

STAYING AHEAD OF FAILURE WHEN EVERY SECOND MATTERS

A 565 MW combined cycle power plant, built for rapid cycling, knew reliability couldn't be left to chance. To protect performance and meet grid demands, plant leadership implemented **Emerson Valve Condition Monitoring** to continuously track the health of their most critical valves.

SEEING PROBLEMS BEFORE THEY ESCALATE

Once remote monitoring was in place, Emerson Valve Diagnostic Subject Matter Experts began regularly analyzing **60 critical valve tags**, reviewing valve signatures, travel accuracy, and device behavior. During routine analysis, they identified a developing issue on an **HRSB bypass valve**. There was slow movement and increasing travel deviation, which are classic signs of an air-handling problem within the actuation system. Instead of discovering the issue during a startup or forced outage, the plant was alerted early and able to plan repairs during a scheduled outage.

A HIDDEN FAILURE, FOUND EARLY

Guided by Emerson diagnostics and recommendations from R.E. Mason, the onsite team inspected the valve and found the root cause: a **severely leaking lower volume booster** starving the actuator of air.

Left unresolved, the issue would have led to longer startups, increased fuel burn, and reduced grid responsiveness. Early detection allowed the plant to fix the problem efficiently before performance or reliability were impacted.

PROTECTING PERFORMANCE AND EVERY MEGAWATT

With continuous valve health insight, the plant now benefits from:

- **Early warning of developing valve issues**
- **Actionable diagnostics that pinpoint root cause**
- **Greater confidence in outage planning**
- **Reduced fuel waste and operational risk**

By catching the leaking booster early, the plant avoided an issue saving them **more than \$100,000 per year in wasted fuel**.

RESTORED SPEED. RESTORED CONFIDENCE

After repair and recalibration, the HRSB bypass valve returned to proper response speed and accuracy restoring the rapid start capability the plant relies on to meet grid demand. Through proactive monitoring, the customer stayed ahead of failure instead of reacting to it.

**LEARN HOW PREDICTIVE VALVE DIAGNOSTICS
PROTECT PERFORMANCE AND RELIABILITY.**