

VAST[®] POWER SYSTEMS

Boosts gas turbine power by ~110%

Reduces water consumption

Achieves ultra-clean emissions and

Reuses data center heat, increasing efficiency

More Power Generates More Profit

VAST is a late-stage U.S. startup that invents, patents, and licenses breakthrough gas-turbine emissions, efficiency, and power technologies to solve critical energy challenges by retrofitting new and existing gas turbines. VAST's solutions strongly increase reliable, clean power to support AI data centers and strengthen grid stability.

VAST Deliverables

VAST upgrades existing gas turbines to deliver **more MWs** with **ultra-low emissions** enabling on-site power

VAST uses AI/Data Center heat to **substantially boost power**

Markets:

- AI/Data Centers (Hyperscalers and Leased Facilities)
- Power providers needing fast, firm/dispatchable, ultraclean power
- Industrial gas turbine applications

Use of funds: partner onboarding (OEMs) and engineering of prefab modular units, for fast plug-in retrofits to initially boost power 20% in Phase I and II, followed by the VAST**Twin**™ Cycle to reach ~110%

The Problem: Firm Ultra-clean Power for AI/Data Centers

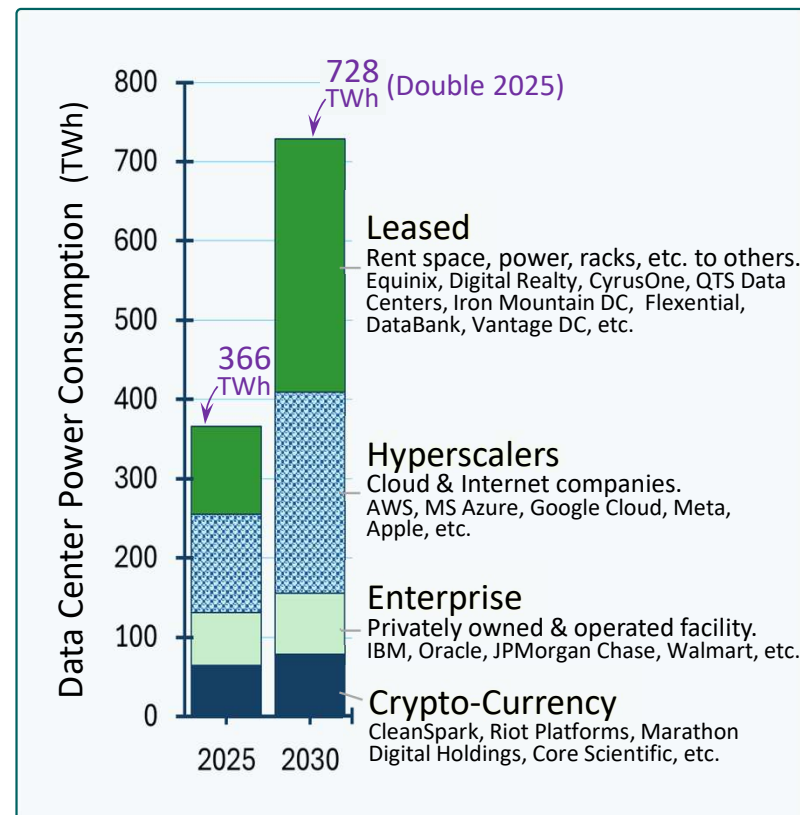
AI/Data Centers need vastly more fast-start power, ultra-low NOx and increased gas turbine durability

Emissions regulations can prevent co-located power

Congested grids limit remote power availability

Hot days reduce available power up to 30%, when critically needed

Nitrogen Oxides (NOx) Emission Limits require **expensive** gas turbine exhaust cleanup, increasing CapEx and OpEx costs



Source: S&P Global Sept, 2025

VAST Retrofit Solutions Reduces Delivery Delays

Phase I - VAST+20™ Core Advantages

Boosts power ~20% on existing gas turbines

- Markets: AI/Data Centers and gas peakers
- Meets most NOx emissions regs without cleanup
- Rapid upgrades via modular packaged solutions

Phase II - VAST+20™ with Water Recovery

Boosts power ~20% on existing gas turbines

- All Phase I Advantages
- Net water recovery
- Lowers water purification costs

VASTwin Cycle™ Advantages

Boosts power ~110% on existing gas turbines

- Markets: AI/Data Centers and gas peakers
- <1 ppm NOx emissions without catalytic cleanup (SCR)
- <2 ppm CO emissions

VAST Retrofit Development Phases

	<u>VAST+20™</u> Water/Steam Injection	<u>VAST+20™</u> <u>with Water Recovery</u> Water/Steam Injection with water recovery	<u>VASTwin™ Cycle</u> Add-on Twin Combustors, 2 nd Expander & Generator with water recovery
Power Output	20% Extra Power	20% Extra Power	110% Extra Power
Water Usage	MORE	NET PRODUCER	NET PRODUCER
Nitrogen Oxides (NOx)	LOW	LOW	SUPER LOW
Carbon Monoxide (CO)	Standard	Standard	SUPER LOW
Development Cost	SMALL	MEDIUM	LARGE
Development Time	SMALL	MEDIUM	LARGE

Why VAST: Confirmed Technology with a Breakthrough Future

Combustion Performance Confirmation

U.S. Dept of Energy
High Performance
Computing (HPC)

Argonne
National
Laboratory

LLNL
Lawrence Livermore
National Lab

National Labs Support

2
DOE HPC
grants awarded

320+
Reactive CFD*
simulations

1.5 Million
Supercomputer
core-hours

*“The project modeled and demonstrated VAST’s ability to meet both national EPA, and stringent California gas turbine emission mandates without catalysts.” ***

DOE Final Project Report

**CFD – Computational Fluid Dynamics with full reactive chemistry*

*** VAST achieved <1 ppmvd NOx and <2 ppm CO emissions at Turbine Inlet Temperature 1300-1400 °C*

- VAST’s 24% efficiency gains deliver major fuel savings and much less CO₂
- VAST[™] Cycle achieves ultraclean emissions far below the most demanding regulations, producing net water
- Path to 110%+ net power increase via VAST[™] Cycle with a parallel 2nd combustor/expander/generator
- VAST+20[™] boosts power ~20% over existing gas turbines, even on the hottest days

Why VAST: Extensive Patent Portfolio

Patents and Intellectual Property

- 16 Active U.S. Patents
- 12 Active International Patents
- 3 Patents Pending

Legal Counsel

- Cooley, LLP

Patent Counsel

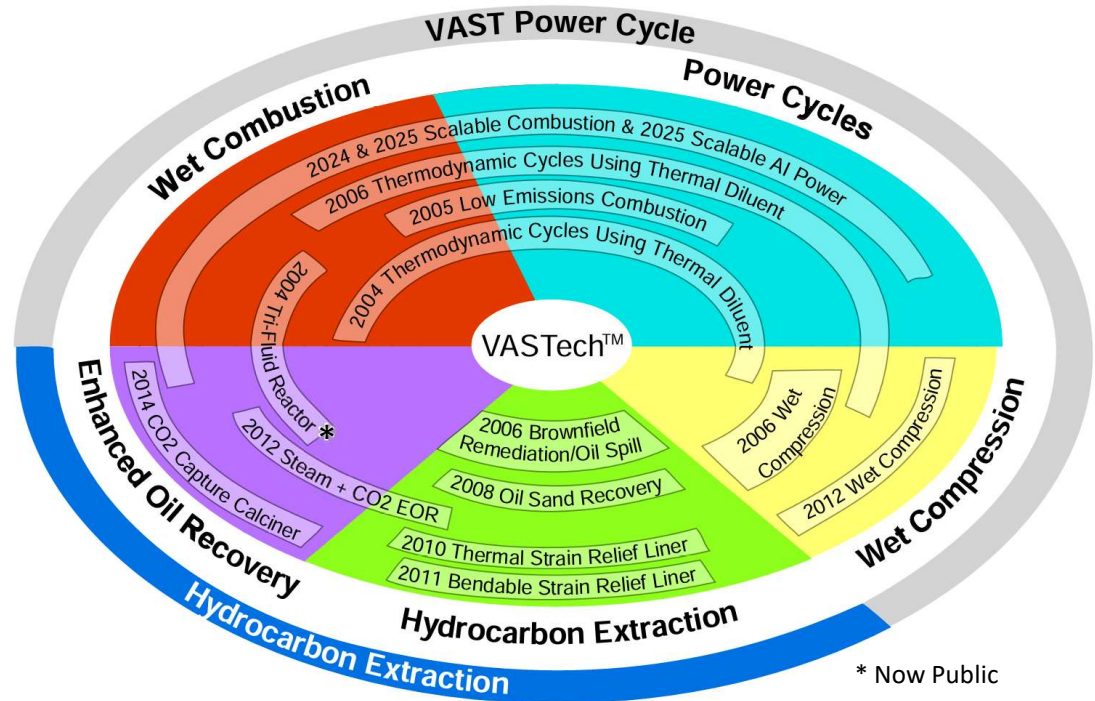
- Ostrolenk Faber LLP
- Schwegman, Lundberg & Woessner, P.A.

1,930 USPTO Citations to VAST Patents

503 to US7523603 Family
499 to US7416137 Family
125 to US6289666 Patent

Cited by GE Vernova, Siemens, Mitsubishi,
and more than 30 other companies

Patent Map Illustrates VAST's Protection Strategy



26 Independent Claims Granted
370 Dependent Claims Granted

The Market

Target Customers

Primary: AI/Data Centers (Hyperscalers and Leased Facilities) requiring firm power, quick start and ultra-low emissions

Secondary: Peaker fleets *seeking more revenue* with hot-day resilience and utilities needing ultraclean power without catalysts

Go-to-Market Strategy

Route: Rapid commercialization of 3 Phase development plan enabling OEM partners to become the preeminent provider of ultra-clean firm power; pilot via retrofitting gas turbine sites; probable exit to partnering OEM

Revenue Model: Performance-tied profit sharing during increased power delivery. We shorten project timelines using EPC partners to install prefab VAST® power kits.

Business Model

3 Revenue Streams: Technology Licensing, Shared Profit Ownership, and Modular Manufacturing of VAST+20 leading to VAST*Twin* Cycle

Further Revenue Opportunities:

1. Increased Hot-day Power
2. Custom field installation
3. Early exit to partner OEM

Customer Value: More reliable power at lower \$\$/MW. Ultraclean VAST power enables onsite generation by meeting all regulations, avoiding emissions cleanup CapEx and OpEx costs

Performance Value: Higher power. Better efficiency and net water production using the VAST*Twin* Cycle

Team

Gary Ginter, Founder & Chair

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Strategic vision, value integration, capital and key player recruiting, succession planning

Todd Royal, Principal & Business Development

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Nuclear Energy Analyst and Deal Maker with extensive energy technology experience for Dept. of Commerce, U.S. Congress, and State Governments

Dr. David Hagen, Co-founder & Chief Scientist

Innovator with 30+ patents protecting VAST technology, which has >1,930 citations

John O'Halloran, President & CTO

Former Intl. Managing Director, Divisional President and CTO at Cummins and Suzlon, in Europe and India

Kenneth McKenzie, Co-founding Investor,
Member of Executive Committee

Warren Blanchard, CFO

Former Managing Partner at Coopers & Lybrand (now PwC), and co-founder of a FINRA member broker-dealer focused on M&A Consulting