

# VAST<sup>®</sup> POWER SYSTEMS

Boosts gas turbine power by 20%

Reduces water consumption

Lowers emissions and uses data center heat

## 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.*

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## VAST Deliverables + SAFE Note

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

Instrument: SAFE Note (Simple Agreement for Future Equity)  
followed by SEED Round within 2 years

Use of funds: partner onboarding (OEMs) and engineering of prefab modular units, for fast plug-in retrofits to boost power 20%

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

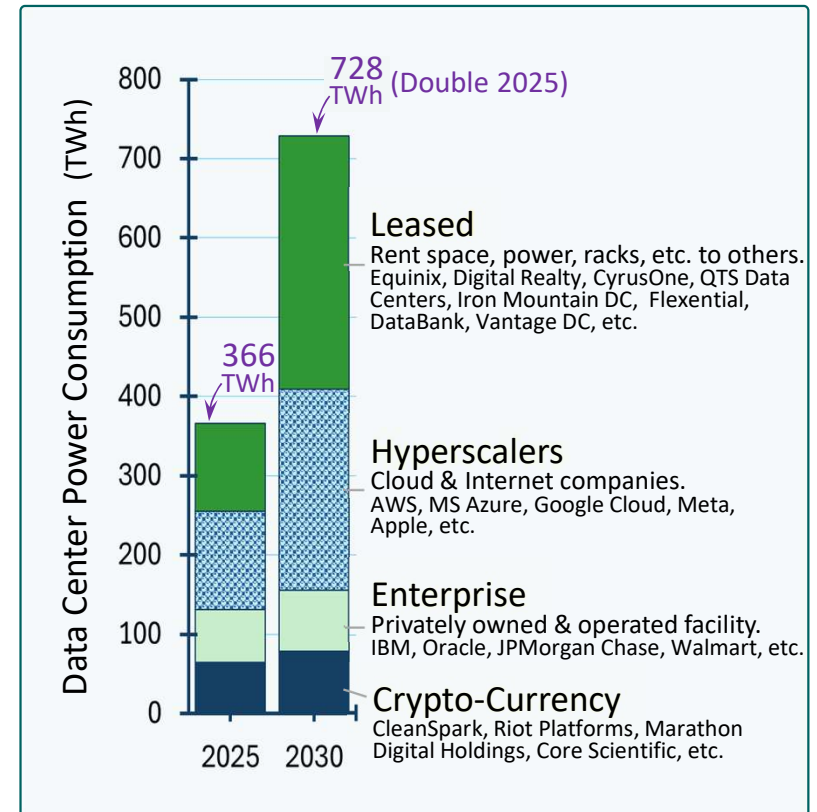
AI/Data Centers need vastly more fast-start power, ultra-low NOx and increased gas turbine durability

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

## 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

## 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)*
- *<1 ppm CO emissions*

# VAST Development/Deployment Phases

## VAST+20™ Retrofit

Water/Steam Injection

## VASTwin™ Retrofit

Add-on Twin Combustors,  
2<sup>nd</sup> Expander & Generator

## VASTrifluid™ Fully Integrated Design

Optimized Combustor Design  
with Heat & Water Recovery

Power Output	20% Extra Power	110% Extra Power	110% Extra Power
Water Usage	MORE	MUCH MORE	<b>NET PRODUCER</b>
Nitrogen Oxides (NOx)	LOW	SUPER LOW	SUPER LOW
Carbon Monoxide (CO)	Standard	SUPER LOW	SUPER LOW
Development Cost	SMALL	MEDIUM	LARGE
Development Time	SMALL	MEDIUM	LARGE

# Why VAST: Confirmed Technology with a Breakthrough Future

## Performance Confirmation Partners

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

**Argonne**  
National  
Laboratory

**LLNL**  
Lawrence Livermore  
National Lab

## National Labs Analysis

**2**  
DOE HPC  
grants awarded

**300+**  
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 emissions

- VASTriFluid™ combustion achieves ultraclean emissions far below the most demanding regulations, producing net water
- VAST’s 24% efficiency improvements achieve major fuel savings and CO<sub>2</sub> reductions
- VAST+20™ boosts power ~20% over existing gas turbines, even on the hottest days
- Path to 110%+ net power increase via VASTwin Cycle with a parallel 2<sup>nd</sup> combustor/expander/generator

# 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

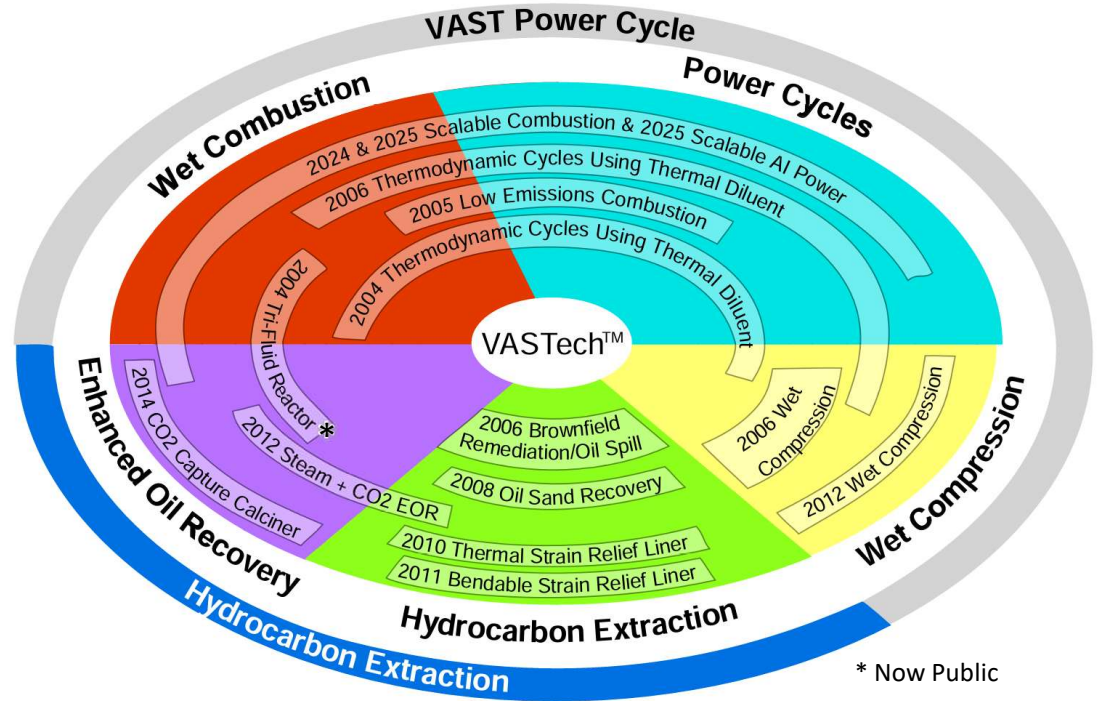
- Ostrolenk Faber LLP
- Schwegman, Lundberg & Woessner, P.A.

### 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

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**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

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**Route:** Co-develop the technology with OEMs becoming the preeminent provider of ultra-clean firm power; pilot with gas turbine sites; pursue rapid commercialization

**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. Bonus for faster installation

**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 with lower fuel using 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