

Efficiency Extra Edition

T2E3 Newsletter
1st Quarter 2008

Planning for Performance Monitoring

“The first rule of any technology used in a business is that automation applied to an efficient operation will magnify the efficiency. The second is that automation applied to an inefficient operation will magnify the inefficiency.”

-Bill Gates, founder of Microsoft

Planning for Performance Monitoring

While Bill Gates is not always the first person that comes to mind when thinking of an efficient piece of software... he does make a good point, especially if you are considering implementing a performance monitoring program at your facility.

If a performance monitoring system is installed without proper planning, it could very well lead to increased inefficiencies at the plant; the direct opposite of what was originally (hopefully) intended.

Just to make sure we're all on the same page, when I'm talking about a Performance Monitoring (PM) Program, I'm talking about the whole enchilada—from the raw data and sensors in the field, to the DCS (or personnel) collecting and recording that data, and the analysis of the data (again, via software and personnel), all the way to the end use of the analysis results; which is hopefully more than just taking up space in a filing cabinet.

A complete Performance Monitoring Program is more than just wires and software; it must, by nature, include time with site personnel including time to read, understand and interpret the information—and, when necessary, put the results into action. In some cases, off-site personnel, such as a central engineering group, must also be involved.

By its very name, PM Systems (the software piece) do not **Do** anything. They simply keep track of (monitor) what's happening and then report that information somewhere, somehow, for someone *else* to **Act** on.

The key to implementing a successful PM program, is to make sure the right information gets to the right people at the right time.

For some sites, this might mean getting a trend of efficiency data for the last month to an on-site engineer, for analysis of, say, the effectiveness of a new maintenance program.

For many others, it means getting that information to the operators in a form that they can use in real-time. Knowing that the heat rate was higher yesterday does not necessarily help the shift that's in the control room today. But, knowing that there is sub-cooling in the condenser, Right Now, does help. But, it takes the operator to actually take action on that information and reduce the cooling tower fan speeds to improve the plant efficiency.

When planning for a PM program, there are many questions that need to be asked, including the following:

What is the main objective of the performance monitoring program?

- Improve heat rate and/or capacity
- Improve availability and reliability
- Reduce maintenance costs
- Minimize and/or control emissions rates
- Increase knowledge for marketers and/or dispatchers
- Build knowledge base for justification of future capital projects
- Other or All of the Above

Who is available to install and maintain any required software?

- Site engineers
- Central engineers
- Consultants / external resources
- Other or All of the Above

(continued on next page)

Announcements

- **Read Tina's Blog:**
www.t2e3.com/blog
- **LM6000 Seminar**
Scheduled for April 3rd & 4th 2008; in San Diego, CA
www.t2e3.com/LM6000.php

Products & Services

Analysis Tools

Excel Workbooks, Macros and Add-Ins:

- Corrected Performance
- Compressor Efficiency
- Steam & Water Flow
- Moist Air Properties

Training Seminars

Performance Test Support

Performance Monitoring Program Design, Support and Evaluation



T2E3

Tina Toburen's
Energy Efficiency Enterprises



14260 120th PL NE
Kirkland, WA 98034

Phone: 425-821-6036
Fax: 253-550-6992
E-mail: performance@t2e3.com

To receive a copy of this quarterly newsletter automatically, along with other announcements for T2E3 products and services, send an email to

performance@t2e3.com

and mention this newsletter in the subject or body of the message.

Your email address will be held in strict confidence and not be shared with any other parties.

To view this or other T2E3 newsletters online, visit:

<http://www.t2e3.com/news.php>

(continued from previous page)

Will the system be used at a single site, or will it be used (in whole or part) to manage performance across a fleet?

Who will be using the system?

- Site engineers
- Control room operators
- Site maintenance personnel
- Plant manager
- Central engineering group
- Asset managers
- Marketers / dispatchers
- Other or All of the Above



Understanding the answers to these questions will get you started in planning a Performance Monitoring Program to fit your facility's needs.

Next Month: What to consider when choosing the Contents of your Performance Monitoring Software System

If you have any questions on this or any other article from T2E3, please contact me via phone (425-821-6036) or email (tinat@t2e3.com).

LM6000 Performance Seminar to be held in San Diego - April 3 & 4

Planned to be convenient for attendees at the 2008 WTUI conference (www.wtui.com).

Contact T2E3 or visit the T2E3 website for more information:
www.t2e3.com/LM6000.php

T2E3 Provides Services for Power Generators

Including the following:

Analysis Tools & Software – from customized spreadsheets to add-ins for Excel or complete compiled programs, T2E3 can develop software tools and analyses to support all your performance monitoring needs, including integrating your existing tools with available site data systems, to create online systems providing data and results in real-time.

Training – both public seminars and customized options are available. Highly interactive sessions increase attendees' knowledge and understanding of the thermodynamic cycles, instrumentation and analyses needed to improve equipment performance and reliability.

Performance Test Support – if your site is required to perform annual capacity or PPA performance tests, having Tina Toburen from T2E3 on site to direct the testing can lead to a smoother test execution with more consistent performance results. Professional reports can also be produced to communicate the results to all required parties.

Commercial Program Design and Evaluation – For sites interested in a more complete enterprise solution for performance monitoring, T2E3 can support your program planning and design, including evaluation of the various commercial products available within the industry for performance

monitoring. Choosing the correct solution will depend on the specific goals and objectives of your performance monitoring program.

Unlock the potential of your operation. Call for more information on how we can work together, today!

