

Salgenx Announces a Safer, More Sustainable Future for Grid-Scale Energy Storage

Saltwater Flow Batteries Mitigate Fire Risk, While Using Integrated Thermal Storage, Self-Healing Electrodes, and Eco-Friendly Materials

MADISON, WI, UNITED STATES,
February 24, 2025 /EINPresswire.com/
-- As the demand for safe, efficient, and scalable energy storage grows, [Salgenx](#)

announces its breakthrough Saltwater Battery—an innovative solution designed to eliminate the risks and limitations of traditional lithium battery technology. With low fire hazard, built-in thermal storage, self-healing electrodes, and environmentally friendly materials, the saltwater flow battery is a alternative to legacy grid-scale energy storage.



Salgenx Saltwater Battery with no Lithium

The Need for More Cost-Effective Energy Storage and Less Risk

The rapid expansion of renewable energy requires robust storage solutions to stabilize the power grid. However, lithium-ion batteries pose safety concerns, high insurance costs, and environmental drawbacks due to their fire risks and reliance on rare-earth materials. A saltwater flow battery offers a superior alternative for utilities, data centers, microgrids, and industrial applications.

Benefits of a Saltwater Flow Battery

- **Low Fire Hazard – Lower Insurance Costs:** Compared to lithium based solutions, which are prone to thermal runaway and fire risks, the saltwater battery uses a non-flammable saltwater electrolyte, ensuring safe operation without fire suppression systems. This dramatically reduces insurance premiums and installation costs, making large-scale storage more financially viable.
- **Integrated Thermal Storage for Enhanced Efficiency:** The saltwater flow battery uniquely stores both electrical and thermal energy, allowing for multi-functional energy use. This feature provides extra value for industrial processes, heating applications, and energy efficiency optimization.

- Self-Healing Electrodes – Longer Battery Life: The built-in self-repairing electrode technology extends battery lifespan by mitigating electrode degradation. This ensures consistent performance over thousands of cycles, reducing maintenance costs and enhancing long-term investment returns.
- Sustainable and Non-Toxic Materials: Saltwater flow batteries are unique in that they are made from abundant and [environmentally safe materials](#), eliminating reliance on scarce resources like lithium, cobalt, and nickel. This reduces environmental impact while enhancing supply chain stability and cost efficiency.

A Future-Proof Solution for Grid-Scale Storage

- Scalable and cost-effective deployment for large-scale storage
- Safe and fire-free operation, reducing regulatory hurdles
- Lower environmental impact compared to lithium-ion alternatives
- Multi-functional energy storage, including [thermal applications](#)

About Salgenx

Salgenx is engineering next-generation energy storage solutions, pioneering safe, scalable, and sustainable alternatives to legacy technology. By integrating non-toxic materials, thermal storage, and self-healing electrodes, Salgenx is redefining the future of grid-scale energy storage.

Contact: Greg Giese / President TEL: +1-608-238-6001 (Chicago Time Zone) Email: greg@salgenx.com

Website: <https://salgenx.com>

Gregory Giese
Salgenx LLC
+1 608-238-6001
greg@salgenx.com

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