

## **Thermal Energy Storage Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

Market Report | 2023-01-23 | 125 pages | Mordor Intelligence

### **AVAILABLE LICENSES:**

- Single User License \$4750.00
- Team License (1-7 Users) \$5250.00
- Site License \$6500.00
- Corporate License \$8750.00

### **Report description:**

The thermal energy storage market is expected to record a CAGR of around 8% during the forecast period. The COVID-19 outbreak negatively impacted the market due to the industrial lockdowns and plummeted power demand in the power generation industry. The thermal energy storage industry players witnessed huge losses in their revenues. The ABENGOA company recorded a revenue of EUR 1,250 million for 2020, a 16% decline from EUR1,493 million in 2019. The thermal energy storage market is likely to boom in the future due to the increased demand for technology in the industrial sector for large-scale heating and cooling applications and the option for an eco-friendly method of saving energy for power generation during peak hours. However, the competition from other energy storage alternatives like battery energy storage is expected to hamper the market's growth in the future.

### **Key Highlights**

The power generation application is expected to witness significant growth during the forecast period due to the growing adoption of concentrated solar power (CSP) technology with thermal energy storage systems.

The research and innovation endeavors to diversify the scope of the technology by the industry players and government organizations create ample opportunities for the market. Very recently, the European Union allotted funds for the technological advancement of thermal energy storage under the Horizon 2020 program.

Europe is likely to grow faster during the forecast period due to the high demand for seasonal energy storage.

### **Thermal Energy Storage Market Trends**

#### **Power Generation Expected to Witness Significant Growth**

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scott-international.com](mailto:support@scott-international.com)

[www.scott-international.com](http://www.scott-international.com)

The global search for renewable methods of power generation and energy security has accelerated the need for technologies like concentrated solar power(CSP) in solar power generation. In the current scenario, these technologies are often used with thermal energy storage systems.

In 2020, the CSP power generation was around 14.5 TWh. The growth in the technology application was witnessed in the industrial and commercial sectors. Several projects are about to get added to the solar CSP power generation portfolio in combination with thermal energy storage systems.

In January 2022, the Chinese government announced plans to build 11 CSP projects with thermal energy storage by 2024. The country's state-owned firms are expected to play a leading role in the upcoming projects in consortium with other industry players. They are gigawatt-scale mixed renewable energy projects to be added within two years.

In August 2021, the Vast Solar Pty reported progress in the Vast Solar CSP Power Plant with thermal energy storage. The 30,000-kW project is located in Australia and is currently under construction. The project is expected to be operational in 2022. Due to these developments, the power generation segment is expected to occupy the largest market share during the forecast period.

### Europe Expected to Witness the Highest Growth

Europe has been installing various thermal energy storage systems for a decade in the urban districts of countries like Spain, Austria, and Northern and Central Europe. The major driver of such a strategic step is the high energy consumption during winters and exploring renewable ways of district heating.

The region has planned even more large-scale thermal storage projects to meet the ever-growing seasonal and short-term storage demand, with a majority of the installations with molten salt technology and underground hot water tanks. They are expected to serve as multifunctional energy hubs for future district heating sources and other applications.

In July 2021, Vantaa Energy declared plans to construct a seasonal thermal energy storage plant in Vantaa, Finland. The 90-GWh million cubic meter storage plant will include hot water caverns around 60 meters underground in bedrock. The company, along with its project partners AFRY and YIT, projected the completion of the project in 2026.

In January 2022, the European Union and the European Investment Bank chose Malta Inc., the grid-scale thermal energy storage provider, to execute the Sun2Store thermal energy storage project in Spain. It is a 1,000-MWh/ten-hour duration energy storage system that combines pumped heat technology with molten salt. The project will be developed in partnership with the Alfa level. Such developments are expected to boost the European thermal energy storage market significantly.

### Thermal Energy Storage Market Competitor Analysis

The thermal energy storage market is moderately consolidated. Some of the key players are BrightSource Energy Inc., Abengoa SA, Baltimore Aircoil Company, Terrafore Technologies LLC, and SR Energy.

#### Additional Benefits:

The market estimate (ME) sheet in Excel format  
3 months of analyst support

#### **Table of Contents:**

1 INTRODUCTION

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 1.1 Scope of the Study
- 1.2 Market Definition
- 1.3 Study Assumptions

## 2 RESEARCH METHODOLOGY

## 3 EXECUTIVE SUMMARY

## 4 MARKET OVERVIEW

- 4.1 Introduction
- 4.2 Market Size and Demand Forecast in USD billion, till 2027
- 4.3 Recent Trends and Developments
- 4.4 Government Policies and Regulations
- 4.5 Market Dynamics
  - 4.5.1 Drivers
  - 4.5.2 Restraints
- 4.6 Supply Chain Analysis
- 4.7 Porter's Five Forces Analysis
  - 4.7.1 Bargaining Power of Suppliers
  - 4.7.2 Bargaining Power of Consumers
  - 4.7.3 Threat of New Entrants
  - 4.7.4 Threat of Substitutes Products and Services
  - 4.7.5 Intensity of Competitive Rivalry

## 5 MARKET SEGMENTATION

- 5.1 Type
  - 5.1.1 Molten Salt
  - 5.1.2 Hot water
  - 5.1.3 Other Types
- 5.2 Application
  - 5.2.1 Power Generation
  - 5.2.2 Heating
  - 5.2.3 Cooling
- 5.3 Technology
  - 5.3.1 Sensible Heat Storage
  - 5.3.2 Latent Heat Storage
  - 5.3.3 Thermochemical Heat Storage
- 5.4 Geography
  - 5.4.1 North America
  - 5.4.2 Europe
  - 5.4.3 Asia-Pacific
  - 5.4.4 South-America
  - 5.4.5 Middle-East

## 6 COMPETITIVE LANDSCAPE

- 6.1 Mergers and Acquisitions, Joint Ventures, Collaborations, and Agreements
- 6.2 Strategies Adopted by Leading Players

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scotts-international.com](mailto:support@scotts-international.com)

[www.scotts-international.com](http://www.scotts-international.com)

### 6.3 Company Profiles

6.3.1 BrightSource Energy Inc.

6.3.2 Aalborg CSP AS

6.3.3 Abengoa SA

6.3.4 Baltimore Aircoil Company

6.3.5 Burns & McDonnell

6.3.6 SaltX Technology Holding AB

6.3.7 Terrafore Technologies LLC

6.3.8 Trane Technologies PLC

6.3.9 SR Energy

6.3.10 Vantaa Energy

## 7 MARKET OPPORTUNITIES AND FUTURE TRENDS

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: [support@scotts-international.com](mailto:support@scotts-international.com)

[www.scotts-international.com](http://www.scotts-international.com)

**Thermal Energy Storage Market - Growth, Trends, Covid-19 Impact, and Forecasts  
(2023 - 2028)**

Market Report | 2023-01-23 | 125 pages | Mordor Intelligence

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scotts-international.com

**ORDER FORM:**

Select license	License	Price
	Single User License	\$4750.00
	Team License (1-7 Users)	\$5250.00
	Site License	\$6500.00
	Corporate License	\$8750.00
		VAT
		Total

\*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

\*\* VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>
Zip Code*	<input type="text"/>	Country*	<input type="text"/>
		Date	<input type="text" value="2026-02-27"/>
		Signature	

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

