## Energy storage software



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Staying ahead of the technology curve means strengthening your competitive advantage. That is why we give you data-driven innovation insights into the energy industry. This time, you get to discover four hand-picked energy storage software companies.

Energy storage management systems increase the value of energy storage by forecasting thermal capacities within electricity grids, batteries, and renewable energy plants. They provide real-time data and information, relieve transmission and distribution network congestion, maintain Volt-Ampere Reactive (VAR) control. Together, startups working on energy storage solutions aim to simplify energy storage management.

US-based startup Nikola Power offers intelligent energy storage software that ensures efficient battery management for renewable energy sources and grids. The startup uses proprietary algorithms to dynamically control the battery performance. It also optimizes savings in behind-the-meter storage systems.

The integration of renewable energy grids with traditional energy networks poses a challenge for grid stability. This is why energy storage optimization is a hot topic. This software solution applies complex algorithms, like the particle swarm optimization algorithm, to configure the capacities of networks and commercial buildings. As a result, these systems maximize storage benefits and minimize energy losses and volatility.

Canadian startup Peak Power develops a software platform called Synergy to counterbalance peak demand for electric utilities and commercial buildings. It responds in real-time to market signals, forecasts peak events, determines operation times, and optimizes the use of storage capacities in distributed energy resources (DERs).

As energy producers work to decrease the use of fossil fuels, there is a need for continuous analysis of power capacities to eliminate disparities between energy demand and supply. Energy storage analytics leverages big data and machine learning to extract energy storage insights in real-time and empower users to access analytics and insights.

Based in the USA, Energsoft is a startup developing a cloud-hosted AI platform to tackle the challenges of data collection, stitching, and analysis for sustainable batteries. Employing deep learning techniques, the startup detects design problems, monitors battery conditions, and prompts users for making upgrades.

Energy storage simulation addresses the issues and bottlenecks in energy storage facilities by replicating the behavior of energy networks. Based on incoming power data, it is designed to predict lifetime performance and return on investment (ROI) for batteries and storage facilities. Storage simulation also enables cities to identify deficit demand and plan renewable grids to support the affected regions.



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German startup TWAICE leverages the power of digital twin technology to simulate electric batteries. They combine the data collected from the battery management system, model libraries, and external data sources to build a high-precision model. The startup also performs additional analytics to increase the efficiency, reliability, and durability of energy storage systems.

The energy startups showcased in this report are only a small sample of all startups we identified through our data-driven startup scouting approach. Download our free Energy Innovation Report for a broad overview of the industry or get in touch for quick & exhaustive research on the latest technologies & emerging solutions that will impact your company!

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