

Energy storage system saves carbon emissions



Overview

Energy storage slashes carbon footprint by enabling renewable energy use, improving grid efficiency, and reducing reliance on fossil fuels.

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[How artificial intelligence can help achieve a clean energy future](#)

A look at how AI can be used to help support the clean energy transition by helping to manage power grid operations, plan infrastructure investments, guide the development of novel

[Explained: Generative AI's environmental impact](#)

MIT News explores the environmental and sustainability implications of generative AI technologies and applications.



[MIT Energy Initiative conference spotlights research](#)

At the MIT Energy Initiative's Annual Research Conference, industry leaders agreed collaboration is key to advancing critical technologies amidst a changing energy landscape.

[Next-generation geothermal energy: Promise, progress, and challenges](#)

Geothermal energy, a clean, continuous energy source accessible in many locations, has been slow to catch on. Nearly 2,000 years ago, the Romans made extensive use of geothermal



[A new approach could fractionate crude](#)



[oil using much less energy](#)

MIT engineers developed a membrane that filters the components of crude oil by their molecular size, an advance that could dramatically reduce the amount of energy needed for crude oil

[Study: Fusion energy could play a major role in the global response to](#)

Investigators in the MIT Energy Initiative and the MIT Plasma Science and Fusion Center have found that - depending on its future cost and performance - fusion energy has the potential



[Using electricity storage to reduce greenhouse gas emissions](#)

While energy storage is key to increasing the penetration of variable renewables, the near-term effects of storage on greenhouse gas emissions are uncertain. Several studies have

[Energy storage systems for carbon neutrality:](#)

Research on the design and operational optimization of energy storage systems is crucial for advancing project demonstrations and commercial



[Making clean energy investments more successful](#)

New research emphasizes the importance of well-validated models and forecasting tools in evaluating choices for investments in clean energy technologies and policies by governments and

[Giving buildings an "MRI" to make them more energy-efficient and](#)

Founded by a team from MIT, Lamarr.AI utilizes drones, thermal imaging, and AI to identify energy waste and structural issues in buildings and recommend retrofits.



Evelyn Wang: A new energy source at MIT

As MIT's first vice president for energy and climate, Evelyn Wang is working to broaden MIT's research portfolio, scale up existing innovations, seek new breakthroughs, and channel

[MIT engineers create an energy-storing supercapacitor from ancient](#)

MIT engineers created a carbon-cement supercapacitor that can store large amounts of energy. Made of just cement, water, and carbon black, the device could form the basis for



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