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# Case Study

I n E x c e l l e n c e

One in a series from the Automated Energy, Inc. Library

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## ENERGY MANAGER MEETS DEMAND FOR REAL TIME DATA

*Switches from Collecting Data Manually to Capturing It Via the Web*

### The Challenge

One of the nation's leading independent energy managers wanted to upgrade its energy information acquisition so it could better support its power and transmission scheduling and other services.

### The Solution

The company selected a Web-enabled, technology-neutral energy information service that enables it to "push" data in real time. Analysts slice and dice it to develop better insights.

### Abstract

One of the nation's leading independent energy managers, Power Resource Managers, wanted to satisfy growing customer demand for real time energy information. However, its manual data capture system couldn't download that much information that quickly. The company decided the solution was to push energy data from meter readings over the Web, but didn't want to make significant investments in hardware or software to get that capability. Instead, they selected an energy information service that provides data in real time, which provides analysts more time to evaluate and mine the data and develop insights into better energy management.

Power Resource Managers (PRM) in Washington State wanted to dramatically improve the way it collected energy data so it could continue growing and servicing customers efficiently.



Thomas E. Harvey, PRM's director of Systems, said real time data acquisition helps company analysts see trends faster and more clearly and use information to project what's going to happen in the near future.

PRM, one of the nation's leading independent energy managers, used a manual dial up system to access several data sources. The system had served well, but when dialups reached close to 100 calls per day to download data, Thomas E. Harvey, director of Systems, knew they had to find a better way. The company wanted to better support its power and transmission scheduling, power supply planning and other services such as risk management with improved access to core data.

Their customers, primarily municipal power companies and large industrial facilities, have a combined load in excess of

1,500 MW peak and 13 million MWh of energy a year, representing between \$500 million and \$1 billion in wholesale power costs managed by the company.

Customer consumption load profiles fed by 24-hour data may have been acceptable to some customers, depending on their energy contracts, but the majority of customers wanted the tighter control offered by real time data acquisition.

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**"...if the data isn't real time,  
it's stale."**

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"For these customers, if the data isn't real time, it's stale," Harvey said. They want to know how much energy they need hour by hour. The real time visibility of customer load profiles is critical.

To meet their needs, PRM decided to push energy data from meters in an XML (extensible markup language) format over the Web in real time. But how to do it?

The company decided it didn't want to spend significant money to develop a system internally, so it investigated Web-enabled services that require no investment in hardware or software, or software upgrades. Criteria included an ability to push data to PRM in a format that it could consume relatively easily in its system. The data had to be presented as an XML feed that includes a tag identifying the meter, the meter reading itself and a data quality flag.

The service had to be neutral in terms of metering technology since PRM needed to be able to pull data from any customer meter, regardless of its technology. PRM additionally wanted a data collection system with higher accuracy. Finally, the data, as well as technical support and service, needed to be available 24/7.

The evaluation process, which included demonstrations and face-to-face visits, took about four to six weeks.

"We selected a Web-enabled service that was flexible enough to restructure its offering so it ends where ours begins,"



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Harvey said. "It's a nice fit." The service provides meter reading, which pushes raw pulse readings to a PRM Web site where the password-protected data is converted to megawatts or other consumable value and then is published by PRM for its analysts and customers to review.

Implementing the automated real time data collection service involved PRM providing a test environment so the service provider, Automated Energy of Oklahoma City, could push data to PRM's system.

"We provided them with our XML scheme and discussed the communications concerns we had," Harvey explained. For example, how often could PRM and its customers see the data and what would happen if a piece of data from a meter was missing for whatever reason?

"We thoroughly tested the process of them providing data and our evaluating it," he said. "Once it all checked out, we flipped the switch to go live." One of the biggest benefits of the new system is that Harvey no longer worries about getting the data from the meter to his system.

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### **"energy information becomes energy intelligence and that's valuable to PRM and to our customers..."**

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"I know that I can get it and that I can work with it," he said. "I can concern myself with what the data means. And I can recommend Automated Energy's solution to any one of our customers and know their service will push it to me in a format that makes life easier for me."

Getting timely energy data and having the ability to quickly evaluate it enables PRM to make better-informed decisions. Because the data comes in automatically, operators no longer spend time dialing up for it. They have more time to consider what it means and that gives company analysts insights that they may not have had before.

"This is when energy information becomes energy intelligence and that's valuable to PRM and to our customers," Harvey explained.

Data capture now is light years ahead of manually collecting data and inputting it into spreadsheets that could be hidden inside the organization. Although the data was

good, it could require a lot of work to access and manipulate. Sometimes, additional spreadsheets would be developed from the original spreadsheets, which compounded the problem.

"With our real time system, analysts can mine the data more easily and make better sense of it," he said. "We're moving up the curve from just having energy data to developing information and knowledge from it, and, ultimately, intelligence." PRM sees trends faster and more clearly and they use this information to project what's going to happen in the near future.

Harvey's objective is to make data available to schedulers and analysts so they can aggregate it by the hour, day or month, and project unanticipated events and emerging energy opportunities.

"Once you have real time energy information in place, people can look more closely at their energy management practices and 'slice and dice' the information in ways that they weren't able to do before," he said. "They can improve operations and substantiate assumptions."

The meter data appears on a simple graphical user interface, a dashboard for monitoring meter information. Users can use this screen to drill down from a macro level which is an aggregation of several meter points to a micro level which shows the raw readings for an individual meter. "We can select variables with a couple of mouse clicks, execute a query and export the resulting data to one of our standard spreadsheets where we further massage and manipulate it," Harvey explained. "If I need to generate the same report every day, I can structure the query so that with a push of a button, I can produce the same result set without having to redefine all the permutations of the report."

Bottom line, Harvey believes the company's data capture and evaluation capabilities position it for continued growth and ensure efficient customer service.

*For more detail on how PRM uses the energy information service or about how the service can benefit your organization, contact Randy Colton of Automated Energy at 405-601-7500, or at [RColton@automatedenergy.com](mailto:RColton@automatedenergy.com).*

