

DATA-DRIVEN DECISION MAKING

Utilizing OSIsoft PI System's® ability to capture real-time process data and their secure PI Cloud Connect service, ORAP Asset Insight® allows plants to receive a measurable return through reduced manual effort, improved data granularity and fidelity, and access to timely and current RAM metrics.



Building upon the proven industry reliability benchmarks currently provided by ORAP[®], customers have the flexibility to choose additional Asset Insight functions to fit the needs of their plant. Those functions include; the ability to track the parameters that influence capital parts age, compliance reporting to NERC GADS, on-demand asset reports using standard Key Performance Indicators, projecting maintenance intervals based on current & future plant operations, and understanding the operating profile of the plant in terms of start time, fuel used, power output, others.



ORAP RAM Connect

Benchmark your reliability performance against peers in ORAP, the most comprehensive gas turbine plant database in the world. Transform real time control system data points directly into time, capacity, and event information required by ORAP, using transformation algorithms developed by SPS. This automated process is performed with minimal operator involvement - automatically creating ~85% of the data required in a consistent, accurate and timely process.

GADS

ORAP GADS

The GADS function automatically captures operating data to determine the periods where a reserve shutdown event must be inserted to simplify NERC GADS reporting requirements. For a cycling or peaking duty plant this automated tool can save the entry of hundreds of events per unit each year, providing real productivity for plant personnel. For a baseload plant this same feature reduces manual effort in reporting maintenance periods.











Life Calculator

Track the cumulative life of your equipment by automatically logging and/or calculating your current age or accumulated cycles on an ongoing basis. Many OEM's have defined complex aging algorithms such as; Factored Hours/Starts, Equivalent Hours/Starts, GE Accumulated Cycles, which have been embedded in the ORAP transformation logic. Because we have embedded the logic within the function you don't have to worry about adhering to the complicated OEM published calculations, the system does it for you automatically! Additionally, if you participate in ORAP Parts-Trac, this product can be used to directly link your age values down to your serialized parts.



Operating Profile

Record each mission, from start-up to shutdown, including all major states from signal to start, through the permissives, to ignition, flame established, accelerating, breaker closure, through each change in load state, to shut down, and then the cool down period. The system tracks the fuel used and power produced at each stage in the mission. Starting time, fuel used, time at baseload, mission termination, and many other mission parameters are captured without operator involvement, so questions of data accuracy and timeliness evaporate.



Maintenance Forecast

Project your major maintenance requirements for up to 20 years. Be predictive about when you will need to perform maintenance, based on your plant's actual operating data. Verify the parameters that are driving maintenance requirements today and use built-in "what-if" scenarios to focus on the impact of possible future changes to plant operations.



RAM KPIs

Calculate and report standard key performance indicators required by asset management, financial management, regulatory authorities, and insurance companies. Using data collected through ORAP Asset Insight, this module provides a customizable output format, graphical and/or tabular, addressing the reporting requirements placed on most plants. Allows plant personnel to spend more time focused on effectively operating the plant, not on generating reports.



Dynamics+

Dynamics + Dynamics Plus is a combustion dynamics advanced warning system that augments and extends the capabilities of your existing Combustion Dynamics Monitoring System (CDMS). Dynamics Plus combines a CDMS with a patented machine learning algorithm and a physics-based combustion model. Going beyond simplistic trending and threshold alarming, Dynamics Plus monitors and dynamically learns the unique combustion signature of a gas turbine and alerts operators to relevant faults. The application detects instrumentation issues, tuning problems, or impending hardware failure, weeks to months ahead of time, before dynamics force an unplanned outage or cause damage to plant equipment. It provides real-time combustion health information that protects the combustion turbine and helps maximize unit availability. It is currently in use at several major utilities and has caught numerous instrumentation issues and hardware faults including melted premixing tubes and cracked resonators. Dynamics Plus is also

autotuning aware, so you won't be flying blind if the autotune tries to mask hardware or instrumentation issues.



CONTACT US

spsinc.com inquiries@spsinc.com