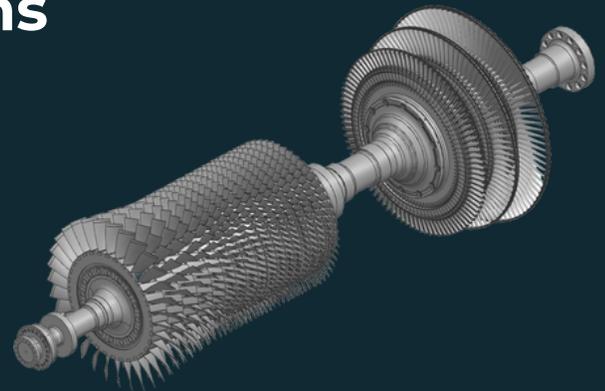


Rotor End of Life Solutions

GE F Class Gas Turbines

EthosEnergy's recommended approach for rotor end of life and compliance with TIL-1576



Are you approaching the hours (144,000 FFH) or starts (5,000 FFS) limit on your B/E-class gas turbine?

TIL-1576 outlines the risk associated with exceeding these limits, including:

- risk of failure
- serious injury to nearby personnel

You could also face a loss of insurance or denied claims by operating beyond these limits.

There are solutions beyond purchasing a new rotor from the OEM. Options that are low risk, cost-effective and flexible with minimized downtime.

EthosEnergy, an independent service provider with OEM pedigree, has developed a series of reliable life extension solutions for these units that allow you to stay in your current technology.

OUR SOLUTIONS

ROTOR REPLACEMENT



Phoenix Rotor™

Hybrid rotor with New and CPO™ components certified for 144,000 FFH

Certified Previously Operated (CPO)™

Rotor with known pedigree and recommended remaining life up to 128,000 FFH

CUSTOMER ROTOR SOLUTIONS

Life Time Assessment (LTA)

Unstack/restack of compressor and turbine rotor and LTA inspection on the rotor components. Possible life extension based on results.

Condition Based Life Extension

Engineering evaluation detailing the rotor condition, associated risks, and recommendations for components replacement. Possible 50k-200k FFH extension.

OUR OEM PEDIGREE

EthosEnergy is the Original Equipment Manufacturer (OEM) of mature Westinghouse and Fiat Gas Turbines. In-house capabilities include both rotor and component manufacturing as well as engineering.

By applying our OEM design standards and processes, EthosEnergy manufactures combustion, gas path, compressor and rotor parts for GE heavy frame gas turbines.

Using analytical tools and the Siemens material database, we have identified the residual life of all rotor components.

We then re-engineered the critical components using stress, temperature, and finite element models, allowing us to understand cyclical and operating life and develop rotor life extension programs.

CUSTOMER BENEFITS

- Cost management
- Time savings - no need for new permitting
- Flexibility vs rigid OEM offering
- ESG friendly by reusing existing assets vs new manufacture
- Financing available
- Warranty
- The only non-OEM rotor option available for B/E class that uses OEM technology and materials

ETHOSENERGY KEY FACTS

- Headquarters in Houston, TX
- Joint venture between Wood PLC and Siemens Energy
- 4,500 employees across 30 countries
- 25 global locations
- 5,000 customers across 120 countries
- 65+ years of OEM manufacturing experience

