

215 South Cascade Street
PO Box 496
Fergus Falls, Minnesota 56538-0496
218 739-8200
www.otpc.com (web site)



December 29, 2011

Ms. Patricia Van Gerpen
Executive Director
South Dakota Public Utilities Commission
Capitol Building, 1st floor
500 East Capitol Avenue
Pierre, SD 57501-5070

**Re: 2011 Annual Report Consideration of New PURPA Standards
Docket No. EL08-028**

Dear Ms. Van Gerpen:

Otter Tail Power Company ("Otter Tail" or "Company") makes the following filing, pursuant to the South Dakota Public Utilities Commission's ("Commission's") December 18, 2009 Order in Docket EL08-028, its Annual Report regarding smart grid deployment opportunities.

On December 18, 2009, the Commission issued its Order that instructed utilities to file annual reports with the Commission on smart grid deployment opportunities. Reports are due December 31 each year through 2012.

Summary of Otter Tail's "Smart Grid" Elements

Otter Tail has deployed smart grid elements - some that go back to the 1940's in the form of time clocks on certain customer loads, to the expansion and upgrade of our load management system, to an automated interruption monitoring system ("IMS") for reliability and operational decisions, to fault locating protective relays on the transmission system, and also to include communications systems linked to the Midwest Independent System Operator ("MISO"). All of these systems have been deployed to improve services and information needed by the utility, customers, and regulators. The key to these investments is providing cost-effective benefits to all stakeholders.

The five questions and Otter Tail's responses for the 2011 report are shown below.

1) Smart grid deployment opportunities.

- MISO Reliability Project – SynchroPhasors: In 2010 and 2011, Otter Tail participated in the North American SynchroPhasor initiative by installing special relays and related communications in two substations. This reliability project is being coordinated by MISO for our region.

SynchroPhasors are precise grid measurements from monitors called Phasor Measurement Units (“PMUs”). PMU measurements are taken at high speed - typically 30 observations per second compared to 1 every 4 seconds using conventional technology. Each measurement is time-stamped according to a common time reference. Time-stamping allows SynchroPhasors from different utilities to be time-aligned (or “synchronized”) and combined together, providing a precise and comprehensive view of the entire interconnection. SynchroPhasors enable a better indication of grid stress, and can be used to trigger corrective actions to maintain reliability.

- Distribution Automation: Otter Tail continues to put pieces into place that foster the future development of a smarter distribution system. In the last two years Otter Tail has invested in SEL relays for system protection on distribution feeders in the communities of Fergus Falls and Bemidji. These smart relays are the cornerstone of the vision to develop self-healing distribution systems. These devices, coupled with possible future investment in smart switches and two-way communications channels, will enable faster restoration to customers when permanent faults occur in the distribution system. The Company has met, and will continue to meet, with vendors, attend workshops, and perform research into this technology.
- Conservation Voltage Reduction: The Company has begun exploration of opportunities for communications improvements that would enable communication between devices on the distribution system to manage voltage levels. Energy savings have been demonstrated through reduction in line losses by employing conservation voltage reduction.
- “Smart” Information: The Company offers a variety of energy feedback products to customers to help them understand and better manage their energy use. Three of the products, Bill Analyzer, Opower¹ home energy reports, and Power Profiler, present energy usage information, analysis, and benchmarking to customers. Bill Analyzer and Power Profiler utilize online applications and near-real time information.

Otter Tail is leveraging data available through Power Profiler to pilot a new rate in Minnesota for commercial customers that are willing to control load during summer events. The project aims to provide customers with a credit on their bill for participation

¹ Opower home energy reports are provided to Minnesota customers only at this time. See <http://opower.com/what-is-opower> for more information on the home energy reports.

in control events during the summer months. Using Power Profiler data, the Company can calculate the customer's demand response (kW) achieved for each control event and associated demand credit. The program is expected to be implemented in 2012, and will be expanded to all states if pilot study results warrant.

- Web Services: Otter Tail is leveraging its public website to support the nearly one-third of our customers who participate in demand response programs. The recently upgraded website includes a display of control event activity for the most recent 48-hour period and display of anticipated (next day) control, when known. Additionally, customers may sign up to receive these same notices by email for their load type and location.
- Mobile Data Project: Otter Tail initiated a pilot starting in mid-2008 to equip service representatives with mobile computer capabilities delivering real-time information. The mobile laptops provide field personnel with immediate access to information that was not previously available from their company vehicles. In addition to cost savings, increased efficiency and potential gains in customer satisfaction, service representatives can also obtain critical response information to aid in restoration and improvements in system reliability in a method that is quicker than it was previously, and it also ensures that the data they are obtaining is the most up to date. The project was completed in 2010. Ongoing evaluation of ways to increase utilization of the mobile computers and access to real-time data by field personnel continued in 2011.
- Interruption Reporting Availability to Customers: During the first quarter of 2011, Otter Tail completed a project that provides real-time feeder interruption information to all customers on Otter Tail's web site. This is an expansion of our current capabilities via Otter Tail's Interruption Monitoring System.
- Load Management System Infrastructure Improvements: Otter Tail implemented change-outs of our mobile radio devices in 2011 in preparation for the Federal Communications Commission (FCC) radio frequency 12.5KHz efficiency technology (narrowbanding) regulations, which will go into effect January 1, 2013. The mobile radio devices utilize an FCC license for voice as primary use and data as secondary use. This communications system is the backbone of our load management system. Radio receivers installed at customer premises receive data control signals from Otter Tail using this FCC license.
- Automated Meter Reading (AMR) or Advanced Meter Infrastructure (AMI): Otter Tail continues to evaluate opportunities to employ AMI and/or AMR technology throughout our service territory. The Company has met with vendors and other utilities to assess costs, learn from the lessons of others, and assess the fit with the Company's existing infrastructure. In 2011, Otter Tail did not expand any of their existing AMR capability or add any AMI technology.

- Geographic Information System (GIS): Otter Tail has begun development of a GIS that will enhance communication with employees and customers, leverage existing technologies to track and manage the Company's assets more efficiently, and provide geo-spatial information of the Company's assets along with related attributes and detail. The GIS will ultimately provide a single source for asset information thereby eliminating inefficiencies related to having information in disparate locations. Spatial business intelligence through the GIS is expected to provide a platform for data management, strategic planning and analysis, workforce automation, engineering and operational support, distribution automation and outage management, and situational awareness.
- Fleet Tracking Services: Otter Tail met with vendors to explore potential opportunities for fleet tracking services. These services would provide a global positioning system (GPS) device installed in Company vehicles and allow for tracking vehicle use, location, performance, idle time, and driver compliance with state laws. Data would be available on the web and could overlay a GIS base map. Otter Tail has not determined to invest in a fleet tracking service at this time, but will continue to monitor the use and capabilities of these services and the potential integration of this type of service within the Company. The service is expected to assist in providing more efficient customer service, reduce costs, and provide employee location information which would be particularly useful in times of outages.

2) Why or why not deployment was made.

Deployments were made either as an investigation to determine potential benefits or they were proven on a cost/benefit basis. If they were not made, the costs outweighed the benefits.

3) The extent of the deployment.

Generally, deployments will initially occur where cost/benefits are maximized and expanded to include, if possible, all of Otter Tail's territory.

4) Possible deployments that could be made in the forthcoming year.

In 2012, Otter Tail will continue to evaluate distribution automation, AMR/AMI technologies, and opportunities to leverage existing systems that are described above. No other specific investment for new smart grid deployments are identified for 2012 at this time.

5) What considerations will determine whether or not smart grid applications will be deployed, including costs and potential cost savings of deployment?

As Otter Tail previously offered in EL08-028, we support reasonable, cost-effective investments that produce net societal benefits. We continue to seek flexible and reasonable legislation that produces meaningful benefits to our customers. We are also open to discussions on the most

appropriate methods to advance useful and cost-effective measures regarding the smart grid and other industry-related issues.

Otter Tail will continue to monitor and consider other smart grid type installations at other utilities and regional independent system operating areas.

If you have any questions regarding this filing, please contact me at 218-739-8595 or dprazak@otpc.com.

Sincerely,

/s/ DAVID G. PRAZAK
David G. Prazak
Supervisor, Pricing & Load Research

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By electronic filing