E.ON: Reaping the Benefits of the NES System

Malmö, Sweden

E.ON Reaps the Benefits of the NES Smart Metering System

Like many European countries, Sweden mandated that its electricity utilities provide customers with monthly meter readings, as well as provide meter data to all retailers and customers. E.ON Sverige - Sweden's largest utility, with more than 1 million electricity, gas, and heating customers- wanted to do more than just comply with the new law. E.ON wanted to implement an efficient process for collecting and verifying meter values. It wanted to create simple, accurate customer invoices and a more efficient process for handling supplier changes and relocations. And it wanted a system that could grow as the company's needs changed, offering services associated with customer service, grid management, and more.

Based on these goals, in 2006 E.ON chose the NES System for its Storstad project, which deployed advanced metering services to 370,000 customers in Malmo, Orebro, and Stockholm. "We selected the NES System because its open, bidirectional, and extensible infrastructure offered us a comprehensive range of utility applications, ones that we felt could benefit many aspects of our company's operation, such as metering, customer services, distribution operations, and value-added services," says Thomas Pehrsson, Roll-Out Manager and CTO, E.ON Sverige AMR project. The NES System enables a comprehensive set of energy services, including multi-tiered

billing; time-of-use and real-time pricing; prepaid metering; remote electrical disconnect and reconnect; distribution system asset optimization; electricity outage detection and restoration management; blackout and brownout elimination; real-time direct load control; power quality measurement; and extensive tamper detection features.

To save costs and take advantage of a competitive environment, E.ON outsourced the operation of the system to Swedish meter operator Elektro-Sandberg. This allowed E.ON to focus on core business functions such as asset management, power system operation, and customer service, while Elektro-Sandberg could focus on operating the advanced metering system and manage IT, communications, resource management, and quality of service.

Project Results

Throughout the deployment process, E.ON had been assessing the results. Not only did the system deliver the anticipated cost/benefit return, but the system's value has increased each year as new benefits have been identified and they continue to trend even higher.

Beyond the financial benefits, the NES System has had a positive impact in many other areas, including improved customer service, reduced system losses, and increased customer loyalty.

The system implementation is successful by all metrics, and system operation and performance have been excellent. E.ON operates systems based on a number of technologies; the NES System has consistently delivered the highest percentage of successful periodic meter readings, with an average success rate notably above the desired metric.

As a result of this strong performance, E.ON has experienced a significant reduction in customer service calls. Between Q1 2007 and Q4 2008, the number of calls for both meter-reading and invoice-related issues dropped by 56 percent. This let service representatives focus on other tasks and has improved call center efficiency. During the same time period the number of customer meter-related complaints also dropped by about 50 percent, due not only to the elimination of estimated bills but also to the positive impact of accurate and timely meter readings. Reducing customer complaints has increased customer loyalty and has helped improve the results in E.ON's customer satisfaction surveys.

Looking Ahead

As part of its goal to improve customer service, E.ON integrated outage information produced by the NES System into its SCADA system. And as part of its smart grid development strategy, the company incorporated power quality data from the NES smart meters into the operations of its power system.

In the future, E.ON also plans to expand its smart grid to offer other customer-related services, and incorporate more retail-oriented products and services into the system. "We've only tapped a portion of the NES System's features," says Pehrsson. "As our needs grow, we'll take advantage of more advanced ones. And that's exactly why we chose the NES System: to deliver the initial

applications and services we needed, and to provide the platform for desired future value-added services.”

400,000 NES smart meters

Outcomes / Benefits:

• Provided positive ROI (return on investment) associate with costs vs benefits.

• Benefits have improved each year.

• Delivered their highest percentage of successful meter readings with a rate above the desired metric.

• Improved customer service (reduction in customer service calls).

• Increased customer loyalty and customer satisfaction.

• Reduced system losses.

Time frame 2006 - ongoing