

Global Long Duration Energy Storage Market Size study, by Technology (Mechanical Storage, Thermal Storage, Electrochemical Storage), Duration (8 to 24, >24 to 36, >36), Capacity (Up to 50 MW, 50-100 MW, More Than 100 MW), Application, End User, and Regional Forecasts 2022-2032

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Abstracts

The Global Long Duration Energy Storage Market is valued at approximately USD 4.26 billion in 2023 and is expected to grow at an impressive CAGR of 13.6% during the forecast period 2024-2032. The long-duration energy storage market plays a critical role in ensuring grid stability and resilience as renewable energy sources become more prominent in energy systems worldwide. The increasing integration of renewables like solar and wind demands efficient storage solutions to handle intermittent energy supplies. As nations focus on decarbonizing electricity, demand for long-duration energy storage technologies such as flow batteries, compressed air, and thermal storage is rapidly rising.

Government policies and incentives that support energy storage deployment, along with advancements in storage technologies, are driving the market forward. Cost reductions in storage solutions have further enhanced economic feasibility, enabling global carbon neutrality and accelerating the energy transition. Additionally, the grid management segment emerges as a leader in the market due to the critical role of energy storage in frequency regulation, voltage stability, and peak load management.

Utilities are anticipated to be the largest end-user segment, driven by the necessity for grid stability and increasing adoption of renewables. Furthermore, North America leads the market owing to extensive integration of renewable energy sources, ambitious

decarbonization goals, and supportive government initiatives such as energy storage mandates and tax incentives.

Major market players included in this report are:

Sumitomo Electric Industries, Ltd.

ESS Tech, Inc.

Energy Vault, Inc.

Eos Energy Enterprises

Invinity Energy Systems

MAN Energy Solutions

Highview Power

Primus Power

CMBlu Energy AG

Malta Inc.

Fluence Energy, Inc.

Tesla, Inc.

Siemens AG

Lockheed Martin Corporation

NGK Insulators, Ltd.

The detailed segments and sub-segments of the market are explained below:

By Technology

Global Long Duration Energy Storage Market Size study, by Technology (Mechanical Storage, Thermal Storage, Ele...

Mechanical Storage

Thermal Storage

Electrochemical Storage

By Duration

8 to 24 Hours

24 to 36 Hours

36 Hours

By Capacity

Up to 50 MW

50-100 MW

More Than 100 MW

By Application

Grid Management

Energy Arbitrage

Backup Power

By End User

Utilities

Commercial & Industrial

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

Rest of Europe

Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

Latin America

Brazil

Mexico

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

Years considered for the study are as follows:

Historical Year – 2022

Base Year – 2023

Forecast Period – 2024 to 2032

Key Takeaways:

Market estimates & forecasts for 10 years from 2022 to 2032.

Regional and country-level analysis for each market segment.

Detailed competitive landscape profiling key players in the market.

Insights into key business strategies and recommendations for future market approaches.

Analysis of market dynamics, including drivers, challenges, and opportunities.

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