Smart Metering and Advanced Metering Infrastructure Market include Itron Inc., Landis+Gyr Group AG, Schneider Electric SE, Siemens AG, Honeywell International Inc., ABB Ltd., Toshiba Corporation, Kamstrup A/S, Diehl Metering GmbH, Xylem Inc. (Sensus), Aclara Technologies LLC, Trilliant Holdings Inc., Hitachi Ltd., Genus Power Infrastructures Ltd., Larsen & Toubro Ltd., Badger Meter Inc., Wasion Group Holdings Limited and Enel X.

Key Developments:

In November 2025, Hitachi Energy India and Bharat Heavy Electricals Ltd (BHEL) have executed a novation agreement that transfers contractual rights and obligations for the Rajasthan HVDC project from Rajasthan Part I Power Transmission Ltd (RPPTL) to an Adani Group entity. The agreement, completed, formalises the replacement of RPPTL with AESL Projects Ltd (APL) as the contracting party.

In November 2025, Siemens Energy has signed a contract to design and deliver the power conversion system for Oklo's Aurora powerhouse reactors. The contract will see Siemens Energy conduct detailed engineering and layout activities for a condensing SST-600 steam turbine, an SGen-100A industrial generator, and associated auxiliaries to support Oklo's first advanced reactor, the Aurora powerhouse at Idaho National Laboratory.

In November 2025, Schneider Electric announced a two-phase supply capacity agreement (SCA) totaling \$1.9 billion in sales. The milestone deal includes prefabricated power modules and the first North American deployment of chillers. The announcement was unveiled at Schneider Electric's Innovation Summit North America in Las Vegas, convening more than 2,500 business leaders and market innovators to accelerate practical solutions for a more resilient, affordable and intelligent energy future.

Components Covered:

Hardware

Software

Services

Meter Types Covered:

Smart Electricity Meters

Smart Gas Meters

Smart Water Meters

Communication Technologies Covered:

RF Mesh

Power Line Communication (PLC)

Cellular

Applications Covered:

Residential

Commercial

Industrial

End Users Covered:

Utilities

Municipalities

Large Enterprises

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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