



CUSTOMER CASE STUDY

Boosting Power Plant Efficiency

BKO AI improved power-plant operations through monitoring, proactive maintenance, and staff training to support efficiency and better-informed decisions

Solution: BKO AI Monitoring and Diagnostics Platform

Industry: Power Generation

Use Case Focus: Asset Performance Management

GOALS

- Establish a predictive maintenance framework using real-time asset health data for optimal scheduling.
- Upskill plant personnel to effectively interpret performance dashboards and drive daily decisions.
- Provide plant leadership with clear historical visibility and predictive analytics to forecast long-term trends.

SOLUTIONS

- Developed online monitoring dashboards to enable parameter monitoring and real-time operational visibility.
- Implemented live health score dashboards assessing the performance of gas turbines, steam turbines, and condensers.
- Delivered technical training programs to equip onsite personnel with analytical and dashboard interpretation skills.
- Conducted a comprehensive three-year historical data analysis to identify root causes of equipment inefficiency.

CHALLENGES

- Data silos across various equipment and systems restricted the efficient flow of critical operational information.
- Maintenance schedules lacked the empirical data required to determine optimal servicing times and post-maintenance results.
- Plant operators lacked the necessary training and experience to leverage visualization dashboards.
- Limited historical monitoring data prevented leadership from accurately tracking yearly performance trends.

RESULTS

- Recovered 10 MW of capacity at base load across two critical power generation units.
- Transitioned plant operations to proactive maintenance scheduling backed by real-time asset performance metrics.
- Empowered utility leadership to make long-term planning decisions based on verified, up-to-date data.
- Provided monthly performance and optimization reporting to support grid-reliability planning in Texas.

EXECUTIVE SUMMARY

BKOAI improved power-plant operations through monitoring, proactive maintenance, and staff training to support efficiency and better-informed decisions. The solution combined online monitoring dashboards, live health scores for gas turbines, steam turbines, and condensers, technical training, and a three-year historical data analysis. The program recovered 10 MW of base-load capacity across two units, supported proactive maintenance scheduling, and provided monthly performance and optimization reporting for grid-reliability planning in Texas.

Improving Visibility and Maintenance Decisions

Data silos limited the flow of operational information, while maintenance schedules lacked the empirical data needed to determine optimal servicing times and post-maintenance results. BKOAI developed online monitoring dashboards and live health score dashboards to improve visibility into plant and asset performance.

Building Operator Capability with Historical Context

Plant operators lacked the training and experience needed to use visualization dashboards effectively, and leadership had limited historical monitoring data for long-term trend analysis. BKOAI delivered technical training and analyzed three years of historical data to identify root causes of equipment inefficiency.

Recovering Capacity and Supporting Long-Term Planning

The program recovered 10 MW of capacity at base load across two critical power generation units. It also supported a transition to proactive maintenance scheduling, enabled long-term planning using verified data, and established monthly performance and optimization reporting to support grid-reliability planning in Texas.