

# Flexible Service Agreements

**Thomassen Energy**  
a Hanwha company

# Flexible Service Agreements

## Total Maintenance Concept

Thomassen Energy can offer you a total maintenance concept. It is the product of decades of experience in all aspects of GE-type heavy-duty gas turbine technology and our ISO-certified 9001 management system.

Our Flexible Service Agreements are based on a total maintenance concept offering Customers enhanced unit availability and reliability along with reduced maintenance and operation costs. This concept includes the gas turbine itself, all auxiliaries and load gear, and generator, boiler and steam turbine maintenance in full-service Flexible Service Agreements (FSA's). Our basic maintenance agreements are modular in design in order to meet all of your needs.

They include:

- scheduled and unscheduled maintenance
- delivery of parts
- component reconditioning
- conversions, modifications and upgrades
- engineering support for gas turbines, controls and maintenance
- 24-hour on-call service
- unit operations assistance
- customer training
- remote monitoring.

## Condition Based Maintenance

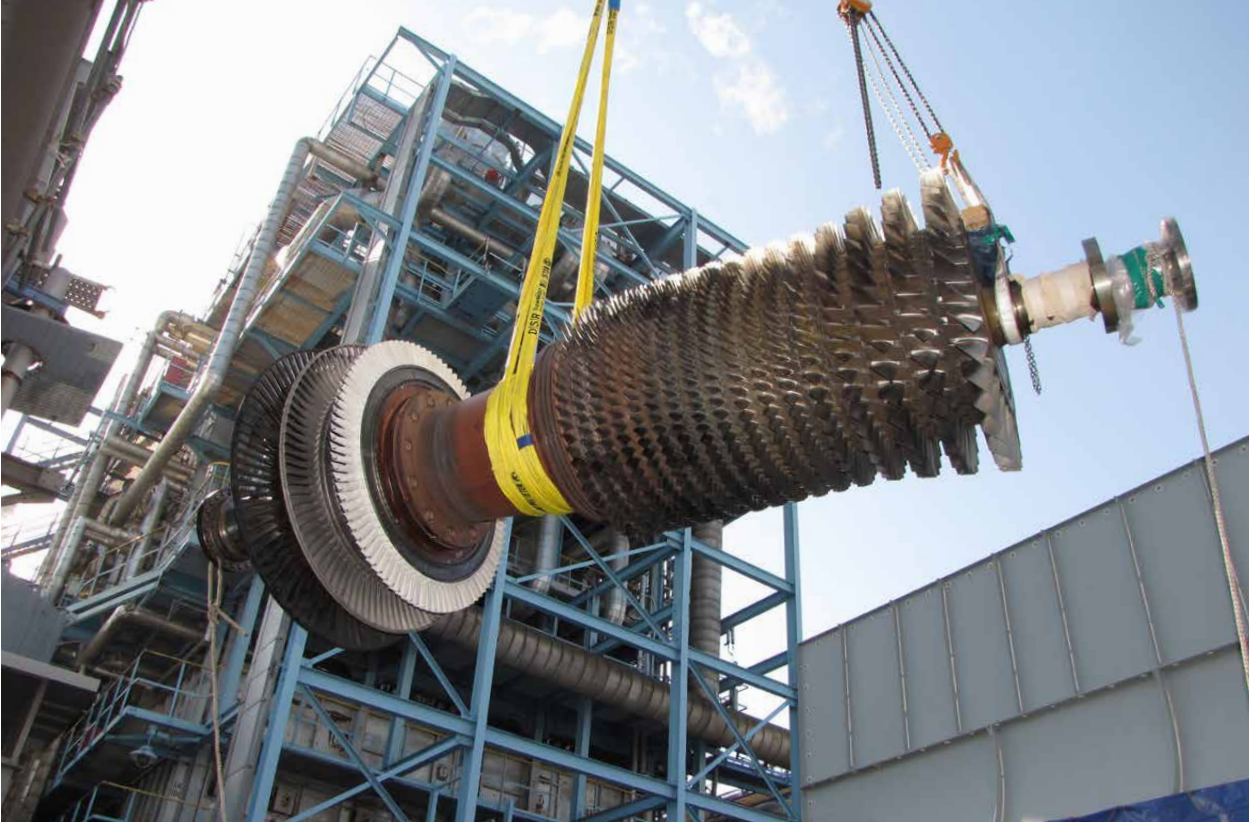
Your turbine type and installed components define the frequency of the standard inspections. The intervals between equipment changes vary according to operating conditions such as environmental conditions, firing temperatures, the number of starts / stops and running modes.

Appraisal visits to determine the general condition of the equipment precede scheduled inspections. This knowledge helps to anticipate requirements during scheduled inspections and enables more efficient planning for unit shutdown. Each inspection finishes with a post-outage meeting. During this meeting a detailed evaluation report is presented and discussed.

In case you are confronted with a forced outage immediate contact is made with the contract manager.

All historical and real-time data on the unit will be gathered via the Thomassen Online Monitoring System (THOMS). Your liaison manager coordinates immediate dispatch of a service specialist who carries out extensive inspections. As soon as we determine the extent of the damage, we coordinate a detailed repair program with the Customer.





### **Parts Delivery**

Thomassen Energy can offer you a complete range of new and refurbished capital, consumable and operational parts for GE heavy-duty E and F-class gas turbines. Patented spare parts developed in-house as alternatives to OEM parts offer lower up-front and service-life costs, increased efficiency and lower emission levels.

By combining strategic stocks, spare parts inventory at Customer sites and just-in-time deliveries of new parts, your liaison manager can minimize stocking of parts and maintain the highest levels of unit availability.

### **Component Reconditioning**

From our service centers worldwide, we offer refurbishment of all gas turbine components, including combustion components, hot gas path components, gas turbine rotors and all on-base and off-base equipment. During reconditioning you have the option to have your combustion parts equipped with our Thomassen Extended Lifetime Program (THOMELT) kits.

### **In-house Engineering**

We use our comprehensive in-house knowledge of turbines, repair, controls and maintenance engineering to provide technical support for tailor-made technical solutions, including special fuels, performance improvements and reducing downtime.

### **Main Features:**

Flexible Service Agreements provide the following benefits:

- Transparency and unilateral responsibility with no risks of budget overruns
- Guaranteed equipment availability and performance
- Guaranteed spare parts availability
- Minimal costs for new and refurbished parts over the lifetime of the FSA's or custom periods
- Flexible financial solutions
- Storage capacity.

# Thomassen Energy

**Innovation and Service for a World with Clean Power**

Havelandseweg 8d • 6991 GS Rheden  
P.O. Box 95 • 6990 AB Rheden • The Netherlands  
T +31 26 497 5800 • F +31 26 497 5857 • E [info@thomassen.energy](mailto:info@thomassen.energy)  
[www.thomassen.energy](http://www.thomassen.energy)