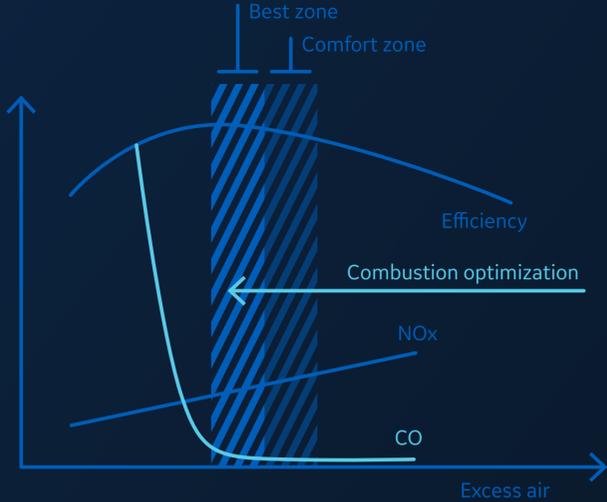




Boiler Optimizers for Coal-Fired Power Plants

Proven Results for Boiler Optimization

The need to minimize costs, maximize availability and enhance operational flexibility is more important than ever. BoilerOpt is a powerful software that improves plant productivity by pushing the operations envelope to be more flexible and available when markets demand it while minimizing emissions, outages and maintenance costs.



Reach the 'best zone' with BoilerOpt, a software for closed-loop optimization of fuel and air bias in real time at all operating loads

[LEARN MORE](#)

Reduce Heat Rate - Reach NOx Requirements - Optimize Soot Cleaning - Improve Efficiency

BoilerOpt includes CombustionOpt and SootOpt

Achieve better boiler combustion & emissions

<p>01</p> <h3>Controlled Variables</h3> <p>variables we want to control</p> <ul style="list-style-type: none"> Superheat steam temperature Reheat steam temperature Boiler outlet gas temperature Excess O₂ CO, NOx, Opacity 	<p>02</p> <h3>Manipulated Variables</h3> <p>variables we can manipulate</p> <ul style="list-style-type: none"> Tilts Fuel distribution Windbox to furnace differential pressure Air supply distribution 	<p>03</p> <h3>Disturbance Variables</h3> <p>variables that cannot be changed, but affect operations</p> <ul style="list-style-type: none"> Ambient conditions Unit demand Fuel composition
--	---	---

PROVEN TECHNOLOGY

<p>200+</p> <p>Installations at coal plants</p>	<p>23+</p> <p>Years of proven operation</p>	<p>1.5M</p> <p>Tons CO₂ savings</p>
<p>50MW Plants to 1GW Plants</p>		

REAL WORLD RESULTS

	B2	B3	B4
Generation efficiency improvements	0.22%	0.21%	0.20%
Heat rate improvements	0.61%	0.59%	0.55%
CO ₂ reduction	13.6 KT/Yr	13 KT/Yr	12 KT/Yr
Annual fuel cost savings	\$600k	\$575k	\$550k
*TOTAL ANNUAL COST SAVINGS FROM B2, B3, B4-\$1.73M			

RESULTS FROM 3 UNIT PLANT

0.59% Heat rate improvements

38kT Reduction in CO₂

\$1.73M Annual fuel cost savings

Multi-Unit Powerplant

2708_{MW} combined capacity

- AI/ML & Model Predictive models
- 4x28 MV's for neural network optimization
- 24x7x365 closed-loop optimization
- 4x85 nos. of soot blowers coordinated optimization
- 10%-15% reduction in non-productive soot blowing
- Ability to operate 8 blowers simultaneously

*Coal price used: USD 80/Ton

CUSTOMERS SPEAK

Challenge: With the rise in renewables, CENAL's Karabiga is essential to provide stable power to prevent shortages with as little emissions as possible.

Solution: Adopting a technology that improves operational inconsistencies to help improve plant performance and efficiencies.

“General Electric (GE) provided both the technology and expertise required to meet strict emissions guidelines while remaining profitable.”

Ihsan Acar - Power Plant Manager

[LEARN MORE](#)

<p>\$700k+</p> <p>Annual fuel savings</p>	<p>1,320MW</p> <p>Plant powered by 2 GE Ultra Super Critical Boilers and 2 GE Steam Units</p>	<p>15%</p> <p>Reduction in NOx emissions</p>
--	--	---

BoilerOpt™ Today's Presenters

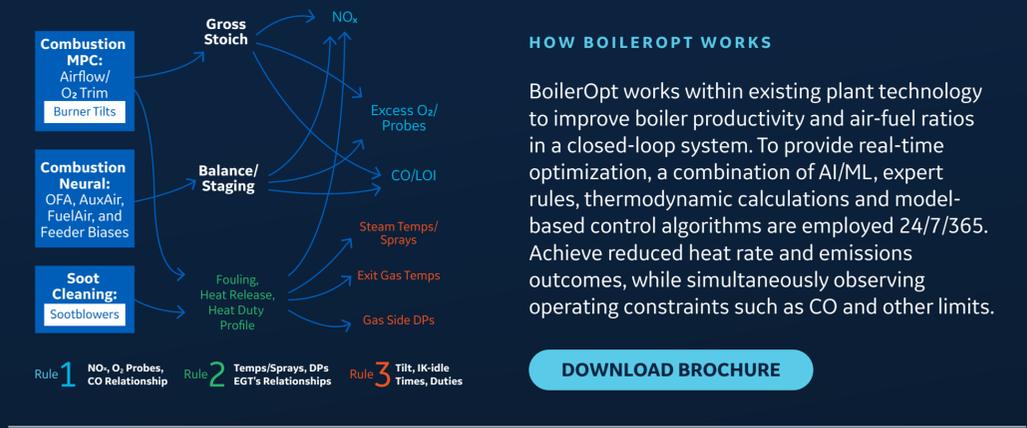
Jenny Bulach
Senior Staff Commercial Excellence Manager
GE Digital
Energy Subject Matter Expert with 21 years in the energy business: 6 years in GE, 15 years at a US Utility as a coal power plant manager, operations manager, performance engineer and various other roles.

Doug Bartlett
Principal Engineer
GE Digital
Project Applications Engineer responsible for the installation, testing of all GE Digital closed-loop optimizers, including Combustion and Soot optimizers for steam power plants, combined cycle products and Duct Burner Optimization and Predictors. Also works closely with product development team on new products and test new products of existing products.

WEBINAR

Explore how you can improve your steam power plant performance, reduce heat rate, and reduce NOx with CO control using these technologies

[WATCH NOW](#)



HOW BOILEROPT WORKS

BoilerOpt works within existing plant technology to improve boiler productivity and air-fuel ratios in a closed-loop system. To provide real-time optimization, a combination of AI/ML, expert thermodynamic calculations and model-based control algorithms are employed 24/7/365. Achieve reduced heat rate and emissions outcomes, while simultaneously observing operating constraints such as CO and other limits.

[DOWNLOAD BROCHURE](#)