

Infinity Turbine and Salgenx Announce Groundbreaking Cluster Mesh Power Generation System for Saltwater Batteries

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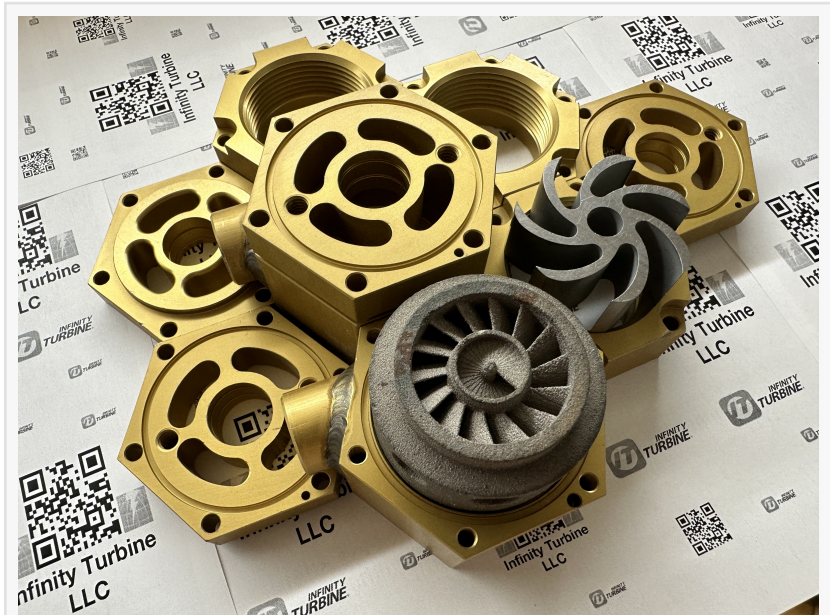
MADISON, WI, UNITED STATES,
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EINPresswire.com/ -- [Infinity Turbine LLC](#) and [Salgenx](#) Saltwater Battery are proud to unveil their cutting-edge Cluster Mesh Power Generation System, a revolutionary technology designed to maximize the utilization of thermal energy while providing substantial savings for data centers and introducing a highly efficient energy storage solution.

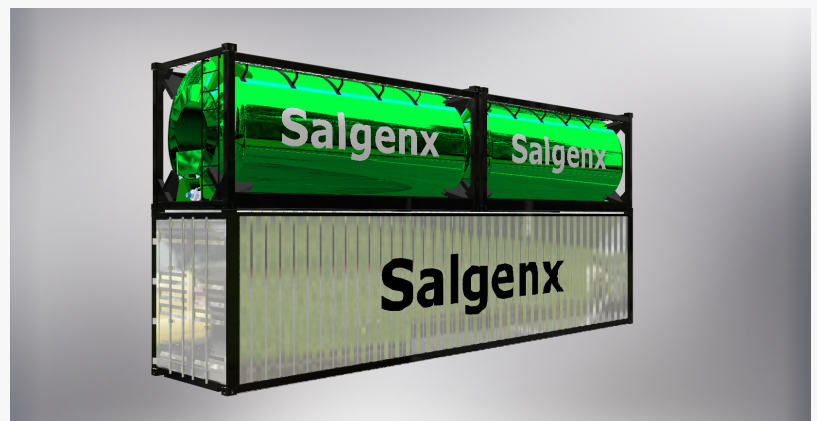
With a Coefficient of Performance (COP) of 9, this innovative system not only generates power from data center waste heat, but also produces cooling as a byproduct of the pressure drop from its [supercritical CO2](#) turbines.

This advanced system is poised to transform energy-intensive sectors such as data centers, thermal energy storage, and large-scale battery solutions by integrating renewable energy into everyday operations.

The unique ability to harness thermal energy for both cooling and power generation positions Infinity Turbine and Salgenx at the forefront of sustainable energy technology.



Infinity Turbine Cluster Mesh Power Generation



Salgenx S3000 Salt Water Battery Energy System

Data Center Savings and Efficiency

Data centers represent some of the largest consumers of energy in the modern world, with significant amounts of power dedicated to maintaining optimal operating temperatures for servers and GPUs. Traditional cooling methods require immense energy inputs, adding operational costs and environmental impact. The waste heat then has to be vented to the air, or cooled by a chiller.

The Cluster Mesh Power Generation system solves this challenge by taking the waste heat and utilizing supercritical CO₂ in a closed-loop cycle. When thermal energy drives the supercritical CO₂ through the system, the pressure drop utilized by the turbines not only generates electricity but also produces a cooling effect as a secondary benefit.

This cooling significantly reduces the need for traditional air conditioning or liquid cooling systems in data centers.

This dual-function technology simultaneously reduces the energy costs of cooling while generating power from waste heat, making it a perfect fit for the demands of high-performance data centers. The heat pump portion of the turbine may reach a COP (Coefficient of Performance) of 9.

Salgenx Saltwater Battery for Grid-Scale and Thermal Energy Storage

Beyond data centers, the Cluster Mesh Power Generation system integrates seamlessly with Salgenx Saltwater Batteries to provide grid-scale storage solutions. This innovative system can be used to store up to 3,000 kWh per module of electrical power, and thermal energy during off-peak hours, allowing operators to charge the saltwater batteries with excess power and then discharge the stored energy when needed.

The saltwater storage system can also be utilized for thermal energy storage (TESS), capturing and holding excess thermal energy to be released during peak demand or used for grid stabilization. By enabling the storage of thermal energy, this combined system ensures efficient energy management across various sectors, from data centers to renewable energy grids.

For USA licensed manufacturers of this system, there are a \$35/kWh tax credit for the battery portion, and other credits for the thermal energy storage.

Key Benefits of the Cluster Mesh Power Generation System:

- COP of 9: Significantly higher efficiency than traditional cooling and power systems.
- Dual-Functionality: Produces cooling while generating electricity from thermal energy, reducing

the need for separate cooling infrastructure.

- Waste Heat to Power: Harvest heat from data centers to make power.
- Data Center Applications: Reduces the energy footprint of cooling in data centers, providing substantial operational savings.
- Thermal Energy Storage: Paired with Salgenx Saltwater Batteries, the system can store both electrical and thermal energy, offering a robust solution for grid stabilization and renewable energy integration.
- Sustainable Design: Leverages supercritical CO2 and saltwater battery technology to minimize environmental impact while maximizing energy efficiency.

Transforming the Future of Energy and Cooling

As industries continue to grapple with rising energy costs and the need for more sustainable solutions, Infinity Turbine LLC and Salgenx are leading the charge with the Cluster Mesh Power Generation system. Whether it's optimizing data center performance or providing reliable grid-scale energy storage, this technology is set to reshape the future of thermal energy utilization.

About Infinity Turbine

Infinity Turbine is a pioneering company dedicated to developing innovative energy solutions that harness waste heat and other renewable energy sources. With a focus on Organic Rankine Cycle technology, Infinity Turbine offers a range of customizable turbines and energy systems designed to improve efficiency and sustainability across various industries.

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Cluster Mesh Power Generation: <https://www.infinityturbine.com>

Grid-Scale Power: <https://salgenx.com>

CO2 Closed Loop HVAC Turbine: <https://cavgenx.com>

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