

Distributed Energy Storage System Market Is Anticipated to Reach a Valuation of US\$ 10.6 billion by 2032

Value of distributed energy storage system market has reached US\$ 4.2 bn in 2022 & is expected to increase at a CAGR of 9.6% to end up at US\$ 10.6 bn by 2032.

ROCKVILLE, MARYLAND, UNITED STATES, September 13, 2023 /EINPresswire.com/ -- The valuation of the globally distributed energy storage system market has reached US\$ 4.2 billion in 2022 and is expected to increase rapidly at a CAGR of 9.6% to end up at US\$ 10.6 billion by 2032. Sales of distributed energy storage systems accounted for around 12% share of the global energy storage system market at the end of 2021.

The Distributed Energy Storage System (DESS) market is experiencing robust

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Distributed Energy Storage System Market

growth and transformation as the global energy landscape shifts towards sustainability, decentralization, and improved grid resilience. DESS comprises a network of small-scale energy storage systems deployed closer to end-users, enabling better management of energy supply and demand, integration of renewable energy sources, and enhanced grid stability.

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Overview of the Distributed Energy Storage System (DESS) Market

Distributed Energy Storage Systems (DESS) are a vital component of the evolving energy ecosystem, allowing for the efficient capture and utilization of surplus energy, especially from

renewable sources like solar and wind. DESS can be deployed at various scales, including residential, commercial, and industrial, enabling consumers to optimize energy consumption, reduce electricity costs, and contribute to grid stability. The market encompasses a wide range of energy storage technologies, including lithium-ion batteries, flow batteries, and advanced energy management systems.

"The Soaring Electric Vehicle Industry Fuels Demand for Distributed Energy Storage Systems"

With an improved standard of living and changing consumer preferences, the automotive industry has witnessed a significant shift towards electric vehicles (EVs). Most EVs are equipped with substantial battery capacity, often exceeding the requirements for daily commuting. These robust batteries have the potential to store surplus energy, far beyond what is necessary for a typical daily commute, making them capable of supplying the energy needs of an average household.

The installation of bidirectional charging infrastructure further enhances the utility of these EVs. This infrastructure allows EVs to charge at home when electrical supply is available and also serve as a power source for household appliances during power outages. Once connected, this infrastructure can efficiently harness excess energy from the grid, storing it in the EV's battery bank. Conversely, it can release stored energy back to the grid to stabilize grid fluctuations. This capability is propelling the rapid growth of distributed battery energy storage systems, which are poised to become an integral part of the energy landscape.

Governments in various countries, including the United States and European nations, have introduced numerous policies to support the manufacturing and adoption of electric vehicles. In 2021, global electric vehicle sales reached a staggering 6.6 million units, constituting 10% of total global automotive sales. By the end of 2021, there were approximately 16.5 million electric vehicles in operation worldwide.

As a result of this electric vehicle revolution, the demand for distributed energy storage systems is expected to surge significantly in the years ahead, as these systems play a crucial role in efficiently storing and utilizing the surplus energy generated by the rapidly growing electric vehicle fleet."

Competitive Landscape

Prominent manufacturers in the distributed energy storage system (DESS) market include ABB, Antora Energy, AutoGrid Systems, Inc., Black & Veatch Holding Company, BYD Motors Inc., Cision US Inc., Eos Energy Enterprises, Inc., Fluence, GENERAL ELECTRIC, Hitachi Energy Ltd., Jabil Inc., Johnson Controls, NEC Corporation, NextEra Energy Resources, LLC, Panasonic Corporation, SAMSUNG SDI CO., LTD., Schneider Electric, Tesla, and TOSHIBA CORPORATION.

In June 2022, Lingtan Intelligence introduced its Tensorpack T 200kWh/100kW distributed energy

storage (DES) system. This innovative DES system incorporates batteries, a thermal management system, a DC/AC bidirectional converter, and a fire protection system within a single cabinet, streamlining energy storage solutions for various applications.

In October 2021, Gogoro, Taipower, and Enel X collaborated to expand the capabilities of distributed energy storage systems by enabling bidirectional charging through their battery swapping stations. This collaborative effort broadens the horizons of DESS by tapping into diverse energy sources, further enhancing its effectiveness.

In September 2021, SimpliPhi Power and Lumin partnered to introduce a user-friendly app designed for monitoring energy generation, consumption, and storage system control. This development simplifies the management and optimization of distributed energy storage systems, making them more accessible and efficient for end-users.

Current Industry News and Trends

Residential Energy Storage on the Rise: The residential sector has witnessed a significant uptick in DESS adoption as homeowners seek to reduce their reliance on the grid and lower electricity bills. Improved battery technology and favorable policies, such as incentives and net metering, have encouraged residential consumers to invest in energy storage solutions.

Grid Integration and Demand Response: DESS plays a crucial role in grid integration and demand response programs. Utilities and grid operators are increasingly utilizing distributed energy storage to manage peak demand, enhance grid reliability, and integrate intermittent renewable energy sources more effectively. This trend is vital for achieving grid resilience and sustainability goals.

Decentralization of Energy: DESS aligns with the broader trend of energy decentralization, allowing consumers to generate, store, and consume their electricity locally. This shift reduces transmission losses, enhances energy security, and empowers consumers to take greater control over their energy usage.

Renewable Energy Integration: DESS facilitates the integration of renewable energy sources, such as solar and wind, by storing excess energy during periods of high generation and releasing it during times of low generation or high demand. This capability enhances the reliability and stability of renewable energy systems.

Energy Transition Initiatives: Many governments and regions are launching initiatives to accelerate the transition to clean energy. DESS is a critical component of these initiatives, supporting the expansion of renewable energy capacity and reducing greenhouse gas emissions.

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Segmentation of Distributed Energy Storage System Industry Research

By Energy Source:

Electricity Grids Renewable Power Sources Solar Wind

By Battery Type:

Lithium-ion Nickel-cadmium Lead-acid Others

By Capacity:

Single Phase Three-phase

By End User:

Commercial

BFSI

Education Institutes

Government & Public Sector

Healthcare

IT and Telecommunications

Retail & e-Commerce

Transportation and Logistics

Others

Residential

By Region:

North America Latin America Europe East Asia

South Asia & Oceania

Middle East & Africa

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<u>Automotive Transmission System Market</u>: Automotive transmission systems market size estimated at US\$ 43.4 billion in 2023. The global market is expected to reach US\$ 79.95 billion by 2033.

<u>Exhaust System Market</u>: Exhaust System Market is expected to reach a valuation of U\$ 57.5 billion by 2022. By sales channel, OEMs to capture major market share in the global market.

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