

... CASE STUDY

Achieving Operational Excellence at Kansas City Power & Light

Challenge

A power generation plant's "heat rate" is the measure of how much energy it takes to generate one kilowatt hour of electricity. The lower the rate, the more efficient the plant. As most businesses around the world try to lower their carbon footprint and create more environmentally friendly operations, Kansas City Power & Light (KCP&L) sought to do the same by using less energy to create electricity, saving them costs while stepping up their commitment to environmental responsibility.

Solution

GP Strategies® provided industry-leading performance technologies for maximizing efficiency and monitoring equipment performance through its EtaPRO™ system. EtaPRO is an efficiency monitoring application for power generation plants. It conducts a real-time "gap" analysis to identify performance deviations that contribute to lost capacity and increased fuel consumption. EtaPRO's VirtualPlant™ software provided powerful thermodynamic modeling for quantifying resulting changes in capacity and heat rate to achieve efficiency improvements.

Business Impact

KCP&L's Iatan plant was the most efficient in the US for converting Power River Basin coal into electricity in 2012. Iatan's #1 heat rate ranking is the result of plant and corporate personnel working together to deliver economic and environmentally conscientious power to their customers. GP Strategies' technologies and services played a role in this accomplishment.



Our commitment to championing environmental stewardship and lowering energy costs, paired with GP Strategies' tools and capabilities, enables us to continue pushing the boundaries of what is possible in thermal efficiency and cost reductions."

– Tom Mackin,
Iatan Plant Manager for KCP&L

RESULTS

KCP&L can now take proactive measures to **improve heat rate**.

Iatan #2 burns less fuel than any other coal-fired unit in the country, while producing the equivalent amount of electricity, with **10% less greenhouse gases**.

Restored a **106-acre wetlands site** along the Missouri River. It is now home to ducks, swans, falcons, bald eagles, and other wildlife.

