

# The Energy Storage Technologies (EST) Market 2013-2023

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#### **Abstracts**

Energy storage technologies (EST) are becoming increasingly important for improving the efficiency of electricity grid systems. With an ever larger share of power generation coming from intermittent renewable energy sources, rising commodity prices and escalating energy peak demand in high-growth economies, EST are under the spotlight as potential game changers in the management of power transmission and distribution. At present, only some EST are commercially viable; yet, visiongain expects the market to see exponential growth in the next ten years, led by technological, economic and political factors already in action.

Visiongain calculates that the 2013 global EST market will be worth \$4,033m in sales value, project CAPEX and RD&D funds. This includes the market estimates for pumped hydro storage, grid-scale battery, compressed air energy storage (CAES), thermal storage, flywheel, ultracapacitor systems and other niche EST currently at their early development stage.

#### Why you should buy The Energy Storage Technologies (EST) Market 2013-2023

What is the future of the energy storage technologies (EST) market? Visiongain's comprehensive analysis contains highly quantitative content delivering solid conclusions benefiting your analysis and illustrates new opportunities and potential revenue streams helping you to remain competitive. This definitive report will benefit your decision making and help to direct your future business strategy.

Avoid falling behind your competitors, missing critical business opportunities or losing industry influence. In our new report you will discover forecasts from 2013-2023 at the global, submarket, and national level. The report also assesses technologies,



competitive forces and expected product pipeline developments.

# We guarantee that you will receive key information which will benefit you in the following way

View global energy storage technologies (EST) market forecasts and analysis from 2013-2023 to keep your knowledge ahead of your competition and ensure you exploit key business opportunities

The report provides detailed CAPEX (USD) projections for the market, the competitors, and the commercial drivers and restraints allowing you to more effectively compete in the market. In addition to market forecasts from 2013-2023, our new study shows current market data, and market shares for each technology submarket and 11 leading national markets.

You will also discover original critical analysis, revealing insight into commercial developments

Why struggle to find key market data? Why miss crucial information? Our comprehensive report provides instant market insight

Our 252-page report provides 174 tables, charts, and graphs. Let our analysts guide you with a thorough assessment of the current and future energy storage technologies (EST) market prospects.

This analysis will achieve quicker, easier understanding. Also you will gain from our analyst's industry expertise allowing you to demonstrate your authority on the EST sector

Understand what thought leaders are thinking. These leaders hold critical knowledge. Be part of this knowledge

By reading the exclusive expert interviews contained in the report you will keep up to speed with what is really happening in the industry. Don't fall behind. You will gain a thorough knowledge on the energy storage technologies sector finding strategic advantages for your work and will learn how your organisation can benefit.

Read the full transcripts of three exclusive expert opinion interviews from



leading industry specialists informing your understanding and allowing you to assess prospects for investments and sales:

Tim Hennessy, Executive Vice President at Deeya Electric

Bret Adams, Director of Business Development at EnerVault

Mr Michael Sund, Vice President-Communications and Investor Relations at Maxwell Technologies

Learn about the market prospects for the leading technology types from 2013-2023

How will individual technology types perform over the forecast period? Discover how high CAPEX can go, from 2013-2023, learning about products and years with the highest predicted growth and revenues. You will also be provided with capacity forecasts (GW) for each technology over the next ten years. You will be able to assess each technology's future, seeing progress and finding what it means, including emerging trends for those technologies. These forecasts will also reveal the competitive landscape. You will see what is happening, explaining the challenges, trends, competitors, and market opportunities. Our report reveals forecasts for the 6 leading key product types as follows:

Pumped hydro storage market and capacity forecast 2013-2023

Grid-scale batteries market and capacity forecast 2013-2023

Compressed air energy storage (CAES) market and capacity forecast 2013-2023

Thermal storage market and capacity forecast 2013-2023

Flywheel market and capacity forecast 2013-2023

Ultracapacitor market and capacity forecast 2013-2023

Other EST market and capacity forecast 2013-2023



Understand the prospects for the 11 leading national EST markets - where will the highest revenues and opportunities occur?

Learn about the market potential for EST companies in the developed and developing countries, from 2013 onwards. You will see where and how opportunities exist with revealing individual market and capacity forecasts and analysis from 2013-2023 for 11 leading national markets, plus the market for the rest of the world.

China market and capacity forecast 2013-2023

US market and capacity forecast 2013-2023

Japan market and capacity forecast 2013-2023

Germany market and capacity forecast 2013-2023

India market and capacity forecast 2013-2023

Spain market and capacity forecast 2013-2023

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UK market and capacity forecast 2013-2023

Brazil market and capacity forecast 2013-2023

South Korea market and capacity forecast 2013-2023

Rest of the World market and capacity forecast 2013-2023

Explore the factors affecting product developers, and everyone within the value chain. Learn about the forces influencing market dynamics.

Explore the political, economic, social, and technological (PEST) issues assessing product advances. Discover what the present and future outlook for businesses will be. Learn about the following business critical



issues

Technological issues and constraints

Supply and demand dynamics

Competition from new product types

Increasing industry consolidation

Advances in product quality

Analysis of barriers to entry

Main policies influencing the market environment

Identify who the leading companies are in the energy storage industry

Our report reveals the technologies and companies which hold the greatest potential. In particular, exploring and analysing the activities of these companies: See where the expected gains will be. Prospects for advances in the EST industry are strong, and from 2013 the sector holds many opportunities for revenue growth. View visiongain's assessment of the prospects for established competitors, rising companies, and new market entrants. Our work explains that potential, helping you stay ahead. Gain a thorough understanding of the competitive landscape with profiles of 5 leading energy storage companies examining their 2012 market spending and market share, capabilities, product portfolios, R&D activity, services, focus, strategies, M&A activity, and future outlook:

Alstom

Voith Hydro

Toshiba

**Dongfang Electric** 

Sinohydro



In addition, shorter profiles are included for a further 61 players active in the EST market.

### Discover Information found nowhere else in this independent assessment of the energy storage technologies market

The Energy Storage Technologies (EST) Market 2013-2023 report provides impartial EST sector analysis. With the independent business intelligence found only in our work, you will discover where the prospects are for profit. In particular, our new research provides you with key strategic advantages: Our informed forecasts, independent and objective analysis, exclusive interviews and revealing company profiles will provide you with that necessary edge, allowing you to gain ground over your competitors.

With this report you are less likely to fall behind in knowledge or miss crucial business opportunities. You will save time and receive recognition for your market insight. See how this report could benefit and enhance your research, analysis, company presentations and ultimately your individual business decisions and your company's prospects.

#### What makes this report unique?

Visiongain consulted widely with leading industry experts and full transcripts from these exclusive interviews with Deeya Energy, EnerVault and Maxwell Technologies are included in the report. Visiongain's research methodology involves an exclusive blend of primary and secondary sources providing informed analysis. This methodology allows insight into the key drivers and restraints behind market dynamics and competitive developments. The report therefore presents an ideal balance of qualitative analysis combined with extensive quantitative data including global, submarket and national market forecasts from 2013-2023

## How The Energy Storage Technologies (EST) Market 2013-2023 report can benefit you

Visiongain's report is for anyone requiring analysis of the energy storage technologies market. You will discover CAPEX and capacity forecasts, technological trends, predictions and expert opinion providing you with independent analysis derived from our extensive primary and secondary research. Only by purchasing this report will you



receive this critical business intelligence revealing where revenue growth is likely and where the lucrative potential market prospects are. Don't miss this key opportunity to gain a competitive advantage.

If you buy our report today your knowledge will stay one step ahead of your competitors. Discover how our report could benefit your research, analyses and strategic decisions, saving you time. To gain an understanding of how to tap into the potential of this market and stay one step ahead of the competition you must order now our report The Energy Storage Technologies (EST) Market 2013-2023: Avoid missing out - order our report today.



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#### **COMPANIES LISTED**



A123 Systems, Abatel, Active Power, AES Corporation, AES Energy Storage, Alstom, Alstom Grid, Amber Kinetics, American Electric Power (AEP), Andritz, Angel Holdings, Applied Power, Aguion Energy, Arizona Public Service Company, Ataur Nanotechnologies Inc. (Altairnano), Austin Energy, Axeon, Axion Power, Bard, Beacon Power, Beta R&D, Black & Veatch, Bloomberg New Energy Finance (BNEF), BMW, Bosch, Boston Power Inc., BYD Co Ltd., C&D Technologies Inc., Calisolar, Cellstrom, China Hydropower Engineering Consulting Group Corporation, China National Electric Equipment Corporation (CNEEC), China Southern Power Grid, China Water Conservancy Corporation, Coca-Cola, Con Edison, CSG Power Generation Company, Daewoo, DayStar Technologies, Deeya Energy, DLR, Dongfang Electric, Dow Chemical Company, Dow Kokam, Dresser Industries, Dresser-Rand Group, Duke Energy, E.On, East Penn Manufacturing, Ecoult, ?%lectricit?© R?©seau Distribution France (ERDF), Electrovaya, Enel, Energy Safe Victoria, Energy Storage & Power (ESP), EnerSys, EnerVault, Eos Energy Storage, Epsilon Battery, Excell Battery, Exide Technologies, FIAMM, Firefly International Energy, Forbes, Foundation Asset Management (FAM), Gaia Akkumulatorenwerke, General Compression, General Electric (GE), Gildemeister, Google, GP Batteries, Green Charge Networks (GCN), Groupe Industriel Marcel Dassault, GS Yuasa, GS Yuasa International, GS Yuasa Power Fielding, GSR Ventures, Harting Inc., Highview Power Storage, Hitachi, Hitachi Battery Systems Company, HydroChina Zhongnan Engineering Corp., Ingersoll Rand, Isentropic Ltd., Johnson Controls Inc., Johnson Matthey Group, KT, LG Chem, Lithium Technology Corp. (LTC), M+W Group, Maxwell Technologies, Mitsubishi Heavy Industries (MHI), MWH Global, Nedap, Nesscap Energy, Nexeon, NGK Insulators, Nichicon Corporation, Nippon Chemi-Con Corporation, Oak Investment Partners, Palladium Energy, Panasonic Corporation, Phillips Service Industries, Plug Power, Powerthru, Primus Power Corp., Proterra, Prudent Energy, Red Flow Ltd., Restore Energy Systems, Rockland Capital, Rusano, RWE Power, Saft, Saft, Samsung Corporation, Samsung SDI, Sanyo Electric, Schluchseewerk, Seeo Inc., Shimizu Corporation, Shimizu Institute of Technology, Siemens, Sinohydro (China Water Conservancy and Hydropower Construction Corporation), SK Telecom, Solyndra, Sony Corporation, Southern California Edison, Stadtwerke Mainz, State Grid Corporation of China (SGCC), Sumitomo Corporation, Sustainx Inc., Terna, Terna Plus, TK Advanced Battery, Tokyo Electric Power Company (Tepco), Toshiba, Trianel GmbH, Ultralife Corporation, Valence Technology Inc., Verbund, Voith GmbH, Voith Hydro, VRB Power Systems, Vycon Inc., Wal-Mart, Wanxiang, Wemag, Williams Hybrid Power, WZE, Xcel Energy, Xtreme Power Inc., Younicos, ZBB Energy Corporation, Z??blin

#### OTHER ORGANISATIONS MENTIONED IN THIS REPORT



Brazilian Wind Energy Association, California Public Utility Commission (CPUC), Central Electricity Agency (CEA), China Centre for Renewable Energy Development (CRED), China Electrical Power Research Institute (CEPRI), Communist Party of China, Electric Power Research Institute (EPRI), Electric Vehicle Initiative (EVI), Electricity Storage Association, Energy Technology Institute (ETI), Engineering News, European Commission, European Parliament, European Photovoltaic Industry Association (EPIA), European Union (EU), Fraunhofer Center for Energy Storage, Fraunhofer Society, French Environment and Energy Management Agency (ADEME), French Europe Ecology-The Greens, German Christian Democratic Union (CDU), German Christian Social Union (CSU), German Liberal Democratic Party (FDP), Germany Federal Association of Energy and Water Industries (BDEW), Germany Federal Association of Energy Storage (BVES), Global Wind Energy Council (GWEC), Imperial College London, Indian Ministry of New and Renewable Energy, International Atomic Energy Agency (IAEA), International Energy Agency (IEA), Italian Ministry of Economy and Finances, Kodiak Electric Association (KEA), Korea Institute of Energy Research (KIER), Kuick Research, Kyoto University, Los Angeles Department of Water and Power (LADWP), Massachusetts Institute of Technology (MIT), National Aeronautics and Space Administration (NASA), Okinawa Institute of Science and Technology (OIST), Organisation for Economic Co-operation and Development (OECD), Paris Stock Exchange (PAR), Public Utilities Commission of Ohio (PUCO), Regenesys, REN21, Shanghai Stock Exchange (SHH), South Korean Ministry of Knowledge Economy, Spanish People's Party, Tokyo Stock Exchange (TYO), Toronto Stock Exchange (TSX), UK Conservative Party, UK Department of Energy and Climate Change (DECC), UK Liberal Democratic Party, UK National Grid, UK Office of Gas and Electricity Markets (Ofgem), UK Technology Strategy Board (TSB), United Nations Framework Convention on Climate Change (UNFCCC), University of St. Andrews, US Democratic Party, US Department of Energy (DOE), US Energy Information Administration (EIA), US Federal Energy Regulatory Commission (FERC), US Republican Party



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