Restores and Maintains Optimal Performance

In today’s competitive environment, an unplanned outage or poor performance in a gas turbine can significantly impair operations. GE’s Gas Turbine Performance Evaluation is a service that helps you enhance gas turbine performance and minimize unscheduled shutdowns and repairs. GE’s experienced performance engineers evaluate turbine performance utilizing a combination of remote data acquisition technology, precision test instrumentation and industry-leading analysis tools to identify and quantify performance shortfalls on gas turbine units. GE will help customers identify the best testing solution based on customers’ individual performance criteria. GE then provides specific, action-oriented recommendations including advanced hardware tools and process changes.

Provides Cost-Effective, Tiered Approach

GE provides three levels of analysis, each more in-depth than the previous, allowing customers to select the option that best meets their performance recovery objectives and budget.

• Remote Performance Evaluation – This cost-effective evaluation option entails fully remote data gathering and analysis for unit performance calculations. The analysis utilizes existing station equipment and data connectivity tools. The remote diagnostic testing relies on customer involvement for pre-test checks, the performance test, and the pre-test and performance test data. GE’s analysis focuses on overall performance parameters and deviations to the thermal model. It evaluates output, heat rate, and exhaust temperature.

• On-Site Performance Evaluation – The on-site evaluation option is a detailed analysis performed by GE’s qualified engineering team, utilizing precision instruments for critical measurements. Designed to provide better data resolution into component performance, the analysis uses both station and precision equipment. GE conducts the pre-test activities and performance test and collects and analyzes the data for each. The analysis expands to compare component performance to the expected thermal model. In addition to a more in-depth analysis of output, heat rate, and exhaust temperature, the evaluation assesses compressor efficiency and airflow, turbine efficiency and relative firing temperature.

• On-Site Precision Performance Evaluation – Utilizing additional precision instrumentation to enhance diagnostic resolution, this option leverages GE’s testing experience in analyzing and quantifying the component impact on overall performance. In addition to assessing output, heat rate, and exhaust temperature, the detailed analysis focuses on key parameters, evaluating power measurement, fuel flow parameters, compressor discharge conditions, and turbine discharge conditions. The testing results in a more in-depth understanding of unit performance with waterfall charts and pinpointed areas of concern.
Testing Benefits
GE’s Thermal Performance Evaluation is designed specifically to enhance gas turbine performance by providing real, cost-effective solutions to help:
• Enhance turbine efficiency
• Increase output
• Improve heat rate
• Recover lost performance
• Improve exhaust temperature
• Maximize compressor efficiency and airflow
• Reduce fuel costs
• Avoid forced outages
• Improve maintenance planning
• Improve relative firing temperature

GE’s Core Competencies
• Access to Value-added, Proprietary Information
• Experienced Engineering Experts
• Provides Repeatable, Accurate and Understandable Results
• Capability to Quantify Component Impact on Results
• Offers Specific Recommendations to Achieve Measurable Results

Expanded Performance Tools
GE also offers:
• Combustion Re-tuning
• Unit Emissions Testing
• Acoustic Testing
• Steam Path Audits
• Performance Management Program

To learn more about this offering, contact your GE sales representative or visit powergen.gepower.com.