

European Solar Energy Storage

Infrastructure investment energy storage



Overview

PE investment in battery energy storage systems is surging, fueled by their high return potential and growing energy transition demands. PitchBook data shows that PE investments in energy storage and infrastructure have more than doubled since 2014, reaching \$21.1 billion in 2024 alone. Is battery storage a fundamental part of energy infrastructure?

“Battery storage is now viewed as a fundamental part of energy infrastructure, much like LNG terminals and oil tankers,” said Gresham House infrastructure and energy transition investor Lefteris Stakosias. Stakosias said this investment boom reflects a broader shift in the global energy market toward renewables.

Why is PE investment in battery energy storage growing?

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How much did energy storage cost in 2022?

Although energy storage remains a relatively small portion of the total budget for distribution infrastructure, spending increased from \$97 million in 2022 to \$723 million in 2023.

How much will Europe invest in grid infrastructure by 2030?

In Europe, industry lobby group ERT said that the European Union needed to invest €800 billion in grid infrastructure by 2030, with the bulk of investment going to distribution grids (60%) and a quarter to transmission grids. The rest would be directed towards cross-border transmission and energy storage.

How did electric infrastructure change over the years?

Capital investment in electric infrastructure mostly drove the increase, more

than doubling over the period as: Aging generation and delivery infrastructure were replaced or upgraded to resist fire and storm damage. Utilities installed first natural gas-fired generation, then wind and solar generation, and, more recently, battery storage.

Will Green flexibility be Europe's largest battery energy storage system?

The project is expected to be one of Europe's largest battery energy storage systems. Partners Group's January investment in Green Flexibility, a German battery storage developer, underscores the focus on scaling high-potential businesses in energy markets with strong policy support.

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Unleashing the Full Potential of Industrial Clusters: Infrastructure

The Unleashing the Full Potential of Industrial Clusters: Infrastructure Solutions for Clean Energies report examines the challenges around clean energy infrastructure deployment and identifies solutions for clusters, transport and logistics industries.

Closing the global infrastructure investment gap

The World Economic Forum is fostering new approaches to infrastructure investment by maximizing private-sector investment in infrastructure. This is being done by connecting multilateral development banks and governments with institutional investors such as banks, pension funds, insurance companies, asset managers and sovereign funds.



Energy transition infrastructure, regulation and investment

Expert insight on how countries around the world can build secure, equitable and sustainable infrastructure that underpins the global energy transition.

Investing in the grid: PE's

battery storage strategy

As investment in energy infrastructure continues to grow, PE firms are turning to large-scale battery storage to solve the issue of storing intermittent energy sources.



IRENA: Grid infrastructure and energy storage key to energy

...

The deployment of grid infrastructure and energy storage is a key element to avoid delaying global energy transition, according to the International Renewable Energy Agency (IRENA).

World Energy Investment 2024 - Analysis

Global energy investment is set to exceed USD 3 trillion for the first time in 2024, with USD 2 trillion going to clean energy technologies and infrastructure. Investment in clean energy has accelerated since 2020, and spending on renewable power, grids and storage is now higher than total spending on oil, gas, and coal.



Can energy storage systems help reduce the need for new infrastructure

In summary, energy storage systems play a crucial role in enhancing grid reliability, optimizing energy use, and supporting renewable energy integration, all of which contribute to reducing the need for new infrastructure

investments.



Energy storage infrastructure: 7 Crucial Benefits in 2025

By capturing extra energy produced during sunny or windy periods and storing it, energy storage infrastructure acts as a giant, reliable battery for the grid. It releases electricity exactly when we need it--like in the ...

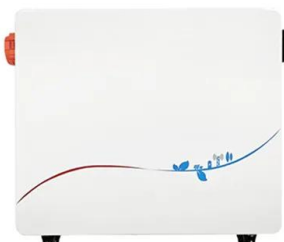


Energy Storage Investments - Publications

Regardless of the investment thesis, energy storage transactions continue to grow. Through the first three quarters of 2024, 83 energy storage financing and investment deals were reported completed for a total of \$17.6 billion invested [1].

What is the US infrastructure bill? An expert explains

Why is the 'historic' Infrastructure Investment and Jobs Act seen as such a big deal? The Forum spoke to infrastructure expert Joel Moser to find out more.





Renewable Infrastructure Investments An Increasing Focus ...

Consequently, MetLife Investment Management (MIM) believes investors focused on infrastructure increasingly will seek to allocate capital to financing renewable energy and systems to store such power generation.

Funding Notice: Infrastructure Investment and

WPTO issued a \$14.5 million funding opportunity to support the sustainable development of hydropower at non-powered dams, pumped storage hydropower, and additional hydropower research and development.



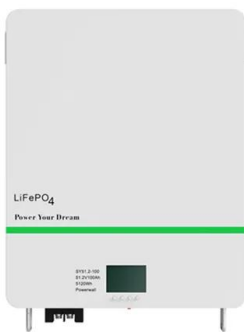
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Why we must invest in sustainable infrastructure

Infrastructure forms the backbone of modern economies but there is an estimated \$15 trillion infrastructure investment gap until 2040. Private capital is critical to closing this gap but institutional investors allocate an average of only 5% of their portfolios to infrastructure.

Sustainable infrastructure outperforms conventional infrastructure by over 20% ...



Overcoming one of the biggest barriers to scaling EVs , World

...

This innovative idea could help scale urban EV charging infrastructure. The top 5 countries for electric vehicle adoption. The world needs 2 billion electric vehicles to get to net zero. But is there enough lithium to make all the batteries? The company is building a network of kerbside EV chargers powered from buildings rather than the utility.

Renewable Energy Systems and Infrastructure , Investment

Global investment in grid infrastructure reached 274 USD billion in 2022. Other countries also made relevant power grid infrastructure investment announcements in 2022.



Industry Leaders Join Forces to Accelerate Renewables ...

The Responsible Renewables Infrastructure Initiative mobilises leaders from business, government, non-profit organizations and academia who are committed to accelerating the



deployment of renewable power infrastructure in a manner which creates more equitable outcomes for people and positive impacts on biodiversity.

Green and blue infrastructure can make cities more resilient

Research shows that green and blue infrastructure can mitigate physical risks and foster the social cohesion critical for cities to survive climate change.



5 futures of infrastructure: What will we build by 2100?

Five future infrastructure scenarios and why bold, resilient and sustainable planning is essential to meet climate, economic and societal demands.

Digital public infrastructure is key to a connected future

Digital public infrastructure is key to enabling a connected future for the benefit for all, but it needs to be accessible, safe, scalable and trustworthy.





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Grid infrastructure investments drive increase in utility spending ...

Aging generation and delivery infrastructure were replaced or upgraded to resist fire and storm damage. Utilities installed first natural gas-fired generation, then wind and solar generation, and, more recently, battery storage. New ...



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