PTE
ENTERPRISE

20 MW of Power. Two 20’ Containers.
No Utility Required.

Portable Turbine Energy — off-grid, point-of-use turbofan generation for AI and hyperscale data centers

Cutaway view. Access doors are at each end.

PRIMARY OR BACKUP POWER
DEPLOYED IN LESS THAN A YEAR

© 2026 Portable Turbine Energy LLC

Power, Not Chips, Is the Binding Constraint

2,600 GW

stuck in U.S. interconnection queues — more than double the entire installed U.S. capacity

~5 yrs

median wait to commercial operation; PJM projects energizing in 2025 averaged over seven years

410 GW

ERCOT large-load queue as of April 2026, roughly 73% of it data centers

~80%

of queued projects withdraw, defeated by delay and grid-upgrade cost

U.S. data center demand hit 61.8 GW in 2025, up 22% year over year, and is projected to reach 134 GW by 2030. The grid cannot be built fast enough to meet it.

Sources: LBNL Queued Up 2025; ERCOT; PJM; S&P Global

© 2026 Portable Turbine Energy LLC

THE STATUS QUO

Every Option on the Table Today Has a Fatal Flaw

Approach	What it gives you	Where it breaks
Wait for the grid	Cheap firm power, eventually	5–7 years to energize; land and capex sit stranded
Diesel gensets	Fast to deploy, familiar	Permitted for backup only; runtime caps, NOx/PM limits, high fuel cost
Recip gas engines	Good fuel economics	~2 MW per unit — 10+ units and a large pad to reach 20 MW
Curtail or throttle	Keeps the utility happy	Destroys utilization and breaks training-job SLAs

Operators are choosing between slow, dirty, and sprawling. PTE removes the tradeoff.

© 2026 Portable Turbine Energy LLC

THE REQUIREMENT

Four Things Bridge Power Must Do

01	**Utility-scale density**	20 MW from a footprint measured in parking spaces, not acres
02	**Weeks, not years**	Factory-built, road-legal, commissioned on a concrete pad
03	**Primary-rated**	Continuous duty — not a backup asset with runtime caps
04	**Redeployable**	Follows the load; moves to the next site when the grid arrives

© 2026 Portable Turbine Energy LLC

THE PTE UNIT

20 MW in Two 20-Foot Containers

MODULE 1 — POWER CORE

Turbofan gas generator + synchronous alternator

MODULE 2 — ELECTRONIC & SOFTWARE CONTROL

Turbine controls, protection and plant management

20 MW

continuous, point-of-use electrical output

Duty	Primary or backup — continuous rated
Grid	Islanded, no interconnection required
Transport	Road, rail or sea; standard ISO frames

One pad. Two ISO containers. No substation, no transmission upgrade, no queue position.

© 2026 Portable Turbine Energy LLC

Specifications at a Glance

Parameter	Specification
Net electrical output	20 MW continuous, ISO conditions
Prime mover	Aeroderivative turbofan gas generator
Footprint	Two 20 ft ISO containers, 800 sq ft; 1,000 sq ft pad with clearance
Fuel	Pipeline natural gas, LNG or CNG; dual-fuel diesel / HVO option
Heat rate	Approx. 9,200 Btu/kWh LHV, simple cycle
Start to full load	Under 10 minutes from cold
Output voltage	13.8 kV, 3-phase, 60 Hz (50 Hz available)
Emissions control	Dry low-emission combustion; SCR option for single-digit ppm NOx
Duty rating	Unlimited hours — primary or backup service

Indicative specifications. Final configuration set at site level based on ambient conditions, fuel supply and emissions permitting.

© 2026 Portable Turbine Energy LLC

DEPLOYMENT

Order to First Power in Thirty-Six Weeks

WEEK 0–4

Site walk, load study and fuel supply plan

WEEK 4–32

Concrete pad, fuel tie-in and cable route

WEEK 32–34

Units delivered by road and set on pad

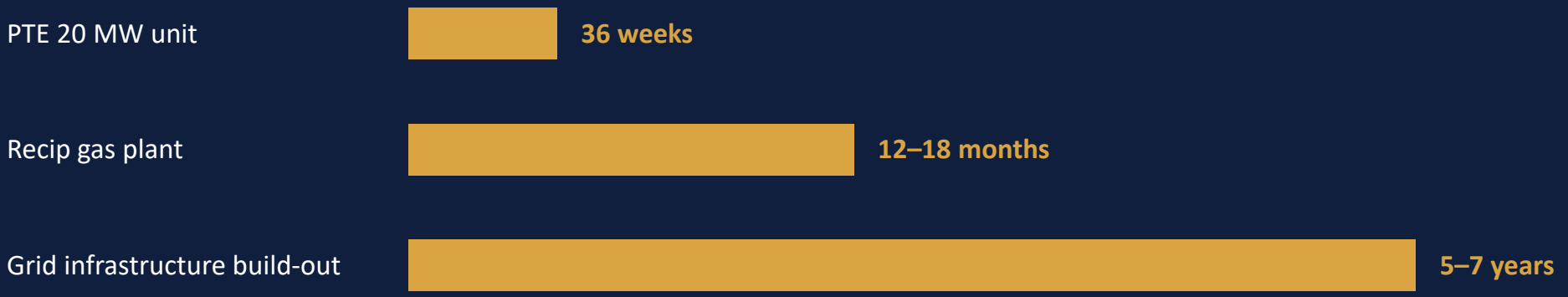
WEEK 34–35

Commissioning, protection and load bank test

WEEK 36

First power to the data center

TIME TO ENERGIZE



© 2026 Portable Turbine Energy LLC

MODULARITY

Scale by Adding Pads, Not Substations

× 1

20 MW

Single unit

Edge site, one small data center, or a phase-one anchor load

× 25

500 MW

Campus block

Full campus block with rotating maintenance windows

× 50

1 GW

Hyperscale, N+1

True redundancy with no single point of failure

1 GW = 50 units on about 50,000 sq ft of pad — just over one acre

Capacity tracks the ramp of your compute build. Units synchronize to a common island bus, so you add or remove capacity without redesigning the plant.

© 2026 Portable Turbine Energy LLC

FUEL & ENVIRONMENTAL

Fuel Flexibility and a Clean Emissions Path

RUNS ON WHAT YOUR SITE CAN GET

Pipeline natural gas

Primary fuel — lowest cost where a lateral exists

LNG or CNG

Trucked supply for sites with no pipeline access

Diesel or HVO

Dual-fuel option for startup and fuel-supply resilience

Hydrogen blend

Combustor path to blended hydrogen as supply matures

EMISSIONS PROFILE

< 9 ppm

NOx at 15% O2 with SCR — meets BACT in most non-attainment areas

~50% lower

CO2 per MWh than the diesel gensets it replaces

Near zero

particulate matter and SOx on natural gas

Emissions figures are indicative and depend on final combustor and aftertreatment selection.

FIELD-TESTED FUEL MATRIX

Engine test runs at PTE's Seneca, South Carolina facility have additionally exercised natural gas (methane), hydrogen–natural gas blends, biogas, syngas, flare gas, No. 2 fuel oil, diesel and jet fuel — broadening the fuel picture beyond the primary options above.

© 2026 Portable Turbine Energy LLC

360° CLOSED-LOOP SYSTEM

Power, Heat, Water and Emissions in One Loop

Turbofan generation

20 MW of firm power at the point of use, fully off grid.

Exhaust heat recovery

Turbofan exhaust heat is captured and put back to work, not vented.

Closed-loop water

HVAC water vapor recovery coupled with off-grid atmospheric water generators.

Emissions recapture

Carbon and NOx recaptured to meet Net Zero standards.

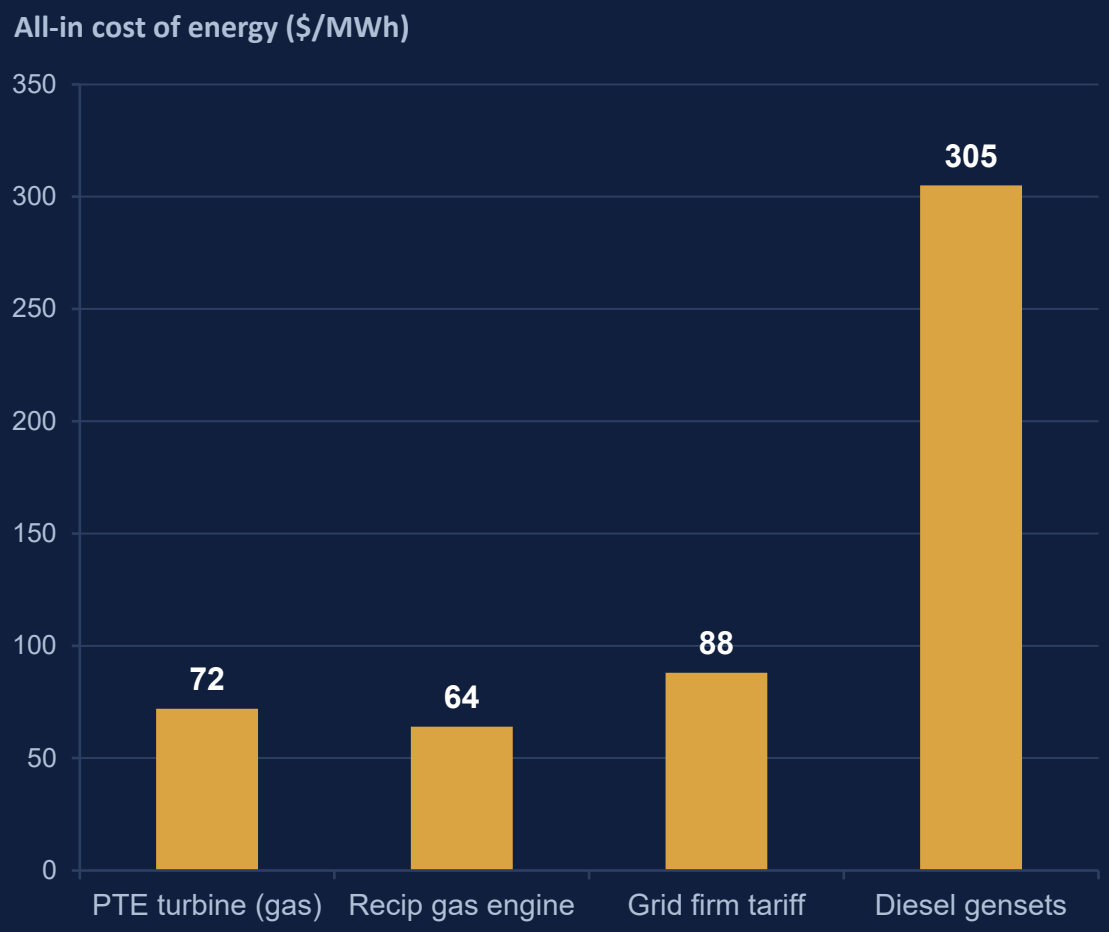
Recovered heat and water return to the process — nothing leaves the fence line

Heat recovery from the turbofans and emissions recapture are designed against Net Zero standards, so a site gets power, cooling and its own water supply from one system.

© 2026 Portable Turbine Energy LLC

ECONOMICS

The Fuel Premium Is Cheaper Than the Delay



$3.5M

per month, per 20 MW block

Revenue a 20 MW block earns once energized, at $175 per kW per month.

Against that, the fuel premium over grid power is a rounding error. Every month of waiting is the expensive line item.

Indicative modelling. Gas at $4.00/MMBtu, diesel at $3.40/gal, grid at blended firm commercial tariff including demand charges.

© 2026 Portable Turbine Energy LLC

RELIABILITY

Built for Continuous Duty, Not Standby

99.5%	8,000 hrs	< 10 min	24 / 7
Target fleet availability	Between hot section inspections	Black start to full load	Remote monitoring and dispatch

Aviation-derived core

The gas generator is an aeroderivative turbofan design with a mature fleet history and a global spares chain.

Redundancy by unit, not by part

Adding one spare unit gives true N+1 at the plant level. Maintenance happens on a unit that is offline, not on the critical path.

Utility-grade protection

13.8 kV switchgear, relay protection and paralleling controls shipped and pre-commissioned inside the balance-of-plant module.

Service included

PTE provides monitoring, scheduled maintenance, consumables and on-call response under a single availability-backed agreement.

© 2026 Portable Turbine Energy LLC

FIELD DEMONSTRATION

Validated on a Live Test Stand, Not Just on Paper

Aircraft-derived turbine, containerized

Containerized module, test yard

Seneca, SC — the expansion pad

Prototype turbofan generator (v1.1) built and run at PTE's Seneca, South Carolina facility — aircraft-derived gas turbine driving a synchronous alternator, mounted on a welded steel cradle inside a standard shipping container.

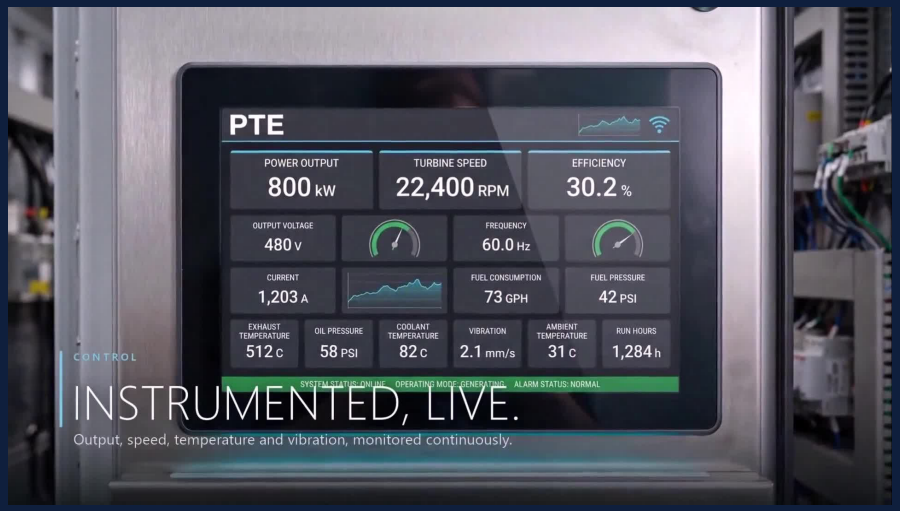
A graded, cut and leveled expansion pad already sits adjoining the facility — the same "add pads, not substations" scaling path described earlier in this deck.

Demonstration unit shown at reduced test output. The commercial product ships as the 20 MW, two-container configuration described throughout this deck.

© 2026 Portable Turbine Energy LLC

CONTROLS & TELEMETRY

Instrumented and Monitored, Start to Finish



Sample readout from the field control interface during a test run

800 kW Power output (test point)	**22,400 RPM** Turbine speed	**30.2%** Efficiency
512°C Exhaust temperature	**73 GPH** Fuel consumption	**1,284 h** Run hours logged

GENERATOR CONTROL & LOGGING

Generator control and protection run on RSLogix 500, continuously logging generator RPM, three-phase line voltage (A–B, B–C, A–C) and four winding thermocouples, in degrees Celsius — the same class of instrumentation that feeds the remote monitoring and dispatch described in this deck's reliability section.

95 dB

measured at the unit

Enclosure design and site layout are engineered from this baseline to meet the property-line noise targets referenced in this deck's siting and permitting section.

Field telemetry validates the control architecture at prototype scale before it ships inside the production 20 MW unit.

© 2026 Portable Turbine Energy LLC

COMMERCIAL MODEL

A Bridge to the Grid — or a Permanent Island

YEAR 0

Energize

Units land on the pad and the first data hall goes live while your interconnection request is still in study.

YEARS 1–5

Carry the load

Turbines serve primary load through the utility study, network upgrade and substation build. Revenue compounds the whole time.

YEAR 5+

Choose

Grid power arrives. Keep the units as backup and peak-shaving capacity, or move them to your next site.

Lease, power-purchase or outright sale — the asset is mobile either way. Your capital follows the buildout instead of being poured into a substation you will only need once.

© 2026 Portable Turbine Energy LLC

DELIVERY

Siting and Permitting: What Each Side Owns

WHAT YOUR SITE PROVIDES

- Level pad, 1,000 sq ft per 20 MW unit
- Truck and crane access; doors at each end
- Gas lateral, or a lay-down area for LNG
- A 13.8 kV tie-in to your MV distribution
- Water only if evaporative cooling is used

WHAT PTE DELIVERS

- Air permit application and stack testing
- Noise modelling to the property line
- Transport permits, crane and set
- Protection, paralleling and commissioning
- Monitoring, maintenance and spares

Air permitting runs 8 to 16 weeks by jurisdiction — in parallel with pad and fuel works, not after.

© 2026 Portable Turbine Energy LLC

FULL EPC SCOPE

One Contract Covers Power, Water and Utilities

1. **Off-grid energy and water**

   20 MW per container pair, scalable to hundreds of MW. Bio and hydrogen capable, plus air-to-water.

2. **Utility packages — design, build, maintain**

   Cooling water, water treatment, chillers, CRAC/CRAH, pump and valve skids, fuel blending, boilers.

3. **Pipe fabrication and module assembly**

   High-purity piping and volume fabrication of data center modules and HACs, working with major EPCs.

4. **Site analysis and testing**

   Laboratories in several states and several hundred PEs for feasibility studies and materials testing.

5. **Project management**

   Multi-billion-dollar programmes worldwide, offices in Asia, EU and Africa, bonding to $2.2B.

© 2026 Portable Turbine Energy LLC

DIFFERENTIATION

How PTE Compares

	PTE Turbofan	Recip Gas Engines	Solar Plus Battery
Time to first power	**36 weeks**	12–18 months	18–30 months
Duty rating	**Unlimited, primary**	Unlimited	Intermittent, needs firming
Footprint per 20 MW	**Two 20 ft containers**	10+ units, large pad	500+ acres plus battery yard
Fuel cost	**Low — pipeline gas**	Low — pipeline gas	None — but heavy capex
NOx emissions	**Under 9 ppm with SCR**	Higher than turbine	Zero at point of use
Rotating equipment	**One core per 20 MW**	10+ engines	None
Redeployable	**Yes — road mobile**	No — site built	No — fixed array

Compared at 20 MW firm output. Recip and solar-plus-storage figures reflect typical market offerings.

© 2026 Portable Turbine Energy LLC

NEXT STEPS

Three Steps to Power on Site

01

Site screening call

Forty-five minutes on load profile, fuel access and your preferred tie-in point.

02

Feasibility package

Two weeks. Sized configuration, indicative pricing, emissions and permitting path.

03

Notice to proceed

First power thirty-six weeks later. Units on the pad, load in the hall.

TALK TO US

Serji Amirkhanian

Chief Executive Officer

+01 864-844-3145
serji.amirkhanian@gmail.com

Tigran Makarian

President & Chief Operating Officer

+01 646-541-0444
info@portableturbineenergy.com

© 2026 Portable Turbine Energy LLC