

# Phoenix Rotor™ Frame 7E & 7EA

Hybrid rotor with new and Certified Previously Operated (CPO)™ components certified for 200,000 FFH of remaining life



The lifespan of heavy frame gas turbine components is limited. Experience indicates that age-related risk, including forced outages, increases exponentially when gas turbine components are operated beyond their design life.

EthosEnergy's Phoenix Rotor™ is intended for rotors approaching or exceeding 200,000 Factored Fired Hours (FFH) or 5000 Factored Fired Starts (FFS) and is available as an exchange or fleet program.

Aligned to meet safety-critical TIL-1576 issued by the OEM, Phoenix Rotors™ are available in stock to minimize outage duration.

EthosEnergy has access to Siemens proprietary material property database and rotor design tools. Proven OEM design and materials are used for EthosEnergy Frame 7EA Phoenix compressor and turbine rotor discs.

## KEY FACTS



<b>Expected Rotor Life</b>	200k FFH, 5k FFS
<b>Warranty</b>	EcoLife™ (50k FFH, 1250 FFS)
<b>Risk Ownership</b>	EthosEnergy
<b>Rotor Disc Materials</b>	NiCrMoV or NiCrMoVNb alloy

## Scope

### Compressor rotor

- Unstack + restack compressor rotor
- Replace with new:
  - Last 4 stages of compressor wheels
  - All compressor blades
  - Compressor through-bolts
- Remaining compressor wheels will be CPO
- New set of compressor though-bolts

### Turbine rotor

- Unstack + restack turbine rotor
- Replace with new:
  - Stage 1/2/3 turbine wheels
  - Stage 1/2 and stage 2/3 turbine spacers
  - Turbine through bolts
- Forward and aft stub shafts will be CPO
- Coat turbine rotor components with 2FI equivalent