504 11th Street Paintsville, Kentucky 41240-1422 (606) 789-4095 • Fax (606) 789-5454 Toll Free (888) 789-RECC (7322) MAR 20 203
PLAND SERVICE

March 19, 2013

Mr. Jeff Derouen, Executive Director

Kentucky Public Service Commission

211 Sower Blvd.

P. O. Box 615

Frankfort, KY 40601

RE: Case No. 2012-00428/ Consideration of the Implementation of Smart Grid and Smart Meter Technologies

Dear Mr. Derouen,

Please find attached the original and fourteen (14) copies of the responses to the Commission's first request for information in the above referenced case.

If you have any questions, please feel free to contact our office.

Sincerely

David Estepp, President & General Manager

Big Sandy RECC

DE/jm

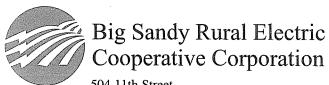


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COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:	
CONSIDERATION OF THE IMPLEMENTATION) CASE NO.
OF SMART GRID AND SMART METER)
TECHNOLOGIES) 2012-00428

RESPONSES TO COMMISSION STAFF'S
FIRST REQUEST FOR INFORMATION
DATED FEBRUARY 27, 2013



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The undersigned, frata, as V.P. Operations,
as IT Manager and
But Da , as Billing / member Society of
Big Sandy Rural Electric Cooperative Corporation being first duly sworn, states that the
responses to Commission Staff's First Request for information in PSC Case No. 2012-00428
dated February 27, 2013, herein are true to the best of my knowledge and belief formed
after reasonable inquiry.
Dated: <u>March 18, 2013</u>
Subscribed, sworn to, and acknowledged before me by Jeff Prater, Adam Ferguson and
Bruce Aaron Davis on behalf of said Corporation this 18 day of March in
the year of 2013.
Notary Public: Judy L. McClure
My Commission Expires: 6-19-14
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Request 98
Page 1 of 1
Witness: Big Sandy: Jeff Prater

Request 98: With regard to calendar years 2007 through 2012, identify and discuss what Smart Grid and/or Smart Meter initiatives the utility implemented. The discussion should include but not be limited to the reasons why each initiative qualifies as a Smart Grid and/or Smart Metering initiative; the date of installation; the total cost of installation; and any benefits resulting from the initiatives, quantifiable or otherwise, received by both the utility and the customers.

RESPONSE 98: During 2005-2008 calendar years Big Sandy RECC installed Aclara's (TWACS) two-way AMI metering system. This project was chosen and implemented for a variety of reasons:

- a. Big Sandy RECC considered it a Smart Meter initiative because of two-way communications.
- b. Meter readings could be obtained in a short period of time (e.g. individual request within an average of 20 seconds).
- c. Remote Disconnect/Reconnect commands could be issued by the TWACS Server.
- d. Voltage checks can be performed by the software.
- e. Interface allows East Kentucky Power to utilize the system for direct load control (i.e. Simple Saver program) for DSM.
- f. System can be used for TOU billing at hourly increments. This would require a software program change, but the existing meter hardware would work. This capability was considered as an important feature of an AMI system.
- g. The meters can be interrogated in real time, enhancing our outage management program's ability.

This project was completed almost five years ago, so detailed costs would be impracticable to obtain. However, the complete cost was approximately \$246.00 per consumer.

The full range of benefits from our AMI implementation is difficult to quantify. Some items are as follows:

- a. Reduced cost of obtaining monthly meter readings.
- b. Produced the ability to utilize direct load control.
- c. Enhanced Outage management System.
- d. Provided the ability to propose prepay metering tariff utilizing infrastructure.
- e. Provided the ability to better monitor kwh usage of consumers.

Request 99
Page 1 of 1
Witness: Big Sandy: Jeff Prater

Request 99: With regard to calendar years 2013 through 2018, identify and discuss what additional Smart Grid and/or Smart Meter initiatives the utility has forecasted to be implemented. The discussion should include but not be limited to why each forecasted initiative qualifies as a Smart Grid and/or Smart Metering initiative; the forecasted date of installation; the forecasted total cost of installation; and any forecasted benefits to result from the initiatives, quantifiable or otherwise, received by both the utility and the customers.

RESPONSE 99: With regards to calendar years 2013 through 2018, the only additional initiative planned is the implantation of prepay metering which is currently under consideration by the Kentucky Public Service Commission, Case No: 2012-00425.

This program will allow customers an excellent venue to monitor their kwh usage and budget their electric costs.

The cost of the prepay metering is \$226.00 per consumer, based on 500 participants.

Request 100
Page 1 of 1
Witness: Big Sandy: Jeff Prater

Request 100:

With regard to DA Smart Grid Initiatives provide the following:

- a. the number of DA systems installed as of December 31, 2012, along with the associated benefits realized.
 - b. the number of DA systems to be installed in the next five years.
- c. the total number of DA systems to be installed when the DA system is completely deployed.

RESPONSE 100: Big Sandy RECC does not have a Distribution Automation Systems in place. No current plan exists for DA systems.

Request	101			
Page 1	of 1			
Witness:	Big Sandy:	Jeff	Prater	

Request 101:

With regard to Volt/VAR Optimization, provide the following:

- a. the number of Volt/VAR Optimization systems installed as of December 31, 2012, along with the associated benefits realized.
- b. the number of Volt/VAR Optimization systems to be installed in the next five years, along with the forecasted in-service date.
- c. the total number of Volt/VAR Optimization systems to be installed when the Volt/VAR Optimization system is completely deployed.

RESPONSE 101: Big Sandy RECC does not have any volt/VAR systems, nor does Big Sandy RECC have any plans for them.

Request_	102			
Page 1	of <u>1</u>			
Witness: 1	Big Sandy:	Jeff	Prater	

Request 102: With regard to Supervisory Control and Data Acquisition ("SCADA") Smart Grid Initiatives, provide the following:

- a. the number of SCADA systems installed as of December 31, 2012, along with the associated benefits realized.
- b. the number of SCADA systems to be installed in the next five years, along with the forecasted in service date.
- c. the total number of SCADA systems to be installed when the SCADA system is completely deployed.

RESPONSE 102: Big Sandy RECC does not have SCADA systems, not any plans for them.

Request	103			
Page 1	of 1			
Witness:	Big Sandy;	Jeff	Prater	

Request 103: As it relates to Dynamic Pricing (where rates are established hourly throughout the day) Tariffs or TOU Tariffs, provide the following:

- a. the number of customers the utility has or had on these types of tariffs, identified separately by specific tariff.
- b. whether these customers shifted load from high-price times periods to lower-priced time periods.
- c. whether these customers consumed more, less or the same number of kWh.
- d. whether the utility reached any findings or conclusions based on its experience with customers on Dynamic Pricing and/or TOU Tariffs.

RESPONSE 103: Big Sandy RECC does not have TOU tariffs.

Request 104
Page 1 of 1
Witness: Big Sandy: Adam Ferguson

Request 104: Describe precautions taken and/or standards developed by the utility to address concerns regarding cybersecurity and privacy issues.

RESPONSE 104: Big Sandy RECC follows the Red Flag Rules and has put in place (IPS) Intrusion Prevention Service by Dell Secureworks who monitor outside of our firewall (Cisco 5510 Series).

Request 105
Page 1 of 1
Witness: Big Sandy: Jeff Prater

Request 105: Provide a discussion and details of progress made regarding the concern raised by the utilities as it relates to the interoperability standards for Smart Grid equipment and software.

RESPONSE 105: The only equipment and software Big Sandy RECC has experience with is Aclara systems. Big Sandy has experienced no interoperability of equipment and software.

Request 106
Page 1 of 1
Witness: Big Sandy Jeff Prater

Request 106: Provide a discussion concerning how the costs (investment and operating and maintenance costs) associated with the installation of Smart Grid facilities should be recovered from the ratepayers.

RESPONSE 106: Big Sandy RECC references the response to PSC Request 106 submitted by EKPC and adopts that response as its own.

Request 107
Page 1 of 1

Witness: Big Sandy: Jeff Prater

Request 107: State whether the utility would favor a requirement that it report to the Commission so that the Commission is aware of the jurisdictional Smart Grid and/or Smart Meter activities within the Commonwealth. As a specific example, the requirement could order that a report be provided each September regarding the Smart Grid and/or Smart Meter activities the utility is planning to perform during the upcoming calendar year, followed by an April report of the Smart Grid and/or Smart Meter activities the utility completed the preceding calendar year.

RESPONSE 107: Big Sandy RECC references the response to PSC Request 107 submitted by EKPC and adopts that response as its own.

Request 108
Page 1 of 1
Witness: Big Sandy: Jeff Prater

Request 108: State whether the utility believes KRS 278.285 is an appropriate approach to recovering the costs (investment and operation and maintenance) associated with Smart Grid investments.

RESPONSE 108: Big Sandy RECC references the response to PSC Request 108 submitted by EKPC and adopts that response as its own.

Request 109
Page 1 of 1
Witness: Big Sandy: Jeff Prater

Request 109: State whether the utility believes a tracking mechanism as described beginning on page 3 of the Wathen Testimony on behalf of Duke Kentucky is an appropriate approach to recovering the costs associated with Smart Grid investments.

RESPONSE 109: Big Sandy RECC references the response to PSC Request 109 submitted by EKPC and adopts that response as its own.

Request 110
Page 1 of 1
Witness: Big Sandy: Bruce Aaron Davis

Request 110: State whether the utility has commissioned a thorough DSM and Energy Efficiency ("DSM-EE") potential study for its service territory. If the response is yes, provide the results of the study. If no, explain why not.

RESPONSE 110: Big Sandy RECC references the Request 110 submitted by EKPC and adopts that response as our own.

Request 111
Page 1 of 1
Witness: Big Sandy: Bruce Aaron Davis

Refer to the Munsey Testimony on behalf of Kentucky Power, page 10, lines 11-19 regarding the Green Button initiative. Describe the extent of your utility's participation in this industry-led effort.

RESPONSE 111: Big Sandy RECC has not participated in the Green Button initiative thru the present time.



Request 112
Page 1 of 1
Witness: Big Sandy: Bruce Aaron Davis

Request 112: Refer to the Roush Testimony on behalf of Kentucky Power, DMR Exhibit 1. Provide a similar exhibit containing a list of time-differentiated rates available to your customers.

RESPONSE 112: Big Sandy RECC's only time differentiated rates are based on EKPC's E-2 Rates, which are all of Big Sandy RECC's scheduled rates with the exception of Industrial Schedules I and II.



Request 113
Page 1 of 1
Witness: Big Sandy: Jeff Prater

Request 113: Provide a description of the type of meters (mechanical, electromechanical, AMR [one-way communication], AMI [two-way communication]) currently used by the utility. Include in the description the reasons the current meters were chosen and any plans to move to a different type of metering configuration.

RESPONSE 113: Big Sandy RECC uses AMI metering that utilizes two way communications known as "Power Line Carrier". The system is supported by Aclara (TWACS). Big Sandy RECC has approximately 20% of its residential meters that are electro mechanical fitted with a solid state module. The remaining meters are solid state electronic meters with a (TWACS) electronic module installed.

The initial implementation of (TWACS) meters included both types. Big Sandy shifted to the solid state meters because we experienced an approximate 3% failure of the retrofitted meters upon installation and less than 1% upon installation of solid state meters.

We have plans to gradually replace all retrofitted meters with solid state meters. We do not have any plans to switch to a different AMI system.

Request		114				
Page 1	of	1				
Witness:	Bio S	Sandy	. т	eff	Prater	

Request 114: If either AMR or AMI metering is in use, state whether the utility has received any customer complaints concerning those meters. If the response is yes, provide the following:

- a. the number of complaints, separated by gas and electric if a combination utility, along with the total number of customers served.
 - b. how the complaints were addressed by the utility.
- c. a detailed explanation as to whether customers should have the ability to opt out of using either AMR or AMI metering.
- d. If customers were to be given the opportunity to opt out of using either AMR or AMI metering, provide:
- i. an explanation as to whether the utility should establish a monthly manual metering reading tariff or charge applied to the opt-out customers to recover the costs associated with manually reading the non-AMR or -AMI accounts.
- ii. an explanation as to whether these opt-out customers could still receive benefit from the utility using either AMR or AMI metering.
- iii. an explanation addressing the point at which opt-out customers, either in terms of number of customers or a percent of customers, affect the benefits of the utility using either the AMR or AMI metering.

RESPONSE 114: Big Sandy RECC has received no complaints.

Request 115
Page 1 of 1
Witness: Big Sandy: Adam Ferguson

Request 115: In testimony, each utility cited cybersecurity as an area of concern related to the implementation of Smart Grid technologies. Provide and describe your company's policy regarding cybersecurity or the standard your company has adopted governing cybersecurity. If your company has not adopted any policy or standard, identify and describe any industry or nationally recognized standards or guidelines that you may be aware of that the Commission should consider relating to cyber security issues and concerns.

RESPONSE 115: Along with the Red Flag Rules that we follow, Big Sandy RECC has passwords to help keep data safe and any papers that have information are scanned into a secure e-filing system and the papers are destroyed.

Request 116
Page 1 of 1
Witness: Big Sandy: Jeff Prater

Request 116: If not previously addressed, provide a detailed discussion of whether deployment of smart meters should allow for an opt-out provision.

RESPONSE 116: It is Big Sandy RECC's opinion that there is no reasonable situation where a customer should be allowed to opt out. The AMI system is detrimental to all consumers because the Co-op cannot collect necessary information without it.