

Thermal Energy Storage Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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Abstracts

Market Overview:

The global thermal energy storage market size reached US\$ 6.3 Billion in 2022. Looking forward, IMARC Group expects the market to reach US\$ 11.5 Billion by 2028, exhibiting a growth rate (CAGR) of 10% during 2023-2028.

Thermal energy storage refers to a power storage system that is used for transferring and storing energy obtained from ice, cold air or water for later usage. It includes sensible, latent and thermochemical heat storage that is based on molten salt, ice and miscibility gap alloy technology (MGA). Some of these solutions are used for storing hot or cold energy for powering electrical systems in commercial and residential complexes, while others are used for storing solar energy in the summers, which is further utilized in the winters. This aids in preventing the overutilization of conventional energy from the grid systems.

Increasing emphasis on the utilization of renewable energy resources across the globe is one of the key factors driving the growth of the market. The growing demand for thermal energy storage systems in heating, ventilation and air conditioning (HVAC) technology for large-scale heating and cooling is also providing a boost to the market growth. Furthermore, concentrated solar power (CSP) is increasingly being integrated with the thermal energy storage systems to offer grid flexibility and minimize efficiency losses by generating electricity through dry cooling during lower ambient temperatures. Additionally, increasing environmental consciousness, coupled with the growing adoption of thermal energy storage for power generation in green buildings, is acting as another growth-inducing factor. Other factors, including the implementation of favorable



government policies to promote sustainable infrastructural development, along with extensive research and development (R&D) activities, are projected to drive the market further.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global thermal energy storage market report, along with forecasts at the global, regional and country level from 2023-2028. Our report has categorized the market based on storage type, technology, material type, application and end-use.

Breakup by Storage Type:

Sensible Heat Storage Latent Heat Storage Thermochemical Heat Storage

Breakup by Technology:

Molten Salt Technology Electric Thermal Storage Heaters Solar Energy Storage Ice-Based Technology Miscibility Gap Alloy Technology (MGA) Others

Breakup by Material Type:

Water Molten Salt Phase Change Materials (PCM) Others

Breakup by Application:

Power Generation District Heating and Cooling Process Heating and Cooling

Breakup by End-Use:

Thermal Energy Storage Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028



Residential and Commercial Sector Utility Industry Other Industries

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

Competitive Landscape:

The report has also analysed the competitive landscape of the market with some of the key players being Abengoa Solar S.A., Baltimore Aircoil Company Inc., Brightsource Energy Inc., Burns & McDonnell Inc., Chicago Bridge & Iron Company (McDermott International), DC Pro Engineering, Fafco Inc., Solarreserve LLC, Steffes Corporation, Terrafore Technologies LLC, etc.

Key Questions Answered in This Report:



How has the global thermal energy storage market performed so far and how will it perform in the coming years?

What are the key regional markets?

What has been the impact of COVID-19 on the global thermal energy storage market?

What is the breakup of the market based on the storage type?

What is the breakup of the market based on the technology?

What is the breakup of the market based on the material type?

What is the breakup of the market based on the application?

What is the breakup of the market based on the end-use?

What are the various stages in the value chain of the industry?

What are the key driving factors and challenges in the industry?

What is the structure of the global thermal energy storage market and who are the key players?

What is the degree of competition in the industry?



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