



MIT News; Topics; Energy storage Topic Energy storage. Download RSS feed: News Articles / In the Media / Audio. Displaying 31 - 45 of 142 news articles related to this topic. Show: News Articles. In the Media. Audio. Ocean scientists measure sediment plume stirred up by deep-sea-mining vehicle



Offering clean energy around the clock. MIT spinout 247Solar is building high-temperature concentrated solar power systems that use overnight thermal energy storage to provide power and heat. April 30, 2024. Read full story ???



In a new paper published in Nature Energy, Sepulveda, Mallapragada, and colleagues from MIT and Princeton University offer a comprehensive cost and performance evaluation of the role of long-duration energy storage (LDES) technologies in transforming energy systems. LDES, a term that covers a class of diverse, emerging technologies, can respond



In deeply decarbonized energy systems utilizing high penetrations of variable renewable energy (VRE), energy storage is needed to keep the lights on and the electricity flowing when the sun isn't shining and the ???



"The Future of Energy Storage," a new multidisciplinary report from the MIT Energy Initiative (MITEI), urges government investment in sophisticated analytical tools for planning, operation, and regulation of ???



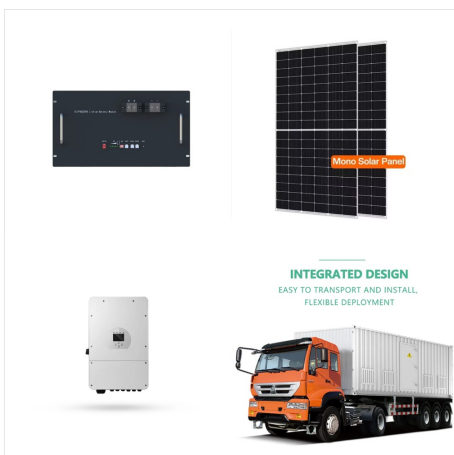
In a new paper published in Nature Energy, Sepulveda, Mallapragada, and colleagues from MIT and Princeton University offer a comprehensive cost and performance evaluation of the role of long-duration energy storage (LDES) technologies in transforming energy systems. LDES, a term that covers a class of diverse, emerging technologies, can respond



The Future of Energy Storage. The Future of Nuclear Energy in a Carbon-Constrained World. The Future of Solar Energy. The Future of the Electric Grid. Six innovative energy projects received MIT Energy Initiative Seed Fund grants. Annual MITEI awards support research on carbon removal, novel materials for energy storage, improved power.



MIT's energy conservation program, Efficiency Forward, has been operating since 2010 and continues to implement highly successful conservation measures to reduce energy use across campus. Efficiency Forward provided key guidance throughout the ???



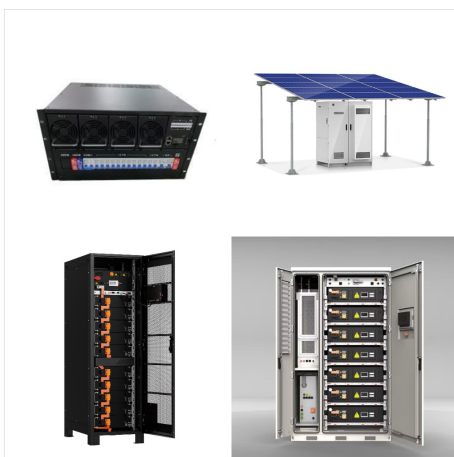
Ravi Manghani, energy storage director for GTM Research, a solar-market analysis firm, who moderated that panel, concluded that what researchers really need to do now is "work on making energy storage less ???



We will dine and discuss with the leaders of the Future of Energy Storage report on May 16, the night the report is released. Guests include Bob Armstrong and Rob Stoner, who lead the MIT Energy Initiative, as well as MIT Material Sciences Professor Yet-Ming Chiang and MIT Sloan Professor Emeritus Richard Schmalensee.



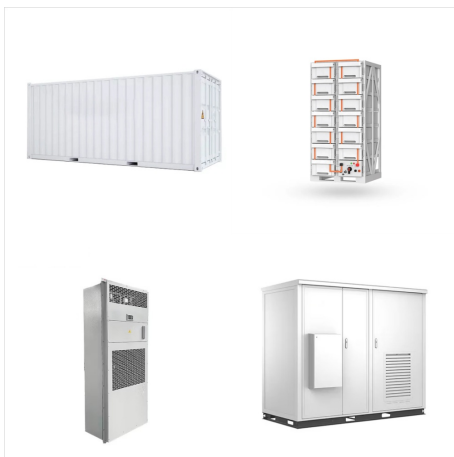
Recognizing the critical need for scalable energy storage solutions to develop regional energy systems in China, ENN Group of China has joined the MIT Energy Initiative (MITEI) to advance research in this area. With a three-year membership agreement, the ENN Group will participate in MITEI's Center for Energy Storage Research.



A new concept for thermal energy storage Cooling buildings worldwide. Analysis points the way to energy-efficient systems Quantum dot materials. Optimizing nanostructures for energy devices Making appliances???and energy grids???more efficient. In MIT Energy Initiative speaker series, Illinois Congressman highlights the policy measures



Fikile Brushett is an associate professor of chemical engineering at MIT, where he holds the Cecil and Ida Green Career Development Chair. His research focuses on advancing electrochemical technologies for a sustainable energy economy, with a particular fascination around the fundamental processes that define the performance, cost, and lifetime of present ???



Form Energy, founded out of the labs at MIT and headed up by former Tesla Energy executive Mateo Jaramillo, claims the battery can be made cheaply using abundant materials, offering the grid viable "multi-day" energy storage option. The US\$405 million Series F brings Form Energy's investment raised to date to well over a billion dollars.



In deeply decarbonized energy systems utilizing high penetrations of variable renewable energy (VRE), energy storage is needed to keep the lights on and the electricity flowing when the sun isn't shining and the wind isn't blowing ??? when generation from these VRE resources is low or demand is high.



MW/400MWh Alamos BESS in California, built at the site of an existing gas power plant. Image: AES Corporation. An interdisciplinary study conducted over three years by the Massachusetts Institute of Technology (MIT) Energy Initiative has found energy storage can be a key enabler for the clean energy transition.



- we used traditional units of power and energy for electricity, yet in order to compare across different energy storage technologies, a reminder that Wh and J are two units measuring energy ( $1\text{Wh} = 3600\text{J}$ ). - Electric power:  $P = V * I$  where V is the electric potential (volts, V) and I the current (Ampere, A). Battery's charge capacity is the



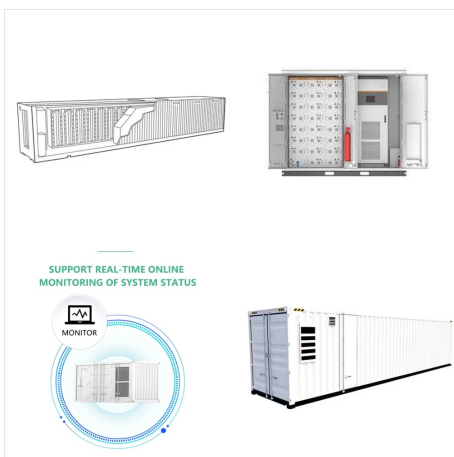
Ravi Manghani, energy storage director for GTM Research, a solar-market analysis firm, who moderated that panel, concluded that what researchers really need to do now is "work on making energy storage less complicated and more boring." MIT's Energy Conference is organized annually under the auspices of the MIT Energy Club, which with



An electrochemical technology called a semi-solid flow battery can be a cost-competitive form of energy storage and backup for variable sources such as wind and solar, finds an interdisciplinary team from MIT. The battery uses dispersed manganese dioxide particles, along with carbon black.



And because there can be hours and even days with no wind, for example, some energy storage devices must be able to store a large amount of electricity for a long time. Kara Rodby PhD '22 was supported by an ExxonMobil-MIT Energy Fellowship in 2021???2022. More information about this research can be found in the first article listed below.



"The overall question for me is how to decarbonize society in the most affordable way," says Nestor Sepulveda SM '16, PhD '20. As a postdoc at MIT and a researcher with the MIT Energy Initiative (MITEI), he worked with a team over several years to investigate what mix of energy sources might best accomplish this goal. The group's initial studies ???



PolyJoule is a Billerica, Massachusetts-based startup that's looking to reinvent energy storage from a chemistry perspective. Co-founders Ian Hunter of MIT's Department of Mechanical Engineering and Tim Swager of the Department of Chemistry are longstanding MIT professors considered luminaries in their respective fields.



MIT Energy Initiative report supports energy storage paired with renewable energy to achieve clean energy grids. An energy-storage solution that flows like soft-serve ice cream. Researchers make the case for a semisolid electrochemical compound as a cost-efficient, grid-scale battery backup for wind and solar power.



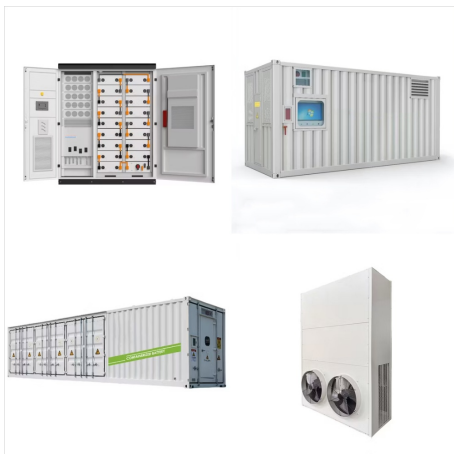
Emre Gen?er is a principal research scientist at the MIT Energy Initiative. The central theme of his research is to identify optimal utilization of resources for the evolving energy system facing the dual challenge of increasing demand while profoundly reducing its environmental footprint. His research focuses on integration of emerging and conventional ???



Robert C. Armstrong, the Chevron Professor of Chemical Engineering, emeritus, is the former director of the MIT Energy Initiative, an Institute-wide effort at MIT linking science, technology, and policy to transform the world's energy systems. A member of the MIT faculty since 1973, Armstrong served as head of the Department of Chemical Engineering from 1996??? Read more



An interdisciplinary team from MIT has found that an electrochemical technology called a semisolid flow battery can be a cost-competitive form of energy storage and backup for variable renewable energy (VRE) sources such as wind and solar. The group's research is described in a paper published in Joule.



A new study by researchers at MIT shows how to evaluate the technology choices available, including batteries, pumped hydroelectric storage, and compressed air energy storage, and demonstrates that even with today's prices for these technologies, such storage systems make good economic sense in some locations, but not yet in others.



MIT's Department of Mechanical Engineering (MechE) offers a world-class education that combines thorough analysis with hands-on discovery. One of the original six courses offered when MIT was founded, MechE faculty and students conduct research that pushes boundaries and provides creative solutions for the world's problems.