+357 96 030922
info@marketpublishers.com

Smart Energy Storage Market Forecasts to 2030 – Global Analysis by Product (Smart Grid, Digital Oilfield, Smart Solar and Home Energy Management System), Component, Technology, Application, End User and By Geography

https://marketpublishers.com/r/S1A6B0FB9C59EN.html
Date: February 2025
Pages: 150
Price: US$ 4,150.00 (Single User License)
ID: S1A6B0FB9C59EN

Abstracts

According to Stratistics MRC, the Global Smart Energy Storage Market is accounted for $10.13 billion in 2024 and is expected to reach $22.4 billion by 2030 growing at a CAGR of 14.2% during the forecast period. Smart energy storage is a term used to describe sophisticated electrical energy storage systems that optimize energy management, boost grid resilience, and employ intelligent technology. In order to store extra energy during periods of low demand and release it during periods of peak demand, these systems combine with renewable energy sources like solar and wind. Smart energy storage helps balance supply and demand, save energy prices, and maintains grid stability by combining features including automated control, real-time monitoring, and predictive analytics.

Market Dynamics:

Driver:

Rising Demand for Renewable Energy

The growing demand for renewable energy has a substantial influence on the Smart Energy Storage Market, boosting the need for efficient storage solutions to balance intermittent energy output. Energy storage systems are essential for storing extra energy during periods of peak production and releasing it during periods of low output or high demand as the use of solar and wind power increases. By encouraging

advancements in storage capacity, efficiency, and grid integration, this move toward renewable energy sources enhances the need for smart energy storage technologies and propels market expansion internationally.

Restraint:

High Initial Costs

The high upfront costs of smart energy storage devices are a major impediment to market expansion. Businesses and customers may be put off by the high initial costs associated with installation and integration, especially in areas where prices are crucial. The general implementation of energy storage technologies is delayed by this expensive barrier, which restricts uptake, particularly in poor nations. Long return-on-investment times also deter prospective investors and impede the adoption of more environmentally friendly energy systems, thus it hinders the growth of the market.

Opportunity:

Grid Modernization

Grid modernization improves grid stability, efficiency, and dependability, which has a big impact on the smart energy storage market. Energy storage systems may be better managed and energy distribution can be optimized through the integration of cutting-edge technology like AI, real-time monitoring, and predictive analytics. Peak load management and the efficient integration of renewable energy sources are made possible by this transition to smarter networks. Modernizing the grid also speeds up reaction times during outages, which raises demand for energy storage devices in both the residential and commercial sectors.

Threat:

Regulatory and Market Barriers

Regulatory and market restrictions impede the market by increasing uncertainty and limiting investment. Slow standard adoption, uneven regional policies, and complicated regulatory frameworks can all impede market expansion. Adoption is further deterred by high upfront costs and a lack of financial incentives for energy storage facilities. Furthermore, there are still major barriers to broad market adoption, including the absence of integrated infrastructure and difficulties integrating large-scale storage

devices into the grid, thus it limits market expansion.

Covid-19 Impact:

The COVID-19 pandemic initially disrupted the Smart Energy Storage Market through supply chain delays, production halts, and reduced investments in energy infrastructure. However, the crisis also highlighted the importance of resilient energy systems, boosting demand for smart energy solutions post-pandemic. As governments focus on green recovery and sustainable energy, the market has rebounded, with increased adoption of energy storage technologies, particularly in renewable energy projects and electric vehicles, driving long-term growth.

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

The supercapacitors segment is expected to be the largest during the forecast period because they make it possible to store and release energy efficiently, promoting grid stability and improving the integration of renewable energy sources. They are perfect for balancing variations in energy supply and demand because of their rapid energy storage and discharge capabilities. The use of supercapacitors in smart grids, renewable energy systems, and electric cars is propelling market expansion due to technological improvements like better materials and lower prices.

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

The smart solar segment is expected to have the highest CAGR during the forecast period because these systems maximize energy use, store extra solar energy, and guarantee a steady supply of electricity even when the sun isn't shining. Smart solar systems improve grid dependability and cut down on energy waste by integrating AI and IoT for real-time monitoring and control. This synergy accelerates the growth of the smart energy storage industry by promoting the use of renewable energy, lowering prices, and supporting environmental goals.

Region with largest share:

North America is anticipated to hold the largest market share during the forecast period due to demand for renewable energy integration, the need for grid stability, and advancements in energy storage technologies. Government incentives and policies supporting clean energy, coupled with the decline in battery costs, are further propelling

market growth. The increasing adoption of electric vehicles (EVs), smart grids, and energy-efficient buildings also contribute to the market's expansion, as industries seek to optimize energy use and reduce carbon footprints.

Region with highest CAGR:

Asia Pacific is anticipated to witness the highest CAGR over the forecast period owing to growing worries about grid reliability and energy security as well as increased power use. The efficiency and adaptability of energy storage systems are being improved by technological developments like artificial intelligence and Internet of Things integration. Regulations and incentives from the government that support sustainable energy alternatives also accelerate market expansion. Additionally, the region's market is expanding more quickly due to the growing use of energy storage systems and electric cars in both the residential and commercial sectors.

Key players in the market

Some of the key players in Smart Energy Storage market include Schneider Electric, Siemens AG, ABB Ltd., General Electric (GE), Honeywell International Inc., Eaton Corporation, Itron Inc., Landis+Gyr, Oracle Corporation, Cisco Systems, IBM, Grid4C, Enel X (Enel Group), Octopus Energy Group, NextEra Energy, BuildingIQ, Watty, Capgemini, Toshiba and Mitsubishi Electric Corporation.

Key Developments:

In May 2024, ABB expanded electrification portfolio with acquisition of Siemens' Wiring Accessories business. The acquisition had broadened ABB's market reach and complements its regional customer offering within smart buildings.

In Feb 2024, ABB announced an agreement to acquire SEAM Group, a major provider of energized asset management. The acquisition brought significant additional expertise to customers in the areas of predictive, preventive, and corrective maintenance.

In Jan 2024, ABB announced to acquire Canadian company Real Tech, a leading supplier of innovative optical sensor technology that enables real-time water monitoring. Through the acquisition, ABB expands its strong presence in the water segment and complement its product portfolio with optical technology critical for smart water management.

+357 96 030922
info@marketpublishers.com

Products Covered:

- Smart Grid
- Digital Oilfield
- Smart Solar
- Home Energy Management System

Components Covered:

- Solutions
- Services

Technologies Covered:

- Lithium-Ion Batteries
- Lead-Acid Batteries
- Sodium-Ion Batteries
- Flow Batteries
- Supercapacitors

Applications Covered:

- Energy Generation
- Energy Transmission
- Energy Distribution

+357 96 030922
info@marketpublishers.com

- Energy Consumption
- Energy Storage
- Other Applications

End Users Covered:

- Residential
- Commercial
- Industrial
- Utility
- Other End Users

Regions Covered:

- North America
  - US
  - Canada
  - Mexico
- Europe
  - Germany
  - UK
  - Italy
  - France

+357 96 030922
info@marketpublishers.com

- Spain
- Rest of Europe

Asia Pacific

- Japan
- China
- India
- Australia
- New Zealand
- South Korea
- Rest of Asia Pacific

South America

- Argentina
- Brazil
- Chile
- Rest of South America

Middle East & Africa

- Saudi Arabia
- UAE
- Qatar

+357 96 030922
info@marketpublishers.com

South Africa

Rest of Middle East & 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 2022, 2023, 2024, 2026, and 2030
- 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

+357 96 030922
info@marketpublishers.com

Contents

1 EXECUTIVE SUMMARY

2 PREFACE

2.1 Abstract
2.2 Stake Holders
2.3 Research Scope
2.4 Research Methodology
  2.4.1 Data Mining
  2.4.2 Data Analysis
  2.4.3 Data Validation
  2.4.4 Research Approach
2.5 Research Sources
  2.5.1 Primary Research Sources
  2.5.2 Secondary Research Sources
  2.5.3 Assumptions

3 MARKET TREND ANALYSIS

3.1 Introduction
3.2 Drivers
3.3 Restraints
3.4 Opportunities
3.5 Threats
3.6 Product Analysis
3.7 Technology Analysis
3.8 Application Analysis
3.9 End User Analysis
3.10 Emerging Markets
3.11 Impact of Covid-19

4 PORTERS FIVE FORCE ANALYSIS

4.1 Bargaining power of suppliers
4.2 Bargaining power of buyers
4.3 Threat of substitutes
4.4 Threat of new entrants

+357 96 030922
info@marketpublishers.com

4.5 Competitive rivalry

5 GLOBAL SMART ENERGY STORAGE MARKET, BY PRODUCT

5.1 Introduction
5.2 Smart Grid
5.3 Digital Oilfield
5.4 Smart Solar
5.5 Home Energy Management System

6 GLOBAL SMART ENERGY STORAGE MARKET, BY COMPONENT

6.1 Introduction
6.2 Solutions
  6.2.1 Smart Meters
  6.2.2 Data and Device Management
  6.2.3 PV Monitoring
  6.2.4 Smart Energy Storage
6.3 Services

7 GLOBAL SMART ENERGY STORAGE MARKET, BY TECHNOLOGY

7.1 Introduction
7.2 Lithium-Ion Batteries
7.3 Lead-Acid Batteries
7.4 Sodium-Ion Batteries
7.5 Flow Batteries
7.6 Supercapacitors

8 GLOBAL SMART ENERGY STORAGE MARKET, BY APPLICATION

8.1 Introduction
8.2 Energy Generation
8.3 Energy Transmission
8.4 Energy Distribution
8.5 Energy Consumption
8.6 Energy Storage
8.7 Other Applications

+357 96 030922
info@marketpublishers.com

9 GLOBAL SMART ENERGY STORAGE MARKET, BY END USER

9.1 Introduction
9.2 Residential
9.3 Commercial
9.4 Industrial
9.5 Utility
9.6 Other End Users

10 GLOBAL SMART ENERGY STORAGE MARKET, BY GEOGRAPHY

10.1 Introduction
10.2 North America
  10.2.1 US
  10.2.2 Canada
  10.2.3 Mexico
10.3 Europe
  10.3.1 Germany
  10.3.2 UK
  10.3.3 Italy
  10.3.4 France
  10.3.5 Spain
  10.3.6 Rest of Europe
10.4 Asia Pacific
  10.4.1 Japan
  10.4.2 China
  10.4.3 India
  10.4.4 Australia
  10.4.5 New Zealand
  10.4.6 South Korea
  10.4.7 Rest of Asia Pacific
10.5 South America
  10.5.1 Argentina
  10.5.2 Brazil
  10.5.3 Chile
  10.5.4 Rest of South America
10.6 Middle East & Africa
  10.6.1 Saudi Arabia
  10.6.2 UAE

+357 96 030922
info@marketpublishers.com

10.6.3 Qatar
10.6.4 South Africa
10.6.5 Rest of Middle East & Africa

11 KEY DEVELOPMENTS

11.1 Agreements, Partnerships, Collaborations and Joint Ventures
11.2 Acquisitions & Mergers
11.3 New Product Launch
11.4 Expansions
11.5 Other Key Strategies

12 COMPANY PROFILING

12.1 Schneider Electric
12.2 Siemens AG
12.3 ABB Ltd.
12.4 General Electric (GE)
12.5 Honeywell International Inc.
12.6 Eaton Corporation
12.7 Itron Inc.
12.8 Landis+Gyr
12.9 Oracle Corporation
12.10 Cisco Systems
12.11 IBM
12.12 Grid4C
12.13 Enel X (Enel Group)
12.14 Octopus Energy Group
12.15 NextEra Energy
12.16 BuildingIQ
12.17 Watty
12.18 Capgemini
12.19 Toshiba
12.20 Mitsubishi Electric Corporation

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

Table 1 Global Smart Energy Storage Market Outlook, By Region (2022-2030) ($MN)
Table 2 Global Smart Energy Storage Market Outlook, By Product (2022-2030) ($MN)
Table 3 Global Smart Energy Storage Market Outlook, By Smart Grid (2022-2030) ($MN)
Table 4 Global Smart Energy Storage Market Outlook, By Digital Oilfield (2022-2030) ($MN)
Table 5 Global Smart Energy Storage Market Outlook, By Smart Solar (2022-2030) ($MN)
Table 6 Global Smart Energy Storage Market Outlook, By Home Energy Management System (2022-2030) ($MN)
Table 7 Global Smart Energy Storage Market Outlook, By Component (2022-2030) ($MN)
Table 8 Global Smart Energy Storage Market Outlook, By Solutions (2022-2030) ($MN)
Table 9 Global Smart Energy Storage Market Outlook, By Smart Meters (2022-2030) ($MN)
Table 10 Global Smart Energy Storage Market Outlook, By Data and Device Management (2022-2030) ($MN)
Table 11 Global Smart Energy Storage Market Outlook, By PV Monitoring (2022-2030) ($MN)
Table 12 Global Smart Energy Storage Market Outlook, By Smart Energy Storage (2022-2030) ($MN)
Table 13 Global Smart Energy Storage Market Outlook, By Services (2022-2030) ($MN)
Table 14 Global Smart Energy Storage Market Outlook, By Technology (2022-2030) ($MN)
Table 15 Global Smart Energy Storage Market Outlook, By Lithium-Ion Batteries (2022-2030) ($MN)
Table 16 Global Smart Energy Storage Market Outlook, By Lead-Acid Batteries (2022-2030) ($MN)
Table 17 Global Smart Energy Storage Market Outlook, By Sodium-Ion Batteries (2022-2030) ($MN)
Table 18 Global Smart Energy Storage Market Outlook, By Flow Batteries (2022-2030) ($MN)
Table 19 Global Smart Energy Storage Market Outlook, By Supercapacitors (2022-2030) ($MN)
Table 20 Global Smart Energy Storage Market Outlook, By Application (2022-2030)

+357 96 030922
info@marketpublishers.com

($MN)
Table 21 Global Smart Energy Storage Market Outlook, By Energy Generation (2022-2030) ($MN)
Table 22 Global Smart Energy Storage Market Outlook, By Energy Transmission (2022-2030) ($MN)
Table 23 Global Smart Energy Storage Market Outlook, By Energy Distribution (2022-2030) ($MN)
Table 24 Global Smart Energy Storage Market Outlook, By Energy Consumption (2022-2030) ($MN)
Table 25 Global Smart Energy Storage Market Outlook, By Energy Storage (2022-2030) ($MN)
Table 26 Global Smart Energy Storage Market Outlook, By Other Applications (2022-2030) ($MN)
Table 27 Global Smart Energy Storage Market Outlook, By End User (2022-2030) ($MN)
Table 28 Global Smart Energy Storage Market Outlook, By Residential (2022-2030) ($MN)
Table 29 Global Smart Energy Storage Market Outlook, By Commercial (2022-2030) ($MN)
Table 30 Global Smart Energy Storage Market Outlook, By Industrial (2022-2030) ($MN)
Table 31 Global Smart Energy Storage Market Outlook, By Utility (2022-2030) ($MN)
Table 32 Global Smart Energy Storage Market Outlook, By Other End Users (2022-2030) ($MN)

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Smart Energy Storage Market Forecasts to 2030 – Global Analysis by Product (Smart Grid, Digital Oilfield, Smart Solar and Home Energy Management System), Component, Technology, Application, End User and By Geography

Product link: https://marketpublishers.com/r/S1A6B0FB9C59EN.html

Price: US$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/S1A6B0FB9C59EN.html