



FX-45 PACKAGED GAS TURBINE GENERATING SET

44.5 MW
ISO OUTPUT

11,711 kJ/kWh
HEAT RATE · LHV

25 ppm
NO_x — DLN DRY

2028
First delivery

+300 units
Global Fleet

TECHNICAL DATA (ISO)

PERFORMANCE

Nominal output (gen. terminal)	44.5 MW
Heat rate (LHV)	11,711 kJ/kWh
Exhaust mass flow	167 kg/s
Exhaust temperature	550 °C
Shaft speed / frequency	4,918 rpm · geared 50 / 60 Hz
Cycle	Simple cycle · ORC / steam-bottoming ready

CORE ENGINE

Gas turbine	TG20B7/8UG3 heavy-duty · new-build
Legacy	Westinghouse W251 family · 300+ unit fleet

FUEL & EMISSIONS

Fuel	Natural gas (DLN) · dual-fuel / H₂ option
NO _x (75–100% load)	25 ppmvd @15% O₂ · dry
US permitting	SCR to ≤2.0–2.5 ppmvd + CEMS (option)

ELECTRICAL, PACKAGE & SITE

Generator	Air-cooled brushless · 13.8 kV · UL-listed
Control system	Redundant PLC (Emerson)
Grid configuration	BTM / islanded microgrid / grid-tie
Plot (per unit)	~45 × 24 m incl. MV & control rooms
Design codes	ISO 3977 · PTC 22 · API 613/614/616/670 · UL · NFPA



WHY FX-45

- **Proven technology** — the W251/TG20 class machine, 300+ units and decades of fleet hours, built new on an exclusive re-opened OEM line.
- **Speed to power** — a packaged generating set outside the sold-out Big-Three turbine queue.
- **One standard, one fleet** — common package, pooled spares and a single maintenance regime across the build-out.
- **Single point of responsibility** — USP&E packages, commissions, warrants and supports the complete generating set, OEM back-to-back.
- **Built bankable** — financing-grade documentation and an IE-ready data room for lenders.

APPLICATIONS

- AI / hyperscale data centers
- Industrial CHP / cogen
- Behind-the-meter microgrids
- Peaking & grid support
- Bridge & interim power
- Combined cycle / ORC
- Mining & remote industry
- Utilities & IPPs

SCOPE & OPTIONS

Included: gas turbine + DLN + OEM controls · generator & gearbox · balance of plant & enclosures · inlet / exhaust · electrical & C&I · fire & gas · engineering data pack.

Options (priced separately): SCR + CEMS · OEM air-cooled generator · alternate control platform · O&M / LTSA · site EPCM & onsite assembly · ORC / heat recovery · dual-fuel / H₂ readiness · GSU transformer · capital spares.

MAINTENANCE INTERVALS (EBH / ES)

Combustion Inspection	12,000 EBH · 400 ES
Hot Gas Path Inspection	24,000 EBH · 800 ES
Major Inspection	48,000 EBH · 1,600 ES
Borescope	Annual

Preliminary data at ISO reference conditions (15 °C, sea level, 60% RH), new & clean, natural gas, power factor 0.8, no inlet/exhaust losses; values indicative and not guaranteed — firm site-rated guarantees are provided with a formal offer. Maintenance intervals in Equivalent Base Hours (EBH) / Equivalent Starts (ES). SCR/CEMS, civils, onsite assembly, O&M and interconnection are optional / by others. Per OEM technical specification (2026). USPE-FX45-SPEC Rev 2 · 08.2026 · © USP&E Global.