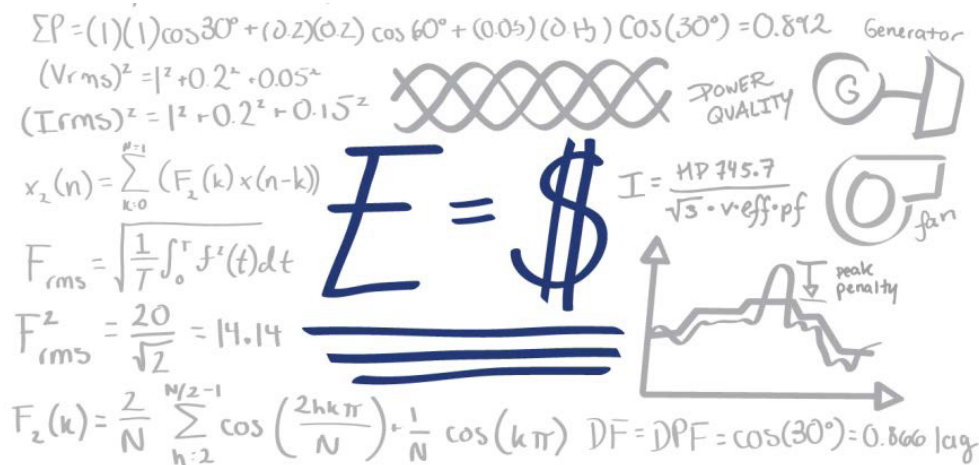


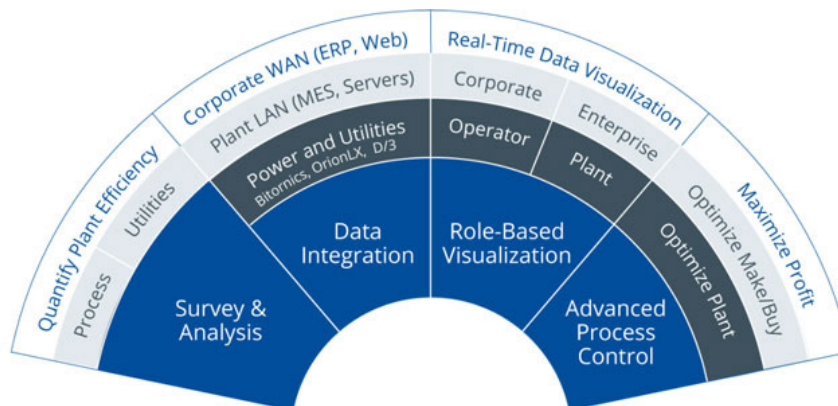
Energy and Utilities Management



Optimize Profits with Real-Time, Common and Verifiable Energy Costs Per Unit of Production

Energy and Utilities costs have become the largest controllable cost in many process facilities. A shared, real-time, and accurate picture of all energy options and equipment efficiencies can turn this growing challenge into a source of competitive advantage. NovaTech Energy Management solutions include survey and analysis services, KPI dashboard development, and complete power system SCADA solutions that allow a process enterprise to make more informed decisions for reducing energy costs and environmental impact. Energy Management solutions provide the greatest value for process components with high or variable energy demands such as boilers, chillers, distillation, and central power production.

Solution Architecture



Energy Survey and KPI Dashboards

NovaTech engineers use a sophisticated set of software programs and algorithms to track the efficiency and energy usage of critical plant equipment and drive behavioral change. Factory Acceptance Tests (FATs) use sophisticated simulation techniques and historical plant data to develop role-based dashboards of KPIs associated with plant operations. These detailed screens are utilized by utilities supervisors and plant operators, arming them with information regarding the historical and real-time efficiency of each utility and all major utility equipment at the facility, including water and glycol chillers, cooling towers, de-ionized water trains, air compressors and boilers. All displays, including summary screens for plant managers, are web-based and available to all plant personnel via a web server on the plant's intranet. Utility and gas costs are reduced by avoiding peak demand penalties and generating steam from the most efficient boilers.

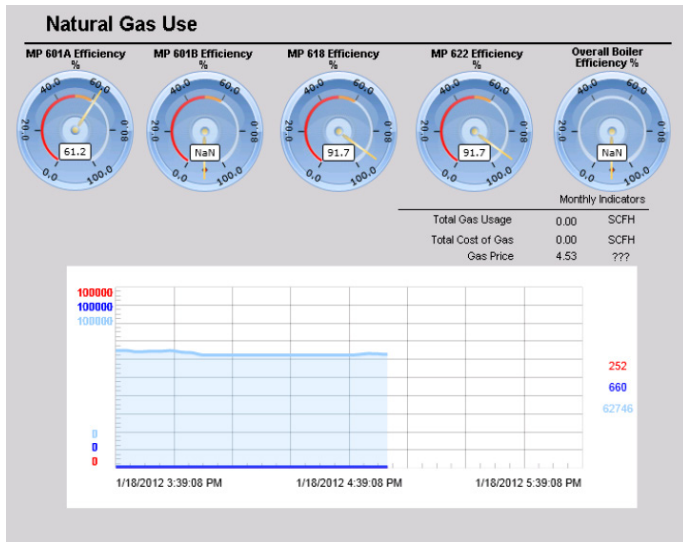
Power Measurement and Data Integration

Bitronics® SCADA Meters and Event Recorders offer a highly reliable and easily deployable solution for tracking power usage and quality at all consumption and generation points within a process plant. The OrionLX™ and OrionLXm Substation Automation Platforms consolidate power and protective relay data from islands of automation, cogeneration assets, and utility interconnection substations. Widely recognized for their durability and ease of use in electric utilities, Orion and Bitronics products provide a comprehensive and accurate baseline of electrical power consumption and for benchmarking and utility audits.

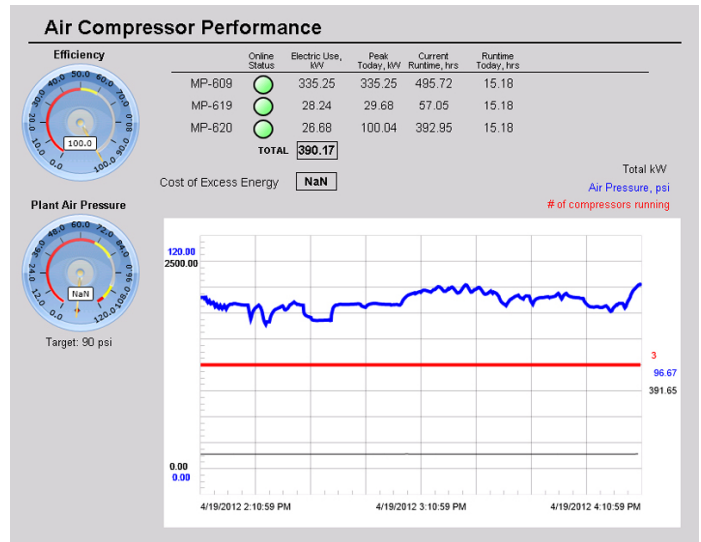
Advanced Process Control

Advanced Process Control (APC) from AspenTech provides additional benefit by moving plant operations closer to ideal set points without compromising safety or quality. APC presents the greatest benefits to processes with high raw material costs, tight security or quality requirements, control requirements beyond PID loops, or that are influenced by other processes within the plant.

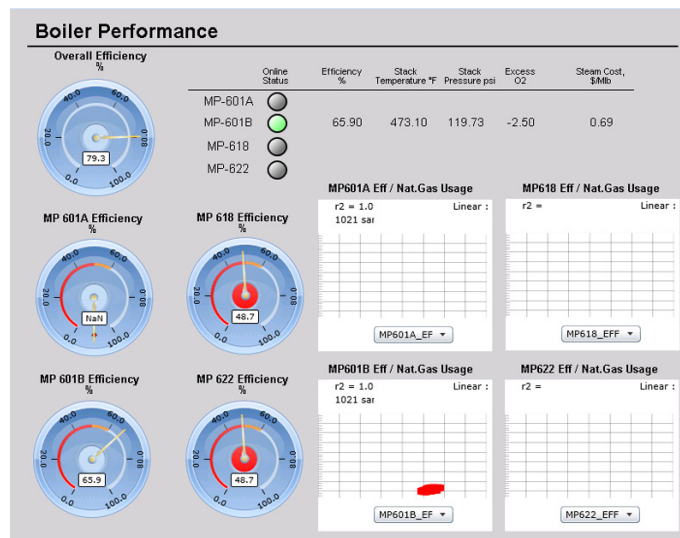
Example Software Screens



Natural Gas Dashboard



Air Compressor Dashboard



Boiler Performance Dashboard