

EVENTS, AGE, OPERATIONS, ANALYTICS



ORAP RAM[™] - a third-party, unbiased service for monitoring and reporting the Reliability, Availability and Maintainability (RAM) of a fleet of assets. Understand where you fit in versus your peers, enabling you to make informed decisions about your operations.

Making Informed Decisions

Critical to informed decision-making is an understanding of your performance compared to that of your peers. For the Energy Industry, SPS' ORAP RAM service allows our customers access to a global resource for Plant and Fleet RAM data unmatched in the marketplace. ORAP has been collecting data from gas and steam turbines (including HRSG & supporting equipment and balance of plant systems) and reciprocating engines for over 35 years. Our customers count on us as a strategic resource to help them make informed business decisions.





Best in Class Performance: Know Where You Fit In Versus Your Peers





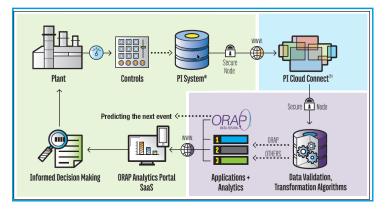
Knowledge Transfer: Consistency and Transparency Across Multiple Plants

Automated Data Capture

Run Your Plants, Not Reports

Gathering data from your power plant can be time consuming. Through a partnership with OSIsoft[®], we are able to capture about 85% of the data required to participate in ORAP, automatically. This information is collected securely using OSIsoft's PI Cloud Connect technology.

Automated collection improves the accuracy and fidelity of the data, reduces the manual effort required for reporting, and improves productivity.





Protecting Your Investment

Operating a Power or Process plant requires talented maintenance and operating staff as well as an organized approach. The cost of Gas and Steam Turbine equipment over its lifespan is immense and requires active maintenance. SPS works with our customers to provide component level detail on these critical assets to help formulate knowledge-based maintenance strategies based on fleet performance characteristics and best-in-class statistics.

- All ORAP information passes through a detailed, engineering, rule-based data verification process
- Reliability Engineering is our CORE business activity this is what we do
- ORAP contains data from ALL major large Original Equipment Manufacturer (OEM) equipment
- The Energy market is constantly changing, and our engineers are responsible for keeping up with evolving technologies and changing market expectations
- Opening active communication between the OEM and plant owners/operators is an essential part of our process How can equipment be improved if the OEM is unaware of fleet experience?

ORAP Analytics Portal

The ORAP Analytics portal is a live, real-time, Internet based "Business Intelligence" portal that provides the Key Performance Indicators (KPIs) that allow you to benchmark your performance to the "peer group" of your choice. The ORAP Analytics portal provides all of the information that you have come to rely on from ORAP, with a more intuitive, visually appealing interface.

Comparisons available in the ORAP Analytics portal include:

- MW Production & Capacity Factor
- Availability
- Reliability
- Starting Reliability
- Service Factor
- Service Hours per Start
- EFOR, EFORd
- Forced Outage Factor
- Maintenance Outage Factor
- Planned Outage Factor



- Among and a set of the set of the
- Component Contributors to Downtime Events
- Top Causes of Failed Starts
- Inspection Duration & Intervals
- Engine Removals

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