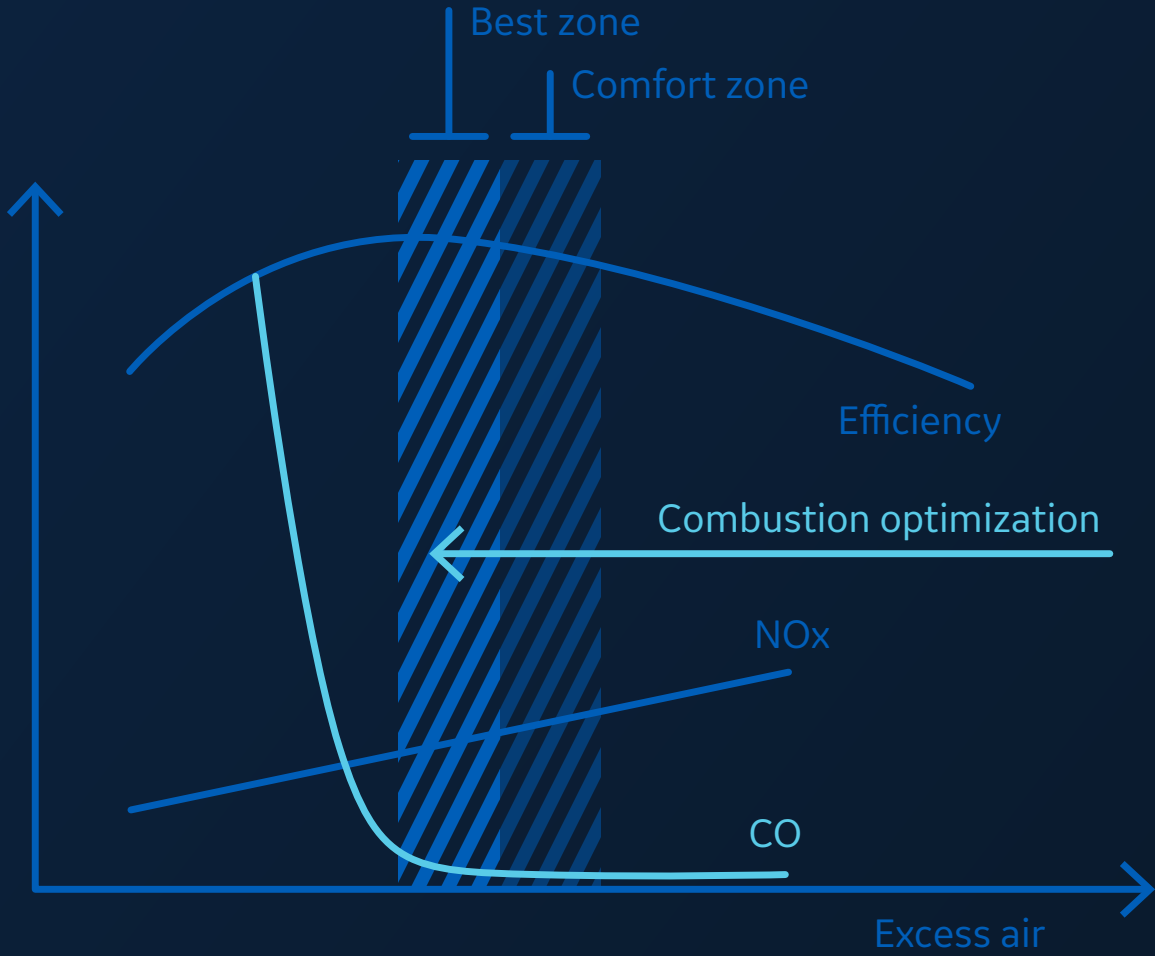




Boiler Optimizers for Coal-Fired Power Plants

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

01

Controlled Variables

variables we **want** to control

- Superheat steam temperature
- Reheat steam temperature
- Boiler outlet gas temperature
- Excess O₂
- CO, NOx, Opacity

02

Manipulated Variables

variables we **can** manipulate

- Tilts
- Fuel distribution
- Windbox to furnace differential pressure
- Air supply distribution

03

Disturbance Variables

variables that **cannot** be changed, but affect operations

- Ambient conditions
- Unit demand
- Fuel composition

PROVEN TECHNOLOGY

200+

Installations at coal plants

23+

Years of proven operation

1.5M

Tons CO₂ savings

50MW Plants to 1GW Plants

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](#)

\$700k+

Annual fuel savings

1,320MW

Plant powered by 2 GE Ultra Super Critical Boilers and 2 GE Steam Units

15%

Reduction in NOx emissions

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.

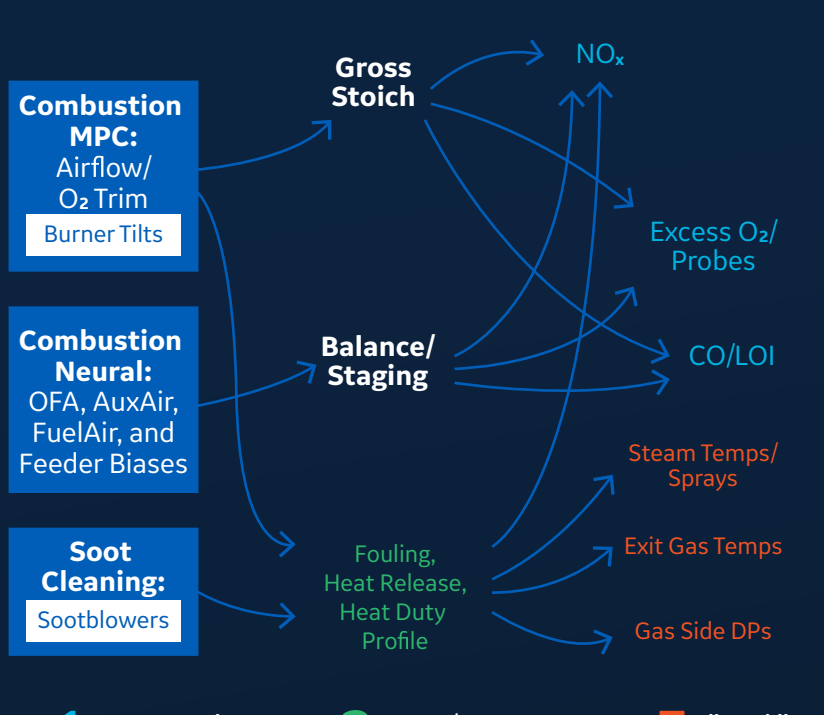


Doug Bartlett
Principal Engineer
GE Digital
Project Applications Engineer responsible for the installation, testing of all GE Digital closed-loop optimizers, including Combustion and Soot optimizers for steam power plants, combined cycle products and Duct Burner Optimization and Predictors. Also works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

[立即观看](#)



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 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](#)



[LEARN MORE](#)

