GE Energy

GenGauge*
Fleet-Wide Dispatch Management Software

fact sheet

The Opportunity

Knowing which units to run and at what load is the essence of dispatching decisions. And at the heart of dispatching decisions is a central question: How do I know that this combination of units and loads represents the lowest cost of generation given all current conditions?

The truth is most utilities can't answer this question today. Sure, they have cost data, but these data are often based on long-term averages. And let's face it—the generating world isn't static. It changes every hour, sometimes even every minute. Today's dispatch decisions made with yesterday's—or even last year's—data could be costing you millions of dollars per year. What's needed is real-time cost information, able to accommodate the complex and constantly changing variables that affect cost.

The Solution

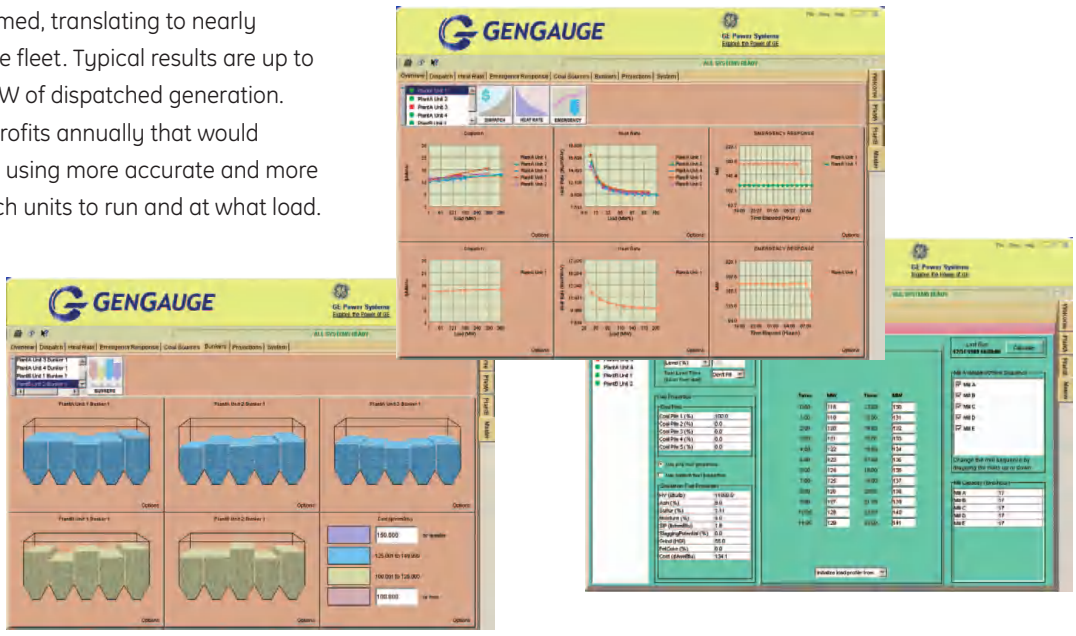
GenGauge* software from GE Energy takes the guesswork out of dispatch decisions, allowing you to truly optimize your total costs. What kind of difference can that make? One GenGauge user estimates their system is saving them $1,000 for every hour that dispatching is performed, translating to nearly million per year over their entire fleet. Typical results are up to $1 million annually per 1,000MW of dispatched generation. That's millions in incremental profits annually that would otherwise be lost, all by simply using more accurate and more timely data to help decide which units to run and at what load.

Capabilities

- Tracks a unit's fuel quality and costs all the way through to the boiler or turbine
- Calculates heat rate curves based on detailed performance modeling
- Calculates SOx emissions based on fuel tracking
- Calculates NOx emissions based on neural modeling
- Communicates with existing IT systems to obtain the data it needs and automatically submit cost data on to dispatch and unit commitment software

Benefits

- Increased profits through improved dispatch and reduced generating costs
- Better unit commitment decisions
- Improved fleet-wide environmental performance for both SOx and NOx
- Enhanced ability to manage abnormal situations



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Real-Time Data

The key to GenGauge is its ability to deliver real-time data. This means that the dispatch decisions you make reflect not only the demand of the moment, but the true costs of the moment as well. Better dispatch decisions improve profitability. Current utility practice is to use long-term averages for fuel quality, heat rate, and emissions when deciding how to operate units. But in today's competitive marketplace, fossil-fired utilities use a variety of different fuels in an attempt to reduce costs. This can result in a wide range in fuel quality and price from unit to unit on any given day. In addition, heat rate and emissions-including both SOx and NOx—can change dramatically over time as fuel quality, equipment efficiency, and ambient conditions change—as much as 10% a day.

Because fuel costs, heat rate, and emissions have the largest impact on the bottom line, the availability and accuracy of these data in real time can dramatically improve the way units are operated to meet demand. GenGauge is the only product designed to obtain and utilize these data to increase the utility's system-wide profits.

Managing the Unexpected

Unexpected events can and do happen. When they do, are you able to conduct rapid and accurate "what if" scenarios based on up-to-the-minute data? For example, if a mill goes down, how much coal is left in each bunker? How long will it last? Should a change in fuel quality be made to sustain operations longer? Can other units be pushed harder to make up the difference, or will you need to purchase replacement power? The right answers to such questions are very valuable, and GenGauge can help. It delivers information you need to make high-quality decisions, allowing you to address even the most stressful of situations with confidence.

Day Ahead Forecasting

GenGauge is capable of using its powerful calculation engines to project future costs to help improve unit commitment-and provide submission for Independent System Operators (ISOs). GenGauge can predict heat rate, fuel quality, and emissions—all important contributors to cost—providing much more accurate cost data for the day ahead marketplace to determine.

Supporting Services

A Supporting Services Agreement (SSA) is an integral part of any GenGauge installation. Once commissioned, your GenGauge system will be delivering optimum performance, but to keep it that way, GE's service engineers will provide active support to avoid dusty keyboards. It's all about the 4 A's: Access (keeping the software accessible), Availability (keeping it running), Accuracy (keeping its outputs accurate), and Actionable (keeping its benefits coming). To achieve the 4 A's, the team will access the system on a regular basis, remotely or via on-site visits, to check system health and usability. And if you have a question or problem, GE is just a phone call or e-mail away.

The SSA also includes system updates, ensuring that the models in your GenGauge system will reflect changes you may make both at the plant as well as with the fleet.

Finally, GE provides training for your people, ensuring they understand how to use the GenGauge system and derive maximum benefit from it.

Contact your GE Energy representative today for complete product specifications and ordering information at either GenGaugeInfo@ps.ge.com or 775-782-3611, at the prompt ask for GenGauge.

* GenGauge is a trademark of General Electric Company.

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