



Solutions for the Power Industry

Optimize Generating Assets for Maximum Reliability and Energy Efficiency

Business Challenge

The power industry faces an unprecedented challenge. At a time of unstable fuel costs, historic environmental challenges, and industry structural changes, the world's demand for reliable electric power continues to grow. While much of the world's power infrastructure is aging, the industry must keep up with the need for more capacity and increased reliability and power quality—all while lowering environmental (GHG) impacts. Today's business and operational challenges are significantly more complex than ever before.

AspenTech Solutions

AspenTech has built its reputation over the last 25 years on helping customers solve the most complex Design, Operations & Control, and Supply Chain challenges in the process industries. Our solutions bring together a combination of industry-leading technology with cross-industry best practices to allow both Engineering & Construction companies and owner/operators to mitigate complexities and achieve their business objectives. AspenTech's solutions for the power industry include:

- **Engineering** - From Carbon Capture and Storage (CCS) and emission control systems to Integrated Gasification Combined Cycle (IGCC) and fuel cells, today's most advanced units are being designed by leading global engineering and construction firms using AspenTech's Engineering Suite. Owner/operators are also using these advanced tools to solve a number of challenges such as maximizing reliability, improving and maintaining optimum energy efficiencies, optimizing startup and shutdown procedures, as well as modeling advanced emission control systems before installation.
- **Operations & Control** - Providing your operators with constant, relevant, and actionable feedback is key to safe and profitable power generation. AspenTech's real-time plant and fleet operations systems support some of the world's largest and most complex units and fleets. Our advanced process control (APC) applications are being installed as an integral part of several advanced emissions and carbon capture systems, as well as being applied to existing assets to bring their operations to new levels of energy efficiency and reliability.

Key Benefits

- **Increase profits with fleet optimization**
- **Maximize reliability and availability**
- **Improve and maintain optimum energy efficiencies**
- **Optimize startup, shutdown, and disturbance procedures**
- **Visualize, monitor, and analyze real-time data from both an operations and a business perspective**
- **Offer advice to operators on specific actions to reduce energy costs**

- Co-Generation and Energy Management** – Co-generation and energy management increases the level of complexity that a power station has to manage. Demand swings for electric power, as well as multiple process steam levels and emissions systems, all combine to increase the number of variables to consider in any optimization. Aspen Utilities Operations is an advanced modeling tool that is used as an online operations advisor as well as an off-line simulator by some of the largest co-generation facilities around the world. Energy efficiency increases are most often reported in the 2 to 8% range, with industry leaders reporting up to a 15% increase in energy efficiency.
- Fleet Optimization** (EDO – Economic Dispatch Optimization) – It is no secret that deregulation, combined with increasingly diverse power generation fleets, has also raised unit commitment and dispatch optimization to a whole new level of complexity. The real challenge is not just to provide a “feasible” plan, but to achieve a truly “profit” optimized solution. Designed to be scaled, one installation is modeling over 230 units, generating over 45,000 MW of capacity.

AspenTech brings industry leading technology together with a global partner network and cross industry best practices to deliver proven solutions for overcoming these challenges and more. Identify your top challenges and solve them with AspenTech.

For more information, contact power@aspentech.com.

About AspenTech

AspenTech is a leading supplier of software that optimizes process manufacturing. With AspenTech's integrated solutions, process manufacturers can implement best practices for optimizing their engineering, manufacturing, and supply chain operations. As a result, AspenTech customers are better able to increase capacity, improve margins, reduce costs and become more energy efficient. To see how the world's leading process manufacturers rely on AspenTech to achieve their operational excellence goals, visit www.aspentech.com.



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