



USP&E DATA BRIEF SHORT REPORT · JULY 2026

The State of **Frontier Power** 2026

A USP&E data brief on the global power crunch — and the operating numbers from our own fleet across 12 countries. Hybrid renewable and thermal. Pro physics, not anti-environment.

PUBLISHER USP&E · uspeglobal.com

AUTHORS USP&E technical, commercial, and SmartPower data teams

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AT A GLANCE

Nine numbers that define 2026

This short report sets the global power supply-demand picture against USP&E's own operating data. The thesis is simple: the supply chain that built the world's power infrastructure for the past two decades has run out of road. The firms that can deliver power despite that — through verified used equipment, frontier-market execution, hybrid plant design, and AI-driven O&M — are now the strategic centre of the industry, not the periphery.

6 yrs Industry lead time for new gas turbines	195% Turbine price increase since 2019	96% Forecast data centre power growth, 2026–2031
15 USP&E live projects, 2026	12 USP&E live projects in this many countries simultaneously	90 days USP&E verified-asset typical deployment
26% Downtime reduction via SmartPower (USP&E's predictive analytics platform)	95% Target availability under USP&E O&M	0 Lawsuits in 24 years (USP&E's track record)

The macro numbers come from BloombergNEF, Wood Mackenzie, and the U.S. Energy Information Administration. The USP&E numbers come from our own monitored fleet, project records, and O&M operations across Mali, Burkina Faso, Mauritania, Sierra Leone, Liberia, Togo, South Africa, Eswatini, Saudi Arabia, Qatar, Iraq, the UAE, Ukraine, and the United States.

SECTION 01

The Supply Chain Has Run Out of Road

Three numbers describe the global power supply situation in 2026 better than any narrative. They are independently sourced, recent, and consistent across the major industry analysts.

Lead times have doubled

BloombergNEF reports that the lead time for new combined-cycle gas power plants jumped from 3.5 years in 2023 to 5 years in 2025 — with costs up 49% over the same period. Wood Mackenzie's April 2026 supply chain report puts the figure at six years, with OEM order books sold through 2027 and turbine prices forecast to reach USD 600/kW by end-2027, a 195% increase from 2019 levels.

The gap between demand and capacity is now visible without filtering. Wood Mackenzie estimates global orders amount to 110 GW of turbine capacity against available manufacturing throughput of just 60–70 GW. Siemens Energy reports a record €136 billion backlog. GE Vernova's queue holds roughly 55 GW. Mitsubishi Power says it is sold out into 2028.

Demand is structurally up

The U.S. Energy Information Administration projects data centre electricity consumption will grow 96% between 2026 and 2031, with AI and cloud expansion the fastest-growing source of new power load on the U.S. grid. ERCOT's published demand forecast went from 85 GW in 2023 to a projected 368 GW by 2032 — a more-than-four-times increase in nine years.

Even subsidised capital cannot buy turbines

In September 2025, Engie withdrew its 930 MW Perseus gas peaker project from the Texas Energy Fund — a programme backed by USD 5 billion in state low-interest loans. The reason given was equipment procurement constraints. When subsidised capital cannot secure turbines, the supply problem has stopped being a financing problem.

"This supply constraint, compounded by six-year lead times and order books sold through 2032, has fundamentally shifted the market from fuel-economics-driven decisions to procurement-strategy-driven project viability."

WOOD MACKENZIE, GAS TURBINE SUPPLY CHAIN REPORT, APRIL 2026

SECTION 02

What the Crunch Does to a Project

Translated to a specific project, the supply crunch creates four cascading effects. Each of them shifts the calculus toward operators that can offer alternatives to new-equipment procurement.

EFFECT	CONSEQUENCE
Stranded timelines	A client load that materialises in 2026–2028 cannot wait for 2030–2031 turbine slots. The project either does not happen, switches fuel, or finds verified used equipment that can deploy inside a year.
Cartel pricing	Total project CAPEX has roughly doubled in fifteen months, from approximately USD 1,000/kW to USD 2,000–2,500/kW on recent gas projects. Specialty components — high-temperature blades and vanes, forged rotors — sit with three or four global suppliers. Pricing power has migrated upstream.
Heat-rate penalty	When efficient combined-cycle turbines are unavailable on the timeline, developers default to simple-cycle peakers, which burn 47–62% more gas per MWh. The fleet that gets built under supply pressure is structurally less efficient than the one that would have been built without it.
Aftermarket squeeze	Existing units rated for 50–60% capacity factors are being pushed to 70–85% to cover the gap. That accelerates parts wear and creates a parallel surge in service, life-extension, and refurbishment demand.

All four effects favour the operator that can source verified used equipment, refurbish to OEM spec, integrate it into a working site, and stand behind the operating outcome. That has been the USP&E playbook since 2002.

SECTION 03

The USP&E Fleet, By the Numbers

The remainder of this report draws on USP&E's own operating data. These are not industry averages or projections. They are direct measurements from projects USP&E has built, owns, or operates today.

Operating footprint, May 2026

METRIC	CURRENT VALUE
Live projects (active EPC + O&M + asset deployment)	15
Countries with active operations	12
Cumulative power stations delivered since 2002	30+
Cumulative projects completed since 2002	150+
Cumulative countries served since 2002	45+
Personnel	350+ engineers, technicians, project managers
Largest single operating asset (Mali, gold-mine power plant)	~110 MW · 36 CAT engines · 3-year O&M contract
Lawsuits filed against USP&E in 24 years	0
Certifications	ISO 9001:2015 and 45001:2018 · FCPA and OFAC compliant
Assets Under Ownership	100MW+
Assets Under Exclusivity & Semi-Exclusivity Agreements	1500MW+
Total Inventory of Inspected, Proven Asset Reserves	4200MW+

Delivery speed: how fast a USP&E project actually goes live

The single statistic that matters most in a supply-constrained market is time from contract to commissioning. Below are representative deployment windows from recent USP&E projects, against the industry benchmark of 12–18 months for new equipment plus 18+ months for Tier-1 EPC slot allocation.

PROJECT	CAPACITY	DEPLOYMENT
Turkey · Industrial client (Pratt & Whitney FT8 MobilePac)	100 MW	<90 days from contract to operational
UAE-to-Mali · CAT MaK 16/32 HFO recovery	8 MW	Cross-continental redeployment under 6 months
South Africa · Platinum mine (Wabtec GE16V250)	25 MW	Zero-hour surplus units, deployment-ready
Iraq · MAN 18V32/40 redeployment from Indonesia	32 MW	Avoided 12–18 month OEM wait entirely
Saudi Arabia · Gulf giga-project (Siemens SGT-400)	3 × zero-hour turbines	Mega-project timeline, USD 10M+ saved vs new.
Togo · Power generation project 40MW (GE TM2500)	2 x 22MW	<120 days from contract to operational
South Africa · Coal producer 10MW	10MW	<60 days from contract to operational
Mali · Gold mine 120 person team O&M and Refurbishment of 100MW HFO (Cat MAK 16CM32)	100MW	<30 days from contract to operational boots on the ground.
North America	2500MW+	Various projects across sectors.

Across these projects the operating principle is the same. If new equipment cannot meet the timeline, verified used equipment, refurbished to OEM spec and deployed under a single accountable team, can. USP&E carries asset inventory and OEM relationships specifically so this option is available when clients need it.

O&M performance: SmartPower + UpKeep

Once a plant is operating, the question shifts from how fast it was built to how reliably it runs. USP&E's SmartPower performance-monitoring platform and UpKeep computerised maintenance management system (CMMS) provide the data backbone. The measured impact on monitored fleet sites:

O&M METRIC	USP&E RESULT
Downtime reduction (SmartPower-monitored sites)	26%
Reliability gain at a Mali gold-mine plant under USP&E	~300% improvement vs prior operator
Availability under O&M (mining-anchored sites)	95% target, repeatedly achieved
Engine cost reduction (Mali plant recovery)	66% per engine vs prior contractor
Predictive-maintenance fault detection	Real-time, cloud-based, stakeholder-visible
CO₂ reduction at a graphite-mine hybrid build (Madagascar)	11,300+ tonnes per year (projected)

These are not theoretical numbers. They come from sites operating today for clients including one of the world's largest gold miners (Mali), a leading platinum producer (South Africa), a Gulf giga-project (Saudi Arabia), West African gold producers, an international oil & gas operator, a global gold major, and the Cross Boundary Energy hybrid build at a graphite mining operation in Madagascar.

SECTION 04

The Frontier Premium, Quantified

Frontier-market execution used to carry a discount in the industry's mind: harder work, lower returns, higher risk premium. The supply crunch has inverted that. Three quantifiable advantages now sit with frontier operators.

Advantage 1:

Asset inventory shortens timelines no one else can compress

New equipment lead times of 5–6 years are mathematical facts. The only way to deploy in 6–18 months is verified used or zero-hour surplus equipment. USP&E maintains direct ownership of over 100 MW of power station equipment and exclusive marketing rights to another 500+ MW, with direct relationships covering an additional 3,000+ MW held by OEMs and industrial owners.

In a market where Wood Mackenzie's analyst said the question has shifted "from fuel-economics-driven decisions to procurement-strategy-driven project viability," inventory access is no longer a logistical convenience. It is project viability itself.

Advantage 2:

Compliance discipline reduces frontier risk to a manageable line item

The headline "frontier risk premium" bundles political, operational, and counterparty risk into a single number. Operators with two decades of on-the-ground experience disaggregate them. USP&E's 24-year posture — full OFAC and FCPA compliance, robust KYC on every counterparty, anti-bribery discipline, and zero lawsuits filed by clients or partners — converts what is often priced as a risk premium into a relationship premium.

Clients including some of the world's largest gold miners, leading platinum producers, major iron-ore and oil & gas operators, Gulf giga-project developers, national oil producers, and industrial operators such as Wabtec have written and signed reference letters confirming this operating posture. The reference book runs to 43 letters.

Advantage 3:

Integrated lifecycle compresses margin leakage

In a conventional power project, value leaks at every handover: OEM to broker, broker to EPC, EPC to commissioning contractor, commissioning to O&M. Each transition introduces coordination cost, schedule risk, and margin compression for the buyer.

USP&E covers the full lifecycle under one accountable team — asset sourcing, engineering, EPC, commissioning, and long-term O&M, with hybrid renewable and thermal design across the portfolio. The structural margin available to this model in a supply-constrained market is materially better than the bundled-broker model that preceded it.

"In 24 years we have built more than 30 power stations and delivered over 150 projects across 45+ countries and never had a single lawsuit filed against us. We pay our bills, we abide by our agreements, and we deliver. With zero lawsuits and 100% project success since 2002, we do what we say, we deliver one time, and we deliver on budget. That is the only durable answer to frontier-market risk premium."

WILL GRUVER, GROUP CHAIRMAN & FOUNDER, USP&E

Five Implications for 2026–2030

From this combination of macro supply data and USP&E fleet data, five implications follow for the next four years of power infrastructure investment. All five point the same direction: toward operators built for execution under constraint.

- 1. One. Time-to-power becomes the procurement metric that matters most.** CAPEX per kW remains important; lead time is now the binding constraint. The firms that can compress deployment from 5+ years to under 18 months carry pricing power they did not have in 2020.
- 2. Two. Verified used equipment becomes a structural asset class.** Across the existing global fleet of gas turbines and medium-speed engines, a meaningful share of assets are recoverable, refurbishable, and redeployable. The operators with relationships across that fleet have a sourcing advantage that does not decay with the OEM cycle.
- 3. Three. Hybrid plant design becomes the default, not the exception.** Single-fuel proposals will increasingly look antiquated. Gas plus solar plus storage plus, for the next decade, a path to small modular nuclear — orchestrated by an AI-driven controls layer — is the configuration that meets both reliability and decarbonisation pressure. USP&E is pro physics, not anti-environment. Thermal base load with supplemental renewable hybridisation is the only practical solution for most of the world.
- 4. Four. Predictive analytics moves from differentiator to baseline.** The plant operated without real-time anomaly detection, predictive maintenance, and remote diagnostics is now an under-managed asset. USP&E's measured 26% downtime reduction across SmartPower-monitored sites is the kind of number that should be table stakes by 2028.
- 5. Five. Africa becomes a primary, not residual, infrastructure thesis.** The combination of population scale, industrialisation momentum, mining-anchored loads, and now hyperscaler interest puts the continent at the centre of the next phase of global power investment.

CONCLUSION

What USP&E Commits To

This is not a forecast about other people's behaviour. It is a statement about how USP&E will operate over the next four years to meet the conditions described above.

We will stay on the frontier. We will not chase Tier-1 metropolitan work where the OEMs and major EPCs are already saturated. We will continue to operate where reliability is uncertain, where speed matters, where the road runs out — because that is where the value sits and that is where our clients need us.

We will be hybrid by default. Every new project assessment starts with the full hybrid question: thermal, renewable, storage, and — through the BridgePower Nuclear joint venture with BAM Energy — small modular nuclear. Single-fuel proposals are exceptions, not the rule. Pro physics, not anti-environment.

We will be AI-native. SmartPower, UpKeep, and the broader predictive-analytics stack are not optional. They are how a USP&E plant runs. The 26% downtime reduction is the current measurement; we will not stop improving it.

We will keep our two promises: Entrepreneurial Speed. Engineering Credibility.

SOURCES AND NOTES

Macro figures cited in this report: BloombergNEF (combined-cycle gas plant lead time and cost data, 2025); Wood Mackenzie (Gas Turbine Supply Chain Report, April 2026; turbine pricing, lead times, order book figures); U.S. Energy Information Administration (data centre consumption forecast); Global Energy Monitor (Global Oil and Gas Plant Tracker, January 2026); Siemens Energy, GE Vernova, Mitsubishi Power (publicly reported backlog and capacity figures). Engie Perseus project withdrawal: September 2025.

USP&E figures cited in this report are drawn from internal project records, SmartPower monitored-fleet data, and client-signed reference letters. Capacity, availability, downtime, and cost-reduction figures are project-specific and not generalisable as industry averages. Forward-looking statements reflect USP&E's view as of the date of publication and are subject to change.

ABOUT USP&E

USP&E is an international hybrid renewable and thermal EPCM and O&M company with offices in Johannesburg, Cape Town, Dubai, Knoxville, London, Lomé, Monrovia, Abuja, Dakar, Dodoma, Tel Aviv, and Caracas. Since 2002 USP&E has delivered over 150 power stations and over 150 projects across 45+ countries for clients including some of the world's largest gold miners, leading platinum producers, major iron-ore and oil & gas operators, national oil producers, Gulf giga-project developers, and industrial operators such as Wabtec. The firm covers the full power lifecycle — asset sourcing, engineering, EPC, operations and long-term O&M — under a single accountable team. USP&E's SmartPower predictive analytics platform delivers a 26% reduction in downtime across monitored sites. The firm is brand-agnostic, OEM-competent, ISO 9001:2015 and 45001:2018 certified, FCPA and OFAC compliant, with zero lawsuits filed against it in 24 years of operation.

USP&E has long-standing partnerships with WGRUV Dance International and ImpactAfrica.org, reflecting a long-running commitment to the communities and continent in which we operate.

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Will Gruver

CHAIRMAN & FOUNDER, USP&E COMPANIES

Mobile: +27 65 744 1119 · Office: +27 (0)10 822 2324

Email: Will@uspeglobal.com · info@uspeglobal.com

uspeglobal.com · powernuclear.com