

Will a bill increase battery capacity on Illinois' electric grid?

Sen. Bill Cunningham plans to push forward a bill to significantly increase the battery capacity on Illinois' electric grid. He considers it a necessary complement to the 2021 Climate and Equitable Jobs Act, which set a 2045 goal to shutter fossil fuel plants and expand renewable energy but did not include significant provisions for energy storage.

How much battery does Illinois need to reach net-zero emissions?

Meanwhile, Meng estimates reaching net-zero emissions will require 200 to 300 terawatts worth of batteries globally. The United States' battery capacity is only slightly above 15,000 megawatts, with Illinois clocking in at 100 megawatts. The bill aims to increase the state's battery capacity to 8,500 megawatts, enough to charge 130 million laptops.

How much battery storage does Illinois need?

A new analysis from the Union of Concerned Scientists estimates Illinois will need at least 3,000 megawatts of storage in the next five years and over 9,000 megawatts by 2035. A major, insurmountable downfall of lithium-ion batteries is that they're made from scarce critical minerals: lithium, cobalt and nickel.

How big is Illinois' battery capacity?

The United States' battery capacity is only slightly above 15,000 megawatts, with Illinois clocking in at 100 megawatts. The bill aims to increase the state's battery capacity to 8,500 megawatts, enough to charge 130 million laptops. "It's a very deep hole," said Pruitt.

What is a battery storage system?

Neighborhoods where battery storage systems are as ubiquitous as refrigerators. A combination of lithium-metal, sodium, solid-state and flow batteries filling the massive energy storage gap in a way that promotes both the environment and human equity.

How many megawatts will Illinois need in 2035?

"It's a very deep hole," said Pruitt. A new analysis from the Union of Concerned Scientists estimates Illinois will need at least 3,000 megawatts of storage in the next five years and over 9,000 megawatts by 2035.

Battery technology in the European Union, Status report on technology development, trends, value chains & markets 2023. January 2024; DOI:10.2760/52259. Report number: JRC135406;

Effective January 1, 2023, a Chicago ordinance prohibits the sale or distribution of any smoke alarm that is solely powered by a removable battery. Tamper-proof smoke alarms with long-lasting sealed batteries (often marketed as 10-year smoke alarms) are now the only type of battery-powered smoke alarms that can be legally sold or distributed in the City Chicago.

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Hydrogen is set to become an important energy carrier in Germany in the next decades in the country's quest to reach the target of climate neutrality by 2045. To meet Germany's potential green hydrogen demand of ...

Lithium-ion batteries are widely used in electronic devices, making accurate monitoring of their state of health (SOH) and state of charge (SOC) essential for many applications. Traditional methods, which rely on electrical properties and algorithms, have limitations in detecting early signs of instability and degradation. This paper presents an advanced ultrasonic method to ...

Chicago's prominence in battery research is attracting attention on a national and international scale. As breakthroughs are made, the city is not only helping to meet the ...

As battery technology continues to improve, EVs are expected to match or even surpass the performance of internal combustion engine vehicles, leading to a widespread adoption. Projections are that more than 60% of all vehicles sold ...

Microsoft is rolling out a visual update to the battery indicator in the latest Windows 11 Insider Preview Build (26120.3000 - KB5050103). This update introduces colour-coded battery icons, allowing users to quickly assess their device's battery status. In a blog post, Microsoft stated, "These ...

The silicon anodes produced by Chicago's NanoGraf will be incorporated into its 18650 battery cell, which the company bills as "the world's most energy-dense lithium-ion battery." NanoGraf ...

Air Energy is a participant in cohort 2 of Resurgence, a cleantech accelerator led by the University of Chicago's Polsky Center for Entrepreneurship and Innovation in partnership with the UChicago Pritzker School of Molecular Engineering. Air Energy was founded following a groundbreaking breakthrough in solid-state lithium-air battery (SS-LAB) technology. ...

CHICAGO (CBS) -- Billions of federal dollars are being awarded to clean energy projects across the country, and Illinois is set to see a big chunk of it.

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