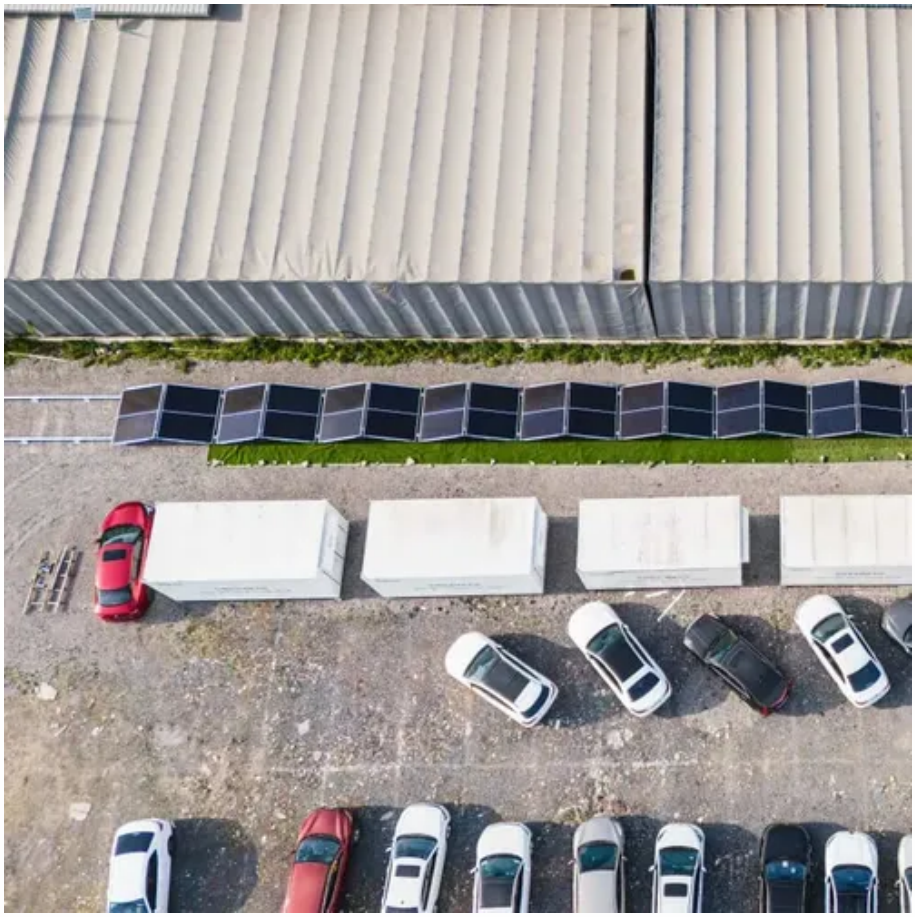
New all-iron liquid flow battery



Overview

Researchers at the Department of Energy’s Pacific Northwest National Laboratory (PNNL) have developed a new large-scale energy storage battery design featuring a commonplace chemical used in water treatment facilities.

Researchers at the Department of Energy’s Pacific Northwest National Laboratory (PNNL) have developed a new large-scale energy storage battery design featuring a commonplace chemical used in water treatment facilities.

A new recipe provides a pathway to a safe, economical, water-based, flow battery made with Earth-abundant materials RICHLAND, Wash.— A commonplace chemical used in water treatment facilities has been repurposed for large-scale energy storage in a new battery design by researchers at the Department.

Researchers at the Department of Energy’s Pacific Northwest National Laboratory (PNNL) have developed a new large-scale energy storage battery design featuring a commonplace chemical used in water treatment facilities. The new recipe provides a pathway to creating safe, economical, and water-based.

A new iron-based aqueous flow battery shows promise for grid energy storage applications. A commonplace chemical used in water treatment facilities has been repurposed for large-scale energy storage in a new battery design by researchers at the Department of Energy's Pacific Northwest National.

The design provides a pathway to a safe, economical, water-based, flow battery made with Earth-abundant materials. It provides another pathway in the quest to incorporate intermittent energy sources such as wind and solar energy into the nation’s electric grid. The researchers report in Nature.

A commonplace chemical used in water treatment facilities has been repurposed for large-scale energy storage in a new battery design by researchers at the Department of Energy's Pacific Northwest National Laboratory. The design provides a pathway to a safe, economical, water-based, flow battery.

Energy Dome began operating its 20-megawatt, long-duration energy -storage facility in July 2025 in Ottana, Sardinia. In 2026, replicas of the system will begin popping up on multiple continents. This giant bubble on the island of Sardinia holds

2,000 tonnes of carbon dioxide. But the gas wasn’t.

New all-iron liquid flow battery

[New all-liquid iron flow battery for grid energy storage]

New flow battery technologies are needed to help modernize the U.S. electric grid and provide a pathway for energy from renewable sources such as wind and solar power to be stored.

New Iron Flow Battery Promises Safe, Scalable Energy Storage

Researchers at the Pacific Northwest National Laboratory have created a new iron flow battery design offering the potential for a safe, scalable renewable energy storage system.

[New All-Liquid Iron Flow Battery for Grid Energy Storage]

A new iron-based aqueous flow battery shows promise for grid energy storage applications.

Unveiling thermal risks of presumed safe lithium iron phosphate

In some all-solid-state battery systems, the risk of thermal runaway induced by gas-phase crosstalk still persists, with hazard levels comparable to

those of liquid electrolyte systems.

CO2 Batteries That Store Grid Energy Take Off Globally

Other grid-scale battery chemistries and approaches are in development, such as sodium-based, iron-air, and vanadium redox flow batteries.

New All-Liquid Iron Flow Battery for Grid Energy Storage

New All-Liquid Iron Flow Battery for Grid Energy Storage A commonplace chemical used in water treatment facilities has been repurposed for large-scale energy storage in a new battery ...

New all-liquid iron flow battery for grid energy storage

Lead author and battery researcher Gabriel Nambafu assembles a test flow battery apparatus. A commonplace chemical used in water treatment facilities has been ...

PNNL Researchers Develop All-Liquid Iron Flow Batteries for ...

Researchers at the Department of Energy's Pacific Northwest National Laboratory (PNNL) have developed a new large-scale energy storage battery design featuring a ...

Aqueous iron-based redox flow batteries for large-scale energy ...

Among them, iron-based aqueous redox flow batteries (ARFBs) are a compelling choice for future energy storage systems due to their excellent safety, cost-effectiveness and ...

New Iron Flow Battery Promises Safe, Scalable ...

Researchers at the Pacific Northwest National Laboratory have created a new iron flow battery design offering the potential for a safe, ...

New all-liquid iron flow battery for grid energy storage

Lead author and battery researcher Gabriel Nambafu assembles a test flow battery apparatus. A commonplace chemical used ...

New all-liquid iron flow battery for grid energy storage

A new iron-based aqueous flow battery shows promise for grid energy storage applications.

Contact Us

For inquiries, pricing, or partnerships:
https://sccd-sk.eu
Phone: +32 2 808 71 94
Email: info@sccd-sk.eu

Scan QR code for WhatsApp.