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January 14, 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: 2010 Annual Report Consideration of New PURPA Standards
Docket No. EL08-028**

Dear Ms. Van Gerpen:

Otter Tail Power Company ("OTP" or "Company") makes the following filing, pursuant to the South Dakota Public Utilities Commission's ("Commission") 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, among other things, that affected utilities file two smart grid deployment opportunities reports with the Commission, each one annually, due December 31, 2010 and the last report is due December 31, 2012. OTP apologizes for inadvertently filing the 2010 annual report after the due date.

Summary of OTP's "Smart Grid" Elements

OTP 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 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 OTP's responses for the 2010 report are shown below.

1) Smart grid deployment opportunities.

- **Energy Storage System:** This proposed system would link the abundant wind energy resources in our region to storage heating systems for our customers. In 2009, we had discussions with a vendor of brick furnaces to modify their smart control package to allow multiple steps of energy storage in these systems while maintaining comfort in the home. These systems need to be able to receive signals to store energy at multiple temperature levels and disperse energy as needed for home comfort. We have identified options for a pilot project to model and dispatch wind in real time or by a day ahead forecast. The Company has not determined if resources will be made available for the pilot.
- **MISO Reliability Project – SynchroPhasors:** In 2010 OTP 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 one 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.

- **Home Energy Monitoring Project:** Our “Community Energy Challenge” in Rothsay, Minnesota, includes the installation of 50 in home energy monitoring devices. These devices display in real time the estimated dollar amount of electricity the household is consuming. A wireless sensor is attached to our meter and transmits information to the portable receiver in the customer’s home. The portable wireless receiver displays energy usage on a LCD screen. It can be set to display in dollars and cents based on OTP rates, or in kilowatt hours. Data from the project is currently being analyzed.
- **Bill Analyzer, Power Profiler and other “Smart” Information:** The Company offers a variety of energy related products to customers to help them manage their energy use. Two of the products, Bill Analyzer and Power Profiler, present energy usage information to customers in ways that utilize smart applications and near-real time information.
- **Mobile Data Project:** OTP initiated a pilot starting in mid-2008 to equip service representatives with mobile computer capabilities delivering real-time information. Among other things, the program provides field personnel with critical response information to aid in restoration and improvements in system reliability. The project was completed in 2010.
- **Interruption Reporting Availability to Customers:** In 2010 we began working on a project that would provide interruption information to all customers on OTP’s web site. This is an expansion of our current capabilities. OTP expects to make the interruption information available to customers by the first quarter of 2011. OTP personnel are working with the vendor on finalizing details necessary to ensure the product operates as intended.

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 OTP's territory.

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

In 2011, OTP has identified the following potential deployments;

- Interruption Reporting Availability to Customers: Discussed in first response.
- MISO Reliability Project – SynchroPhasors: OTP is working on three additional locations.

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

As OTP 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.

OTP will continue to monitor and consider other smart-grid type installations at other utilities and regional ISO's.

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