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PUBLIC SERVICE COMMISSION

August 28, 2015

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Mr. Jeff Derouen Executive Director Public Service Commission 211 Sower Boulevard Frankfort, Kentucky 40602

Dear Mr. Derouen:

Pursuant to the Commission's final Order in Case No. 2011-00037, dated February 29, 2012, please find enclosed for filing an original and ten (10) copies of Owen Electric Cooperative, Inc.'s ("Owen Electric") report, as stipulated in ordering paragraph No. 4, which summarizes the impacts of its DSM and energy efficiency programs and the revised and optional rates approved.

In addition to this report, Owen Electric has filed annual informational reports, as ordered in Case No. 2011-00037, covering the years 2012, 2013, and 2014, and requests that this report be considered the final report and further reporting requirements pertaining to this case cease.

If you have any questions regarding this filing, please feel free to contact me.

Very truly yours, OWEN ELECTRIC COOPERATIVE, INC.

Mark A. Stallons President & CEO

Enclosures

MAS/skc

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## OWEN ELECTRIC COOPERATIVE CASE NO. 2011-00037 FINAL ORDER DATED FEBRUARY 29, 2012 EVALUATION OF DSM, ENERGY EFFICIENCY, AND RATE MODIFICATIONS

In the general rate case (Case No. 2011-00037), Owen Electric Cooperative, Inc. ("Owen Electric") sought to more closely align fixed costs with the customer charge to support a culture of energy innovation driven by energy efficiency, conservation, and demand response efforts while maintaining the Cooperative's financial integrity. These rate adjustments were designed to be revenue neutral and followed the principal of gradualism with a multi-year implementation period. Additional rate offerings (three Time of Use and an Inclining Block) were also made part of this case to provide our members expanded choice of rate designs that fit their lifestyle and assist them in managing their energy costs. Finally, recognizing the importance of member education, Owen Electric developed and implemented an aggressive and comprehensive education and communication plan to engage, educate, and encourage energy innovation as a tool to mitigate rising energy costs, to promote controlling costs and using energy wisely, and to provide clear and easy to understand information regarding rate options available to members.

Since the Commission's final Order was issued February 2012 in Case No. 2011-00037, Owen Electric has engaged in numerous DSM and energy efficiency strategies, programs, technologies, and member education initiatives that facilitate energy innovation opportunities that help our members save energy and manage their energy costs. These initiatives, and corresponding participation levels and energy saving impacts statistics, are detailed in Owen Electric's "Annual Report of DSM and Energy Efficiency Programs" filed with the Commission for years 2012, 2013, and 2014. As evidence by these reports, Owen Electric's member participation in these programs has shown steady and impressive growth and we expect member acceptance of energy efficiency and DSM to continue to increase in the future.

In early 2014, a Meter Data Management ("MDM") system was installed that allowed Owen Electric to safely and securely store our member's meter data and enabled the Cooperative to move forward with pre-pay metering. The MDM system gives members the ability to view their usage via a member portal. This system also places the Cooperative in a position to evaluate and potentially offer advanced billing tariff options such as critical peak pricing and peak time rebates.

Owen Electric recently gained Commission approval (Case No. 2013-00403, Order dated 2/7/14) to offer the pre-pay metering program to its members. By offering members access to their usage in a more timely and convenient manner, Owen Electric believes that members will be better equipped to monitor and manage their energy consumption.

In addition to ongoing initiatives, Owen Electric has engaged in pilot projects to research and evaluate new opportunities. One such pilot was Owen Electric's Smart Home Pilot that was undertaken to evaluate energy and demand management opportunities available to both the member and the cooperative. This voluntary pilot program provided participants access to a host of energy management tools including programmable thermostats, water heater controls, and web based software that allowed them to access and control the energy management devices in their home. These tools, coupled with a Smart Home Pilot Time-of-Use tariff, afforded the member the opportunity to customize their energy use settings and take advantage of off-peak and shoulder rates.

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The pilot revealed the need for more robust Advanced Metering Infrastructure (AMI) and MDM systems in order to perform reliable and meaningful measurement, verification and program analytics. While the pilot demonstrated on-peak energy savings, Owen Electric's pilot technology and software partner, in the end, was unable to calculate and provide the data and analysis needed to evaluate the overall effectiveness of the program.

While the pilot's measurement and verification was limited, this was a positive experience for Owen Electric and the participants. From this pilot we learned valuable information about Smart Home technologies and member engagement.

As we look to the future, Owen Electric is committed to investigating and prudently evaluating DSM and energy efficiency opportunities and deploying those systems that add value to our members' quality of service, and ability to manage their energy usage. Presently, Owen Electric is evaluating the following:

<u>Wireless Communication AMI Pilot</u> – Owen Electric is investigating alternative methods to remotely read meters on a quarter hour, hourly, and daily basis to support our long term energy innovation goals. In January 2015, Owen Electric started a pilot of 8 RF meters and the associated communications equipment, and will be testing functionality of the meters through mid to late 2015. Once pilots are completed, Owen Electric will evaluate the results of the pilot and determine how to proceed.

<u>Volt Var Optimization Pilot</u> – Owen Electric is continuing to evaluate the benefits of more narrow voltage regulation. Having originally chosen a primarily residential, rurally located, substation with three feeders for this pilot project, it has been determined that both voltage reduction and regulation bandwidth reduction are more difficult and costly to achieve on long, rural feeders. Owen Electric will shift its attention to analyze the impact of advanced voltage and Var control on shorter, more suburban portions of the distribution system. Goals continue to be: demand reduction, line loss reduction, tightened voltage regulation and reactive power management.

<u>Conservation Voltage Reduction Program</u>- The 1987 vintage SCADA system was replaced by a system equipped with advanced substation and down line automation capabilities. In addition to increased situational awareness provided by the SCADA upgrade, we have begun utilizing substation bus voltage reduction in coordination with our engineering model and verified end of line voltages from our AMI system to execute an initial Conservation Voltage Reduction (CVR) program. This has allowed Owen Electric to reduce our monthly peak demand and operate more cost effectively for our membership. Our voltage reduction capabilities were advantageous during a recent system wide emergency conservation request from East Kentucky Power and PJM to reduce energy utilization for the overall electrical grid stability.

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<u>Smart Home Pilot II</u>—A second smart home pilot is dependent upon a final decision regarding acquiring an AMI that is capable of hourly reads, the ability to partner with EKPC to accurately measure and verify energy savings, and the development of an appropriate rate structure.

<u>Community Assistance Resources for Energy Savings Program ("CARES"</u>)—Owen Electric will soon file with the Commission the CARES tariff that encourages weatherization and higher efficiency HVAC equipment for low-income members.

Owen Electric will continue to assess strategies, programs, and technologies that facilitate energy innovation opportunities that help our members save energy and will inform the Public Service Commission of future plans as they develop.