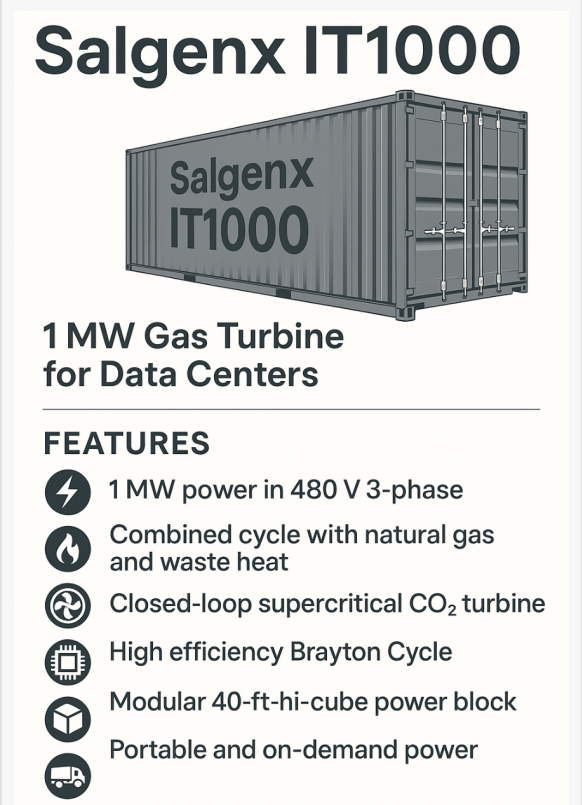
Salgenx Introduces the IT1000: A Next-Generation 1 MW Gas Turbine Power Block for the Data Center Era

The Salgenx IT1000 is a 1 MW modular, high-efficiency natural-gas supercritical CO turbine generator for data centers and grid-scale battery charging.

MADISON, WI, UNITED STATES, November 28, 2025 /EINPresswire.com/ -- Salgenx today announced the launch of the IT1000, a groundbreaking 1,000 kW gas turbine engineered specifically for data centers, high-performance computing sites, and grid-scale energy storage integration. Designed as a modular, transportable power block, the IT1000 delivers high-efficiency, on-demand power while enabling data centers to achieve new levels of resilience, energy independence, and operational cost savings.



IT1000 1 MW Power Block for Data Centers

The IT1000 integrates seamlessly with the Salgenx Grid Scale Battery, providing fast-response charging capability and supporting power smoothing for mission-critical loads. At its core, the IT1000 uses an advanced supercritical CO2 Brayton Cycle with closed-loop CO2 as the working fluid, offering high thermal efficiency, safety, and unmatched energy density.

A High-Efficiency Power Solution for Modern Data Centers

The IT1000 is engineered for the rapidly expanding data center sector, where stable, scalable, and low-cost power is an operational necessity. Key performance highlights include:

- 1 MW continuous power output at 480 V, 3-phase
- Heat rates at or below 10,000 BTU/kW using 500 to 700 C turbine inlet temperatures
- 20,000 BTU/kW performance for medium-temperature waste heat applications near 250 C
- Closed-loop supercritical CO2 turbine for high energy density and compact footprint
- Dual-fuel combined cycle capability: natural gas plus high-grade waste heat recovery

• Direct-heat supercritical CO2 turbine generation using exhaust from microturbine systems
• Non-flammable working fluid (CO2) for enhanced site safety
• Portable 40-ft hi-cube modular format, allowing global shipping, on-demand deployment, and plug-and-play operation
• Ideal for data centers, microgrids, and remote compute installations
• Compatible with high-temperature concentrated solar and geothermal heat sources

The IT1000 represents a pivotal shift in how data centers secure and manage energy. By merging natural gas, waste-heat recovery, and a closed-loop supercritical CO2 system, creates a turbine platform that exceeds legacy efficiency benchmarks while providing grid independence for mission-critical operations.

Combined Cycle Efficiency, Modular Deployment, and Energy Independence

The IT1000 elevates traditional power block design by combining natural gas combustion with direct-use waste heat from microturbine exhaust streams. This allows data centers and industrial sites to stack multiple heat sources into a single, highly efficient power module.

The system's closed-loop CO2 Brayton Cycle delivers exceptional energy density and compactness, enabling the entire 1 MW power block to be housed in a 40-ft high-cube steel container. The result is a unit that can be transported anywhere, rapidly deployed, and integrated into existing infrastructure without costly construction.

Additional benefits include:

• On-demand dispatchable power for peak shaving, emergency backup, and local generation
• Power smoothing when paired with the Salgenx grid scale flow battery
• Scalable modularity for multi-MW deployments
• Build-your-own branding and licensing options, including drop-ship OEM or onsite fabrication
• Reduced emissions and improved fuel utilization via waste-heat recovery
• Thermally flexible architecture, supporting both fossil and renewable heat sources

A New Standard for Data Center Power Infrastructure

With the explosive growth of AI workloads, cloud computing, crypto and high-density GPU clusters, power reliability and thermal efficiency have become strategic priorities for global data center operators. The IT1000 is purpose-built to meet these challenges, offering:

• Lower operating costs through industry-leading heat rates
• High-efficiency power production from both fossil and industrial waste-heat sources
• A compact, transportable, on-site generation platform
• A pathway to renewable integration, including solar-thermal and geothermal retrofits
• Use with stranded gas wells for remote data center or crypto applications

• Use with high heat geothermal
• Use with high heat solar thermal including concentrated solar

The IT1000 provides operators with true energy autonomy while reducing strain on regional grids already facing unprecedented load growth.

Availability

The Salgenx IT1000 is now available for project integration, OEM partnership, and licensing opportunities. Production reservations for 2026 are currently being accepted.

About Salgenx
Salgenx LLC is a leader in advanced saltwater flow battery technology for grid-scale energy storage. Designed for long life, safety, and sustainability, Salgenx batteries provide high-efficiency storage with no lithium, cobalt, or rare materials. Salgenx offers solutions for data centers, utilities, renewable integration, microgrids, and energy-intensive industries.

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