

## FIELD REPORT: Achieving Operational Excellence



“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



### Achieving Operational Excellence is a high priority for Kansas City Power & Light (KCP&L)

As a leading Midwestern US power generator, energy efficiency is a top priority. KCP&L has been a national leader in this regard over the past year, having achieved the #1 Powder River Basin (sub-bituminous coal) heat rate ranking in the US according to the US Energy Information Association’s 2012 End of Year Heat Rate Benchmarking Report.

#### The Importance of Heat Rate

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. KCP&L’s Iatan plant was the most efficient in the US for converting PRB 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.

#### Partnering With GP Strategies™ for Operational Excellence

GP Strategies provides 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 is a powerful thermodynamic modeling product for quantifying resulting changes in capacity and heat rate. Targeting specific areas of deviation from design plant performance allows KCP&L to take proactive measures to improve heat rate. Plant personnel trend key performance indicators in EtaPRO to verify actual improvements.



## Achieving Results Measured in Terms of Wildlife and Ecology

KCP&L's commitment to environmental stewardship is evident from the successes at Iatan. Iatan 2 burns less fuel than any other coal-fired generating unit in the country, while producing the equivalent amount of electricity, with at least 10% less greenhouse gases. This has allowed KCP&L to meet its commitments to emphasize energy efficiency while minimizing environment impact.

But KCP&L's success goes beyond that. The Iatan initiative also included restoring a key part of the local ecosystem—a 106-acre wetlands site along the Missouri River. The wetlands habitat is now home to ducks, trumpeter swans, peregrine falcons, bald eagles, and other rare birds and wildlife species.

To celebrate the success at KCP&L, GP Strategies visited Iatan to deliver their **2012 POWER PLANT Operational Excellence & Stewardship Award**

Tom Mackin, Iatan Plant Manager, KCP&L (right) and Bill Green, Vice President, Energy Services, GP Strategies (left)



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