



Performance Intelligence from GE Digital

Real-time thermal monitoring and actionable recommendations to reach optimum efficiency

Reduce fuel and emissions

How much does 1% heat rate loss mean to your business? Having a clear picture of thermal performance at the plant level is essential to course-correct under performing assets.

Performance Intelligence answers the question, “Do I have a problem?” If yes, how much is it costing me and where is the issue?

Improve and maintain equipment performance and overall plant heat rate

- Monitor system-wide equipment performance across the operating range to reveal developing trends and efficiency losses
- Reveal hidden equipment issues with actionable data insights

Improve startup performance and fuel costs

- Visualize start performance vs. expected and normal
- Understand start variation and improve startup performance through data-driven insights

Maintain capacity for peak seasons

- Monitor the full load range to reveal developing trends and potential derates
- Visualize best and worst performers
- Analyze equipment performance trends that impact plant peak capacity

Generate performance tests and reports

- Quickly assess ASME PTC or custom test criteria
- Export reports in one click
- Compare multiple tests side-by-side



Drive productivity and fuel savings

600 MW Plant Potential Annual Benefit

\$50K
Plant support productivity

Productivity

\$360K
Reduced fuel cost from heat rate benefit (0.5%)

Reduced Cost

\$410K
Per year

Benefit

Performance Intelligence Technical Specifications

Performance Intelligence includes:

- Data integration tag mapping
- Thermal performance models deployed in cloud on-premise
- Model validation analysis
- Analytic configuration
- Application software and UI configuration
- Application functional validation
- Implementation and Subscription/ Acceleration Plan for a customer selected term
- Managed Services – Optional service offering depending on the project

Customer Supplied Materials:

- Collaborate with GE implementation team on the required data and information
- Access to plant personnel for plant and equipment data/ information
- Plant and major equipment design information
- Process layout details
- Piping and instrumentation diagrams
- DCS master tag lists
- Historian master tag lists
- Sample data sets including historical data covering load range and seasonal variation, performance test data, historical upgrade events, major maintenance activities
- Technical support for data questions, sensor investigations and alternative data source discussions

Other Requirements:

- The required interconnection devices, such as short-haul modem pairs, cabling, switches, etc.
- Cyber security devices (e.g., firewall)

For Cloud Implementations:

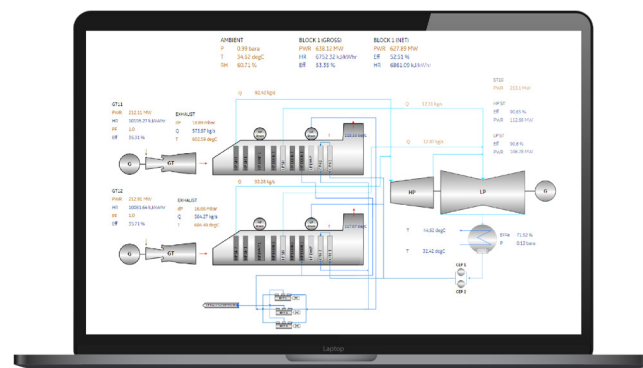
- One On-Site Monitor (“OSM”) or other Edge option, acceptable to GE, including CPU, monitor and keyboard. If required, GE can provide a quotation for an OSM (additional cost/price). One network connection per computer system to provide remote access.
- Data system interface to OSM/Edge (DCS or Historian via OPC or other data exchange protocol)

To view application the following are required:

- Laptop/Desktop
- Connectivity to cloud or web-interface to on-premise system network
- Chrome version 55.X or higher

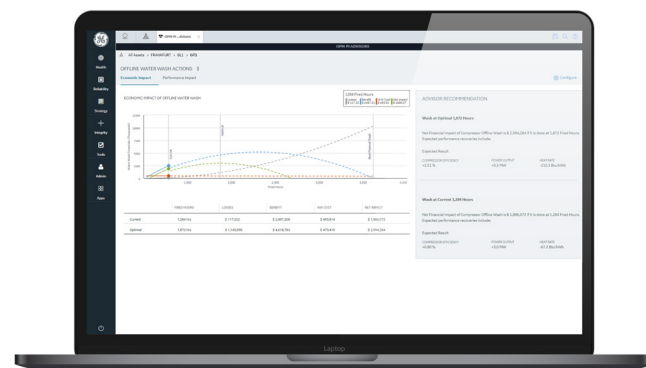
Have confidence in your plant and fleet capacity while reducing fuel and emissions

Performance Intelligence Features



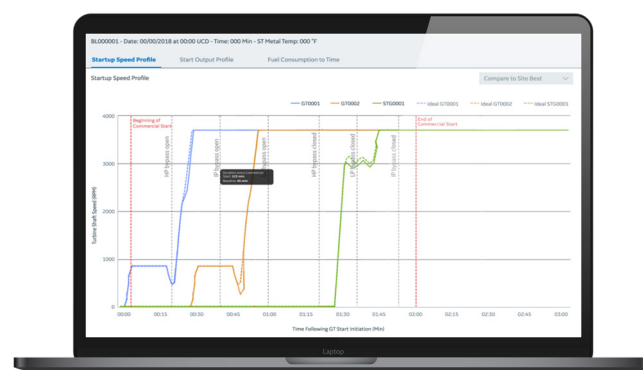
Thermal Performance

- Physics-based Digital Twin models customized to equipment designs
- Performance analytics provides visibility, trends and insights
- Operating mode analytics provide performance data relative to the various plant operating configurations across the load range and operational conditions
- Software user interface provides easy access



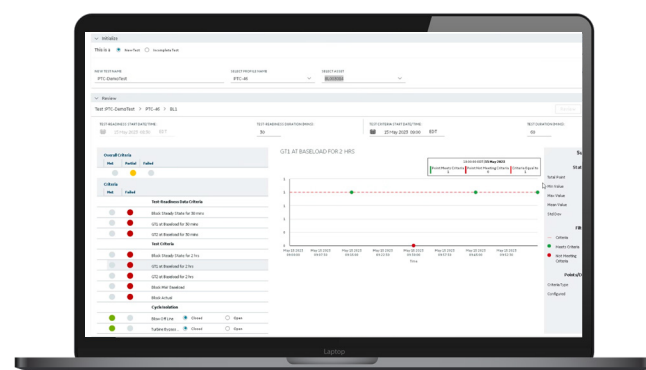
Diagnostic Alerts and Economic Tradeoff Advisors

- Economic optimization to improve waterwash operations and inlet filter house performance
- Automated alerts of performance shortfalls and degradation trends
- Real time alerts include actionable recommendations to improve heat rate and output



Flexibility Performance Monitoring

- Improves plant flexibility and operational performance
- Critical insights provided for start fuel, start time, ramp rate and minimum load



What-If and Performance Test Tools

- Understand the impact of equipment derates on plant capacity and heat rate
- Prebuilt catalog of ASME Performance Test Codes (PTC) or custom test criteria
- Operating mode analytics provide performance results across the load range and operational conditions

How Performance Intelligence works



Digital Twin Models are customized to your plant's equipment, system design and dispatch profile



Performance analytics are deployed, providing visibility to performance data, trends, and insights, across the entire range of operation



The easy-to-access user interface provides operational data summaries, performance analysis, and recommendations



Reduced Fuel



Reduced Emissions



Improved Capacity



Reduced Risk



Reduce your heat rate and save on fuel

Ready to try out the new & improved thermal performance tool to operationalize your heat rate?

[EXPLORE DEMO NOW](#)