

# FocalPoint™ Optimization System

Babcock & Wilcox (B&W), experts in combustion and emissions control equipment, offers the FocalPoint™ optimization system which can provide operational benefits, including among other things, increased boiler efficiency and reduced emissions.

The FocalPoint optimization system can become an integral part of an effective strategy to set achievable heat rate improvements under the U.S. Environmental Protection Agency's (EPA) Affordable Clean Energy (ACE) Rule. Additionally, it is an effective optimization solution for the Mercury and Air Toxics Standards (MATS) requirements.

## Customized Optimization Models

With the FocalPoint system, B&W uses its proprietary combustion, performance and environmental models to develop tailored optimization schemes for your unit. The FocalPoint system also includes a wide range of built-in logic and mathematical functions that can be used to create simple to complex optimization strategies. During commissioning, we work with plant personnel to tailor the FocalPoint system to the specifics of your operations and application. The result is a system that analyzes past and current operating conditions and automatically makes adjustments for improvement.

## Experience and Expertise

The FocalPoint system is backed by B&W's experience with designing, building, operating, and optimizing boilers and environmental equipment. We have personnel with expertise in all areas of the plant. This experience and expertise is included in the design of the FocalPoint system, in the proprietary models and logic that are supplied with the system, and in the engineers that work with you to successfully execute your optimization project.



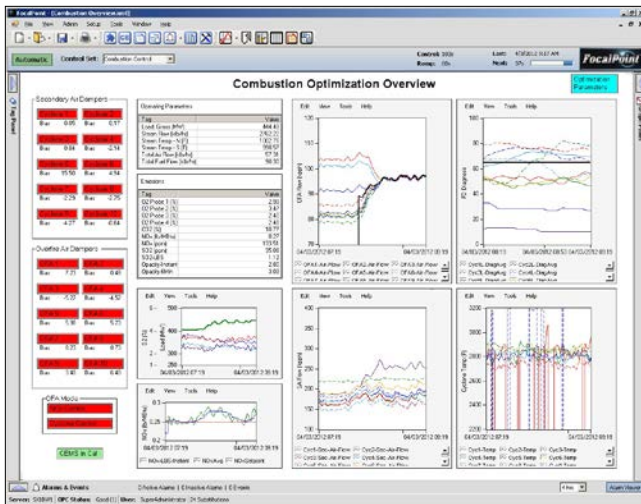
## Key Features

- Developed with B&W combustion, performance, and environmental models
- Contains a wide array of advanced algorithms, models and engineering calculations
- An intuitive user interface allows for easy strategy development
- Strategies can be implemented or modified online
- Uses information from plant distributed control system (DCS), advanced systems and sensors
- Captures existing knowledge about plant operations and best practices
- Use of industry standard Modbus or OPC communications allows for easy integration with existing plant systems
- Use of client-server-based architecture allows for remote monitoring of system operation
- Can be applied on any unit regardless of original manufacturer
- Optimization is not limited to one process. FocalPoint can optimize any system in the plant
- Multiple systems can be optimized simultaneously

## Potential Benefits

- Lower NO<sub>x</sub> and CO emissions
- Improved unit heat rate
- Higher boiler efficiency
- Reduced fouling and slagging caused by poor combustion
- Reduced reagent consumption
- Reduced power consumption
- Relevant to ACE Rule and MATS requirements

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### Intuitive and Easy to Use

Unlike other products that cannot be modified, the FocalPoint system gives you complete freedom to view, create and customize advanced optimization strategies. It is designed to grow and transform as your requirements change. Strategies are built using an intuitive, drag-and-drop interface so programming or control system expertise is not required. Best of all, the control schemes can be implemented or modified without requiring a unit outage.

*The FocalPoint optimization system is part of our complete line of control, intelligent and monitoring solutions available to help improve plant performance, including:*

- Titanium® intelligent sootblowing
- ESP controls and software
- Boiler monitoring, cameras and diagnostics
- Industrial boiler control systems
- Cooling system online monitoring



The intuitive user interface of the FocalPoint system allows easy customization and rapid viewing of key parameters.

### Broad Application to Plant Operations

The FocalPoint system's extensive capabilities and open architecture allow B&W to create control strategies for a wide range of applications. Some areas of the plant that FocalPoint can optimize include:

- Combustion (NO<sub>x</sub>, CO, O<sub>2</sub>, etc.)
- Heat rate/efficiency
- Dry sorbent injection (DSI) systems
- Wet and dry flue gas desulfurization (FGD) systems
- Selective catalytic and noncatalytic (SCR/SNCR) ammonia injection control
- Electrostatic precipitators (ESP)

Applications are limited only by your available control hardware and process measurements. Multiple processes on a unit can be managed by a single FocalPoint installation.

### The Babcock & Wilcox Company

1200 E Market Street, Suite 650  
Akron, Ohio, U.S.A. 44305  
Phone: +1 330.753.4511

[www.babcock.com](http://www.babcock.com)



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