Maintain Reliable and Optimal Plant Operation

Ovation™ Performance Optimization Software

EMERSON™

Ovation™ Performance Optimization Software

Enhance plant efficiency, increase profits and reduce costs and emissions

Emerson's Ovation™ performance optimization software, part of the advanced power application suite, uses Aspen Utilities Planner™ and Online Optimizer software with rigorous steady-state process models to:
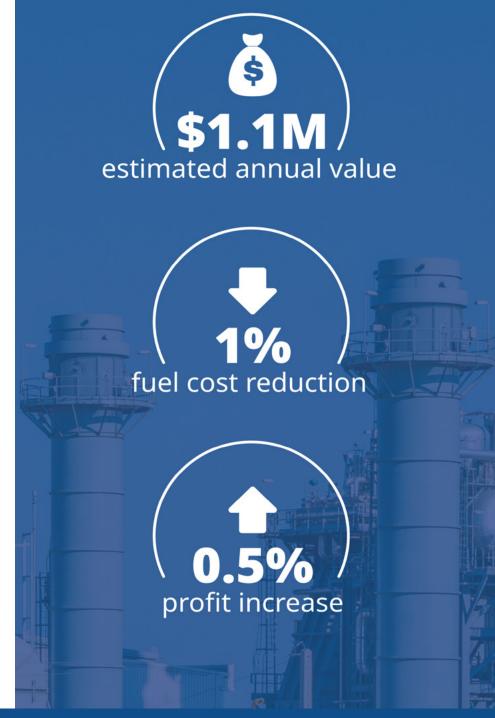
- Detect faulty instrumentation
- Accurately identify controllable losses
- Evaluate potential impacts to process or equipment modifications
- Optimize dispatch configuration

Results -

- **Reduces operating costs and controllable losses**
- **Increases plant and equipment reliability**
- **Helps to identify corrective operational actions or equipment maintenance**
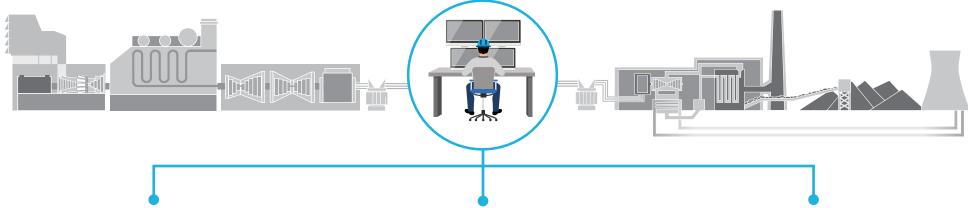- **Decreases NOx and CO2 emissions**

Estimated Quantified Value -

- **Reduce overall fuel cost by 1%, saving a typical combined cycle or conventional unit $500K annually**
- **Increase generation gross profit by 0.5% through improved market participation saving ~$300K annually**

$1.1M
estimated annual value

1%
fuel cost reduction

0.5%
profit increase

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Optimize Plant Operation Against Design While Balancing Demand and Emission Regulations

Track Performance

Determine the most efficient operating mode during changing conditions with accurate plant equipment and overall heat balance models built into the Ovation performance optimization software.

The application identifies controllable losses by tracking equipment performance against design specifications and detecting problematic process areas for attention before they become costly.

A complete set of boiler and turbine performance calculations (based on ASME Performance Test Codes) is included.

Balance Power Distribution

Optimally distribute power among units within a single plant or a networked fleet fleet using the Ovation performance optimizer's cost-based function that considers fuel use, power demands and emissions.

The application provides actionable intelligence that enables quick reaction to changes in load demand and fuel costs, resulting in more-informed decisions when entering electricity and steam buy/sell contracts.

Optimize fuel use and reduce heat rate to cost-effectively satisfy process steam and power demands.

Analyze Operations

Leveraging Aspen Utilities Planner™ and Online Optimizer software, the Ovation performance optimizer can be used to safely test variations to system design, operations and maintenance strategies and more.

Rigorous steady-state performance models provide 'what-if' analysis functionality for accurately quantifying the benefits and risks of control system or plant changes.

Evaluate the effect of upgrading existing or adding new equipment or processes to a plant in a secure environment without disrupting plant operations.

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Ovation™ Advanced Power Applications

A suite of software applications that improve operational flexibility, increase reliability and availability and optimize environment performance

Emerson's Ovation automation software and technology was designed from the ground up to help customers achieve operational excellence and create a sustainable competitive advantage.

The Ovation platform's broad range of field-proven control design techniques leverage over five decades of expertise to provide tighter, more precise and reliable process control. Integrated advanced power applications further enhance operations by automatically balancing performance or economic improvement opportunities to deliver optimum results.

Installed applications provide immediate operational and financial returns that can offset alternative capital expenditures. Emerson's high-value and low-risk software, developed using advanced algorithms and modeling methods, is field-proven to provide sustainable benefits that address specific control challenges.

Advanced Bypass Control	Advanced Drum Level Control	Advanced Inlet Pressure Control	Advanced Pump Protection	Control Loop Tuning
Duct Burner AGC Control	Dynamic Rotor Stress Advisor	Procedural Integration	Performance Optimization	Response Optimization
	SCR Optimization	Steam Header Blending	Steam Temperature Optimization	

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Emerson and AspenTech Better Together

Together, Emerson and AspenTech provide software that delivers customer outcomes from edge to enterprise – providing safer and more sustainable operations, increased profitability and improved reliability.

Our combined software solutions optimize operations through industry-leading state-based control in the Ovation automation platform to maximize process performance.

We provide a comprehensive, holistic approach to asset optimization to achieve the highest possible value across the entire asset lifecycle. We focus on the design, operations and maintenance of assets – while optimizing for safety, sustainability, reliability and performance.

AspenTech's asset optimization suite includes software for manufacturing and supply chain, performance engineering and asset performance management.

Aspen Utilities Planner™ and Online Optimizer software, part of the performance engineering management collection, is an integrated solution for developing accurate forecasts of a utility's demand.

The Ovation performance optimization advanced application, leverages Aspen Utilities Planner™ and Online Optimizer software to manage and optimize energy consumption and sources, helping to ensure optimal energy supply while minimizing costs and emissions.

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For more information visit
www.Emerson.com/Ovation

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