Manage Risk and IMPROVE Profits

OPTIMIZE Productivity

INCREASE Efficiencies

VirtualPlant fossil plant model with integrated boiler/turbine cycle provides a powerful desktop tool for evaluating equipment degradation, maintenance activities, and capital improvements.

Key EtaPRO Features & Benefits

- Real-time, first principles models for accurate expected and corrected performance
- 500+ pre-engineered calculation templates to ensure consistency across the fleet
- Thermodynamic models for desktop “what-if” studies to provide quick answers to hard questions
- Long-term trending with advanced data filtering and parameter correlation for process insight
- Graphical “foot printing” for tracking equipment and plant degradation
- Rigorous real-time data validation with first principles models that identifies faulty instruments
- Plant-specific diagnostic flow charts with “live” data for troubleshooting of off-target performance
- Silverlight™ WEB Client for single “enterprise view” of multiple EtaPRO servers
- Freely distributed client software to maximize information availability to the enterprise
- Automated e-mail alerts for immediate notification of off-target performance
- Electronic logs for capturing alerts, equipment starts/stops, process data, and manual operator entries, cross-referenced to historical data
- Streamlined production reporting with automated report distribution via email or web
- Comprehensive support for PI System®, Wonderware®, and OPC HDA compatible data historians
- Flexible user authentication for compatibility with NERC CIP security requirements
- Menu-driven configuration with no programming required
- High performance client/server architecture using modern software technologies

Every EtaPRO System provides a comprehensive view of your plant’s performance and offers these key features and benefits.
We’ll help you manage your risk by developing skilled workforces and monitoring your plants to keep them running efficiently.

— Joe Nasal, Senior Vice President, GP Strategies™

The Proven EtaPRO™ System

Leading power generators across the globe use EtaPRO to keep their plants operating at peak performance. With state-of-the-art thermodynamic modeling and monitoring technologies, EtaPRO shows how your plant is performing, how it should be performing, and what off-peak performance is costing. Every minute of every day, you’ll know where your losses are and what can be done about them. Installed on more than 700 generating units in 28 countries, EtaPRO goes beyond other systems, giving your staff the power to continuously detect, quantify, alert, log, trend, diagnose, predict, and report plant performance and condition.

Minimize Risks. Maximize Profits.

Every generating unit in your fleet provides an opportunity to improve performance, reduce emissions, and increase profit. EtaPRO identifies these opportunities in real-time by showing where your generating assets are operating in terms of efficiency and capacity, and where they should be operating. EtaPRO displays each opportunity, quantifies potential savings, and presents real-time cost information to plant management, engineering, and operations teams for timely decision making.

EtaPRO shows how your plant is performing, how it should be performing, and what off-peak performance is costing.
How GP Strategies looks at your plant...

Combined Cycle Power Plant

Fossil Power Plant

- Excessive Air preheating: $227,000 / yr
- Low-Air Heater X-ratio: $194,000 / yr
- Economizer Fouling: $284,000 / yr
- HP Blade Deposits: 116 Btu / kWh (49 MW)
- Failed Expansion Joint: 109 Btu / kWh $63,800 / mo
- Compressor Fouling: $102,638 / mo
- Low HP Scr Flow (Bypassing): 93 Btu / kWh $54,300 / mo
- Worn Packing: 25 Btu / kWh $157,700 / yr
- Tubsheet Fouling: 40 Btu / kWh 1.6 MW
- Leaking bypass valve: 40 Btu / kWh $252,300 / yr
- Air Removal Section Fouling: 20 Btu / kWh $126,100 / yr
- 40 Btu / kWh $102,638 / mo

437.2 T/h

749.2 MW

256.5 MW
VirtualPlant™ uses equipment design data, plant system P&IDs, and performance test results - your plant’s DNA - to provide a flexible and powerful thermodynamic model of your entire plant.

VirtualPlant™ — Your Plant’s DNA

Unlike control systems or data historians, VirtualPlant shows your plant’s true performance capability for current load, fuel supply, and operating conditions. VirtualPlant uses equipment design data, plant system P&IDs, and performance test results - your plant’s DNA - to provide a flexible and powerful thermodynamic model of your entire plant.

EtaPRO then uses this real-time model to accurately determine expected plant and equipment performance, rigorously validate DCS inputs, and forecast future performance. Based on the latest network technologies, EtaPRO provides desktop access to easy-to-use VirtualPlant models so you can quickly perform “what-if” studies, quantify cost impacts of off-design performance, and estimate heat rate and capacity impacts of operating and maintenance decisions.

EtaPRO performance targets are driven by real-time VirtualPlant models.

Fouling, leaking, wearing, or failure – these degradation mechanisms can easily add up to 3% or more of a plant’s fuel bill amounting to millions in excess annual costs. EtaPRO helps you identify, quantify, and eliminate losses.
The GP Strategies Difference

World-class power plant performance requires world-class engineering, technology, and support. With every technology we develop, people remain the key differentiator to achieve success. Our Performance Engineering team offers more than 800 man-years of experience and expertise that will help you get the most out of your EtaPRO™ investment with training, consulting, project execution, and ongoing support. This is the GP Strategies Difference – a commitment to product quality and customer support that provides value to our customers year-in and year-out.

GP Strategies provides a full range of Performance Engineering, Training, and Remote Monitoring Services. Our staff of Power Industry experts provides services for:

- Advanced Performance Analysis & Diagnostics
- Remote Monitoring of Plant and Equipment Performance and Operation
- Thermal Audits
- Acceptance Testing
- EtaPRO System Upgrades and Enhancements
- VirtualPlant™ Model Development and Integration
- Plant Parametric & Design Studies
- Nuclear Plant Performance Monitoring and Thermodynamic Modeling
- GPlEARN™ Blended Learning Programs
- Plant and Performance Engineer Training