

INTELLIGENCE UPDATE

Battery options fizzle as sodium-ion startup shuts



Peter Judge

1 Oct 2025

Data center operators and designers want a safer, more efficient battery option. Lead-acid units have low energy density and need substantial maintenance, while lithium-ion batteries address those issues, but carry the risk of thermal runaway. Sodium-ion promised a good alternative chemistry, but the market (or at least a weighty set of investors) has rejected it.

Natron Energy, the leading supplier and most vocal supporter of sodium-ion batteries in the US, has ceased operations, closing a manufacturing plant in Holland (Michigan) that was due to manufacture 600 MW (estimated 15 MWh energy capacity) of batteries per year, and canceling a planned \$1.4 billion factory able to manufacture 24 GW (estimated 600 MWh) of batteries per year in North Carolina.

Because sodium is cheaper, more plentiful and less reactive than lithium, sodium-ion batteries were projected to be more affordable and safer than the dominant lithium-ion family of chemistries, with the added benefit of higher power-to-energy ratios and cycle endurance. Sodium-ion batteries are heavier, but are suitable for stationary applications, such as grid storage and data center UPS systems — particularly for short (1-minute to 2-minute) ride-through times.

Unfortunately for Natron, the price and supply chain advantage that sodium ion suppliers hoped for never materialized. When Natron was founded in 2012, lithium-ion batteries cost around \$726 per kWh (BloombergNEF). By 2024, strong competition and demand from the electric vehicle market had driven the price down by 84% to \$115 (BloombergNEF).

To remain competitive, Natron needed a gigafactory. The project required significant funding — a challenge made even harder by the federal retreat from supporting green technologies.

In September 2025, Natron had \$25 million in purchase orders for its BlueRack250 sodium-ion battery cabinets (almost entirely from data center operators) but reported that it could not raise sufficient funds to execute them.

Even if it made the units, Natron's data center customers could not use them. Batteries for

stationary storage must have UL1973 safety certification and pass UL9540A fire risk tests. Natron's flagship BlueRack system had neither of these, so its batteries could not be used in North America, or in other markets where UL certification serves as a standard third-party evaluation of manufacturers' claims of electrical and fire safety.

Meanwhile, sodium-ion batteries are also struggling in Europe: the leading manufacturing contender Northvolt (Sweden) filed for bankruptcy in March 2025, unable to fulfil a \$2 billion contract with BMW.

The future of sodium-ion batteries

Based on the properties of sodium, sodium-ion batteries may find a niche in the long term, but any role in data centers is now five to 10 years away. For now, their market will be minuscule compared with lithium-ion batteries. Manufacturing capacity, estimated at between 2 GWh/year (Shanghai Metals Market) and 42 GWh/year (Statista), is less than 1% of the 4 TWh of lithium-ion batteries made each year. By 2030, this is only expected to reach 5% (370 GWh/year) of the 7 TWh of lithium-ion capacity expected that year.

Around 66% of lithium-ion batteries are manufactured in China, by companies including Contemporary Amperex Technology Limited (CATL), Build Your Dream (BYD) and China Aviation Lithium Battery (CALB). These suppliers are also expected to dominate sodium-ion units — if and when it eventually takes off. Outside China, Peak Energy hopes to receive backing for a US gigafactory, while Tiamat has similar ambitions in France.

For now, operators need to look elsewhere for an alternative solution beyond the established battery options of lead-acid and lithium-ion. Sodium-ion looks set to join the list of arguably superior technologies pushed aside by incumbent technologies with stronger market power.

Other related reports published by Uptime Institute include:

[*Ignore Li-ion fire risks at your peril*](#)

[*Emerging tech: low-carbon hydrogen*](#)

[*Anatomy of a thermal runaway*](#)

[*EU battery regulations: what do the new rules mean?*](#)

ABOUT THE AUTHOR



Peter Judge

Peter is a Senior Research Analyst at Uptime Intelligence. His expertise includes sustainability, energy efficiency, power and cooling in data centers. He has been a technology journalist for 30 years and has specialized in data centers for the past 10 years.

[**pjudge@uptimeinstitute.com**](mailto:pjudge@uptimeinstitute.com)

About Uptime Institute

Uptime Institute is the Global Digital Infrastructure Authority. Its Tier Standard is the IT industry's most trusted and adopted global standard for the proper design, construction, and operation of data centers – the backbone of the digital economy. For over 25 years, the company has served as the standard for data center reliability, sustainability, and efficiency, providing customers assurance that their digital infrastructure can perform at a level that is consistent with their business needs across a wide array of operating conditions.

With its data center Tier Standard & Certifications, Management & Operations reviews, broad range of related risk and performance assessments, and accredited educational curriculum completed by over 10,000 data center professionals, Uptime Institute has helped thousands of companies, in over 100 countries to optimize critical IT assets while managing costs, resources, and efficiency.