



Clean, economical
power generation
from waste heat using
supercritical CO₂



ECHOGEN

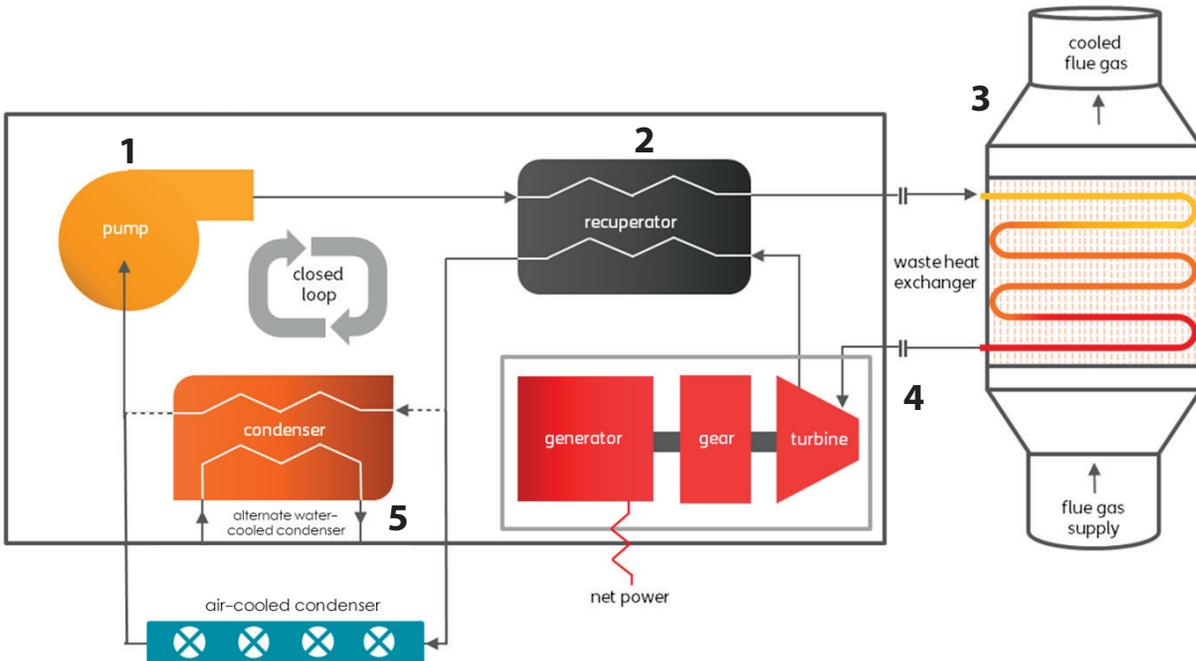
power systems



Echogen is the industry leader in commercial sCO₂ heat recovery systems. Founded in 2007, Echogen has progressed from multi-kW demonstration units to multi-MW commercial products, including the groundbreaking 8 MW EPS100 heat engine.

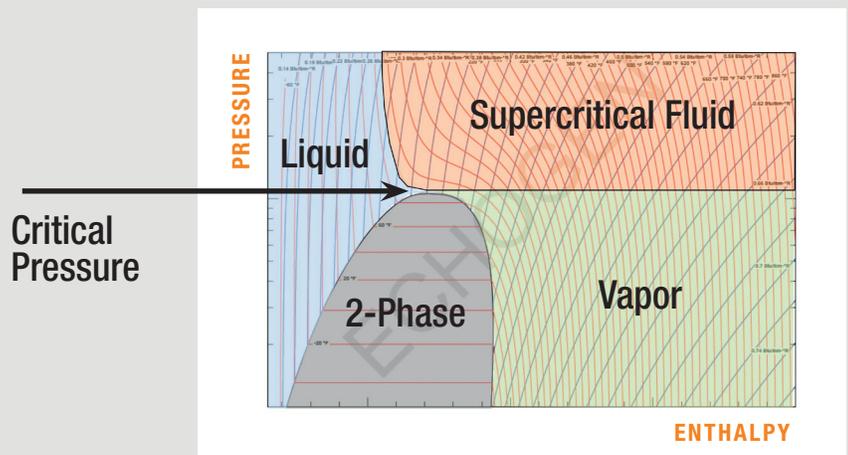
Water-free, no exhaust bypass stack required, fast start, unmanned operation

Echogen sCO₂ Heat Recovery Cycle

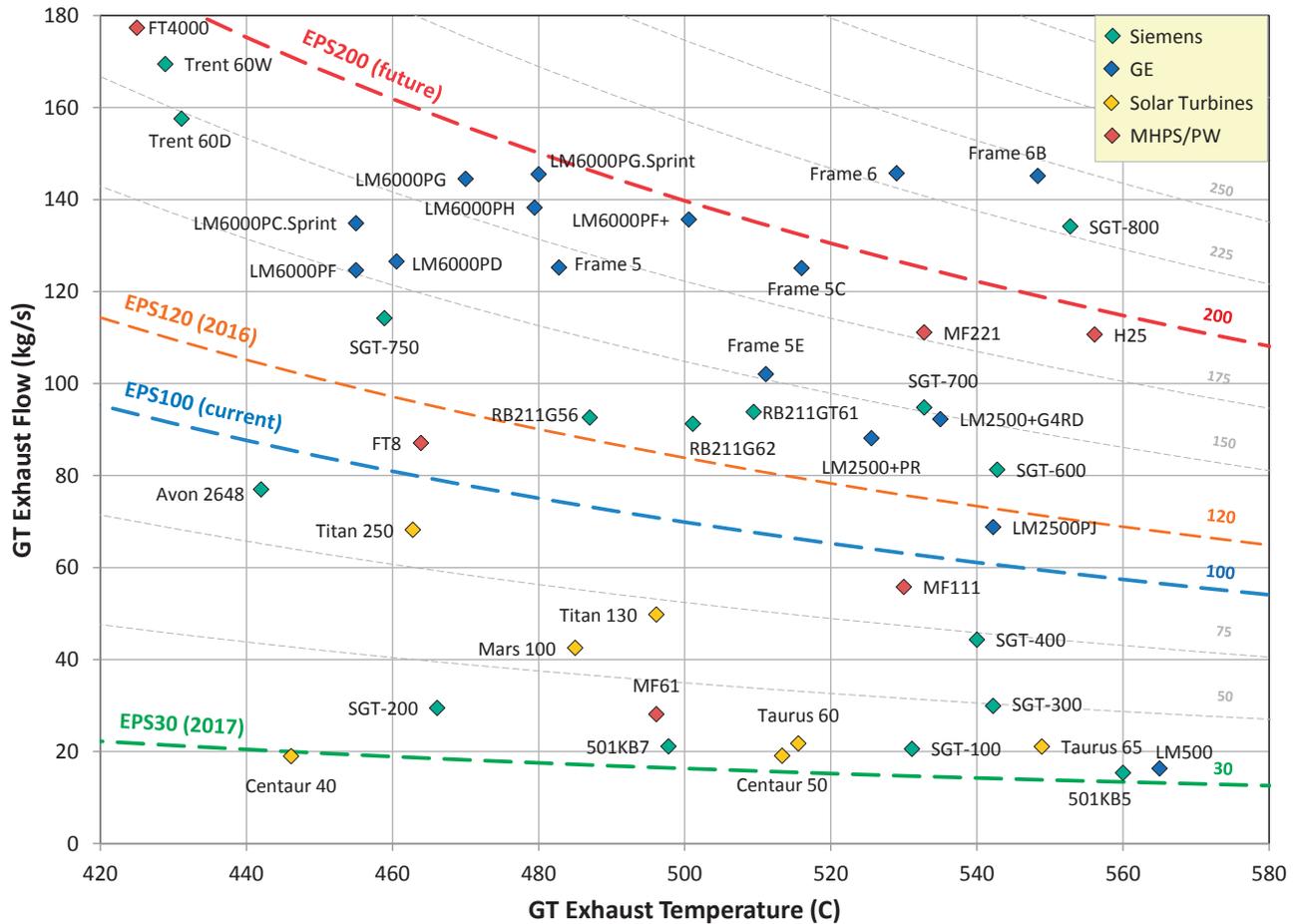


1. Liquid CO₂ is pumped above critical pressure (sCO₂).
2. CO₂ is preheated in the recuperator.
3. Recovered waste heat is added at the waste heat exchanger.
4. High-enthalpy CO₂ is expanded in the turbine, driving the generator.
5. CO₂ is cooled in the recuperator then condensed to a liquid. Coolant can be air or water.

CO₂ becomes supercritical above 31°C and 74 bar. Supercritical fluids have advantageous properties of both liquid and gas.



The Perfect Fit Behind Your Gas Turbine



Technology Benefits



EFFICIENT

- Simple heat transfer, no boiling process (single phase)
- Direct in-stack WHX, no intermediate fluid required

COMPACT

- 25-50% footprint reduction compared to steam cycle
- No diverter or bypass stack required

COST-EFFECTIVE

- Generates power at competitive installed cost
- Revenue not dependent on fuel prices

WATER-FREE

- No water required with use of air-cooled condenser
- Cooling tower option also available

CLEAN & SAFE

- Produces electricity without incremental emissions
- Working fluid is thermally stable and environmentally benign

FLEXIBLE

- Applicable to a wide variety of heat sources
- Does not disrupt existing plant operations

New-build or retrofit, our compact, water-free and
bypass stack-free design makes the
Echogen sCO₂ Heat Recovery System
the perfect addition to your power plant.



ECHOGEN
Heat recovery reinvented.



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