

Case Study - Tracking High Cost Capital Parts to Enhance Plant Resale Value



ELIMINATING PARTS VALUE UNCERTAINTY

Background

A merchant combined cycle F class power station in the Southeast US was recently sold. The selling merchant generator kept poor records on the hot gas path parts, so these parts were assumed to be scrapped at the next inspection and added no value in the sale. The purchasing organization recognized the potential to maximize the value of their own capital parts moving forward and sought to install a parts tracking solution soon after the transaction was completed.

As the operational requirements of gas turbines continue to change because of low natural gas prices, coal plant retirements, and increasing amounts of intermittent renewable energy, optimizing the hot gas path parts life continues to be a primary driver of “controllable” life cycle cost. For merchant plants especially, potential buyers will reward great record-keeping of these expensive parts or assume the worst (no useful or economic life remaining) if such records are not readily available in a rigorous and clear form.

The Situation

The Maintenance Manager for the new plant owner contacted Strategic Power Systems, Inc. to explore building or leasing a software system which would rigorously track the interval life, cumulative life and location of all hot gas path parts across the owner’s US power plant fleet. Location was important along with age because the fleet sought to reduce parts inventory costs by sharing spares. Some of the sites stored spare parts at the plant and others stored spares in separate warehouses. The owner’s corporate Asset Management group wanted to be able to instantly see each location as well as the spare parts for the entire fleet.



Tracking Parts Location & Age



The Solution

SPS proposed to the new merchant owner a software-as-a-service solution for tracking the ages and locations of the fleet’s hot gas path parts; a solution called ORAP Parts-Trac®. For implementation of Parts-Trac, SPS arranged and scheduled a two-day workshop with staff from each of the fleet’s power plants.

At the workshop, SPS and the staff reviewed; the Parts-Trac system, discussed best practices, and tailored the system to fit the company’s requirements on items such as the specific aging requirements (fired hours, equivalent fired hours...), part naming conventions, part position, and many more. All of this was documented and provided to the company as their Capital Parts Tracking Plan.

Within a short period after the workshop, each of the individual sites and the corporate Asset Management team could produce up-to-date parts age and location reports down to the serial part level with the push of a few keys. If the merchant owner decides to sell any of its plant assets in the future, it will suffer no loss in the value of its inventory due to inaccurate or incomplete records on the remaining useful life of the hot gas path parts.

Business Benefit

A typical F class combustion turbine owner might spend ~\$7 million to replace the hot gas path parts in a single unit. A failure to keep accurate records of the parts life would result in a potential buyer assuming the worst about the remaining parts life - no remaining life. Assuming that the actual remaining useful lives across all of the parts is about half of the recommended life, having a system that yields up to date and accurate ages could enhance the sales value of the plant by approximately \$3.5 million.

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Accurate parts age records can add millions of dollars to the sale value of a power plant.



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