South Kentucky RECC
A Touchstone Energy® Cooperative

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January 6, 2010

Mr. Jeff Derouen:
Executive Director
Kentucky Public Service Commission
211 Sowder Blvd.
P.O. Box 615
Frankfort, KY 40602-0615

Dear Mr. Derouen:

RE: Case no. 2009-00489 – Response to First Data Request of Commission Staff

Attached you will find an original and eight (8) copies of South Kentucky Rural Electric Cooperative, Inc. response to the First Data Request of Commission Staff dated December 28, 2009.

If additional information is needed, please advise.

Sincerely,

SOUTH KENTUCKY RECC

Stephen Johnson
Vice President of Finance

jb Enclosures

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATER OF:

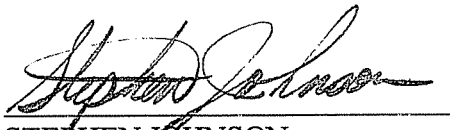
APPLICATION OF SOUTH KENTUCKY	)	
RURAL ELECTRIC COOPERATIVE	)	
CORPORATION FOR A CERTIFICATE	)	
OF CONVENIENCE AND NECESSITY TO	)	CASE NO. 2009-00489
INSTALL AN ADVANCED METERING	)	
INFRASTRUCTURE (AMI).	)	

RESPONSE TO COMMISSION STAFF'S
FIRST DATA REQUEST

Comes South Kentucky Rural Electric Cooperative Corporation ("South Kentucky" or "SKRECC") and files with the Commission an Original and eight (8) copies of the attached response to the Commission Staff's First Data Request to South Kentucky Rural Electric Cooperative Corporation dated and served on December 28, 2009. Each copy has been placed in a bound volume with each item separately tabbed.

CERTIFICATION

The undersigned, Stephen Johnson, stated that he is the Vice President of Finance of South Kentucky Rural Electric Cooperative Corporation; that he supervised the preparation to the within response; and certifies that the within response is true and accurate to the best of his knowledge, information and belief formed after reasonable inquiry.



STEPHEN JOHNSON
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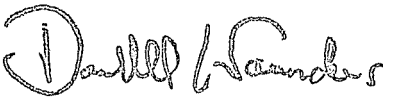

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the above and foregoing was this 6 day of January 2010, deposited in the regular United States mail, all postage prepaid and addressed for delivery to Mr. Jeff Derouen, Executive Director, Public Service Commission, 211 Sowder Blvd., P.O. Box 615, Frankfort, KY 40602-0615

ATTORNEY FOR SOUTH KENTUCKY RURAL
ELECTRIC COOPERATIVE CORPORATION

RESPONSE TO P.S.C FIRST DATA REQUEST

Q. Refer to Exhibit A of South Kentucky's December 10, 2009 application, pages 11-28. Provide a narrative description of the analysis performed by South Kentucky that led to the selection of the Aclara Two-Way Automatic Communications System ("TWACS").
At minimum, the description should include:

a. A listing of the Advanced Metering Infrastructure ("AMI") technologies considered other than TWACS.
b. Whether a Request for Proposals was issued and if so, the names of the respondents and a brief description of each proposal, including the cost.
c. A comparison of the capabilities, costs and any negative aspects of the systems considered by South Kentucky.
d. The reasons the TWACS was chosen over the other systems considered.

R. The Energy Policy Act of 2005 states that it is the official policy of the United States to encourage demand response and the U.S. Department of Energy and the Energy Independence and Security Act of 2007 also encourages utilities to move toward Smart Grid Technology.

With the expected forthcoming federal requirement for utilities to install Smart Grid Technology, South Kentucky established an in-house committee to evaluate and assess possible AMR solutions and ultimately to select a vendor and successfully negotiate a contract for the deployment of an AMR system. This committee was established in 2007 and included employees from our IT, Metering, Engineering, Technical Services, and Finance teams. The team reviewed various AMR systems and decided to concentrate their efforts on the three most dominate vendors in the market. Hunt Technologies, (Turtle), Cannon, and TWACS. All three vendors were contacted and equipment capabilities investigated. No firm pricing was obtained for the preliminary investigation as the capabilities of each system was examined. Various cooperatives that had already implemented AMR projects were visited, both within and outside the State of Kentucky. The team narrowed the choices to two vendors Cannon and TWACS. Turtle was excluded due to it not being an advanced two way communications system.

In 2009 the U.S. Department of Energy through the American Recovery and Reinvestment Act accepted applications for "Smart Grid" funding from utilities throughout the United States. South Kentucky decided to move from an AMR project to an AMI project. The internal committee was reformed to investigate options. Again, the two best options were considered to be Cannon and TWACS. South Kentucky discovered that other cooperative's that installed a Cannon AMR System had to change out thousands of meters due to bad modules. In addition the Cannon system requires signal repeaters to be installed on down line feeders to return the power line carrier signal to the substation and

the TWACS system did not need these repeaters. Due to these issues and the fact that several cooperatives we visited were very pleased with their TWACS systems, and the compatibility of TWACS with other software systems in use at South Kentucky RECC, a decision was made to proceed with ACLARA which is the TWACS vendor.

RESPONSE TO P.S.C FIRST DATA REQUEST

Q. Refer to Exhibit A, page 29 of the application.

a. Explain how South Kentucky arrived at the project savings in bad debt write-offs of 10 percent. Include all calculations performed in arriving at the 10 percent projection.

b. Explain whether South Kentucky proposes to make periodic on-site visits to its customers' premises if its AMI program is approved. If visits are not proposed, explain whether South Kentucky believes there is any value from a safety perspective of on-site visits by meter readers or service personnel.

c. Explain how South Kentucky proposes to limit the risks incurred by remote connections and reconnections.

d. Provide the percentage of South Kentucky's meter reads that are currently estimated.

e. Through a demand response program using direct load control for six months each year, South Kentucky estimates savings of approximately $43,000 per month, or $260,000 per year. How many years does South Kentucky expect it will take before it attains this level of savings? Also, given the differences in the two systems, explain why South Kentucky believes it is realistic to assume the same estimated savings per customer as Florida Power and Light.

R. 2a The TWACS AMI system will have pre-pay capabilities and allow members to pre-pay for their electric. By allowing members, the option to move to pre-paid metering members can purchase electricity weekly and better manage their funds with smaller payments made on a more frequent basis. The estimate that 10% (is a conservative percentage) of delinquent accounts would sign up for the pre-paid option was based on the fact that Co-Mo Electric Cooperative in Central Missouri saw a 20% reduction in write-offs with a pre-pay system as stated in the below web site.

http://www.exceleron.com/case-studies/case-study-co-mo-electric.html

R. 2b Yes, South Kentucky plans to continue to visit each site periodically.

R. 2c With AMI the risks may be reduced by allowing the member to be on-site when the account is connected. With the new system, reconnects can be performed remotely, 24 hours per day. The member can call our office after returning home and we can then turn the account on, thereby limiting potential risk.

R. 2d From January through December 2009 there were 6,688 estimated readings. This represents less than 1% of the meter reads for the year.

R. 2e South Kentucky proposes to control both air conditioning units and electric water heaters. We would have a goal of reaching the threshold of 5,000 load control accounts within 5 years of the complete installation of the system. To obtain the savings estimated South Kentucky must control 5,000 residential accounts and average the same 1.44 KW per month per account as Florida Power & Light (FP&L). This reduces peak demand by 7,200 KW per month system wide. This would calculate to a savings of $43,000 in demand costs per month. For our calculation purposes we estimated savings only during 6 months per year. In reality there would be some savings year round as the water heaters would be controlled all year. FP&L was held as a model due to their having the largest load control system in the United States with around 750,000 participants. While FP&L's air conditioning load will be much greater in Florida; the water heating load will be much greater in South Kentucky territory due to our colder climate and also due to our 93% saturation rate of electric water heaters.

In addition, East Kentucky Power through their Direct Load Control Program is realizing a 1 KW reduction in demand for each air conditioner controlled and for each water heater they are seeing a 0.3 KW load reduction in the summer and a 0.6 KW load reduction in the winter. We feel the 1.44 reduction realized by FP&L is well within what will be realized by South Kentucky as our calculations utilized the 1.44 KW reduction for only 6 months of the year and water heaters will be controlled year round.

The above calculation is based on current Tariff's and in the future the expectation is there will be a significant increase in demand related costs.

RESPONSE TO P.S.C FIRST DATA REQUEST

Q. Explain whether it is expected that an AMI system such as the one proposed will be beneficial in reducing lengths of service outages following major storms or disasters

R. Yes, the AMI System that South Kentucky plans to install will help in reducing lengths of service outages following major storms or disasters.

Once completely installed the TWACS system has the ability to "ping" every active electric account and confirm if the electric is on. This is very helpful in isolating and locating which lines and members are out of service. During storms South Kentucky has restored electric to a circuit or three phase feeder and left the area believing electricity was restored to all members on the line, only to discover later that some members were still without power. Many times the linemen are miles away working on another outage. With the TWACS system the electric meters on the line being restored can be "pinged" and additional outages discovered before the linemen leave the affected area.

RESPONSE TO P.S.C FIRST DATA REQUEST

Q. Describe the extent to which South Kentucky has considered the confidentially of personal information that can potentially be obtained about customers through AMI and how that information will be protected and/or used.

R. The AMI system will be gathering meter reading, voltage, amperage, and load profile data. This data is for billing and internal use only. No financial or personal data is gathered by the system.

RESPONSE TO P.S.C FIRST DATA REQUEST

Q. Provide the failure rates reported for TWACS meters and the failure rate of the mechanical meters currently in use on South Kentucky's system. Explain whether the capability exists to retrieve information from a failed TWACS meter and identify any information from a failed TWACS meter and identify any information that is retrievable.

R. We have no history of the TWACS modules and have to rely on other cooperatives that have used the system and the vendor to obtain failure rates. After consulting with other cooperatives we estimate the failure rate to be approximately two to three tenths of one percent. During the previous 12 months (4^{rth} Quarter 2008 through 3^{rd} quarter 2009) South Kentucky has experienced slightly over a 1% failure rate with current mechanical meters.

The AMI meter which will be used is a General Electric which is totally electronic. It is retrofitted with the TWACS module installed in the meter. Also, it should be noted that when a mechanical meter fails in all cases no data after the failure can be retrieved, resulting in the member receiving a bill that has been potentially estimated for a long period of time. With the AMI system South Kentucky will be able to record data daily and "PING" the system at least 4 times daily allowing SKRECC to find failed meters faster and reducing the amount of time that an estimated bill will cover.

RESPONSE TO P.S.C FIRST DATA REQUEST

Q. Refer to Exhibit G of the application. Provide the discount rate used by South Kentucky in performing its present value cash flow analysis.

R. The discount rate used by South Kentucky is 6%.

RESPONSE TO P.S.C FIRST DATA REQUEST

Q. Will all South Kentucky customers (Residential, Commercial, and Industrial) receive new meters? If no, explain why.

R. Yes, all members will receive a new meter.

RESPONSE TO P.S.C FIRST DATA REQUEST

Q. Provide the estimated cost of each residential, commercial, and industrial meter. Can those meters be used with any AMI system other than TWACS?

R. The cost of the meters themselves are (a) residential meters ($26.00), (b) commercial and industrial meters ($300.00). Each of these meters utilizes a TWACS module of which pricing is protected under a non-disclosure agreement. South Kentucky can make an ACLARA representative available upon request from the Commission to discuss pricing.

The meters (TWACS) can be used with other AMI systems.

RESPONSE TO P.S.C FIRST DATA REQUEST

Q. Provide the total estimated cost of the AMI system. Explain in detail how it was derived.

R. The total project cost is expected to be $19.5 million. Equipment costs will be the largest portion of the cost totaling $13.5 million. This includes (1) ACLARA software and support, (67,500) GE meters with the AMI module installed for single phase residential accounts, (1,800) single phase (transformer rated) and three phase meters and modules for commercial and industrial accounts, (20,000) disconnect collars, (7,000) load control switches, (1) spare parts kit for substation, (42) specially built pad-mount transformers for substations, (42) power line carrier equipment setups for substation installation, various spare meter base parts, and (42) DSL connections for communication.

Also there is $600,000 in transportation costs for visiting each site to change the meter, perform any meter base repair, and check the connections on the service entrance.

In addition there is $5.4 million in labor and fringe benefits associated with the installation and maintenance of the system.

RESPONSE TO P.S.C FIRST DATA REQUEST

Q. Will South Kentucky's employees be trained to install the new meters and equipment?

a. If no, explain who will perform the installation.

b. If yes, provide the numbers of trained employees who will be responsible for installation of the AMI system.

R. Yes, South Kentucky expects to train approximately 60 South Kentucky personnel, all linemen, meter technicians, and service personnel to install these meters and equipment.

RESPONSE TO P.S.C FIRST DATA REQUEST

Q. Has South Kentucky contacted other electric utilities in Kentucky to determine what other AMI systems are in use and how they perform?

a. If no, explain why this has not been done.
b. If yes, provide the following
   1) The AMI technology in use and the name of the electric utility using it.
   2) The advantages and disadvantages of the different AMI systems and the reason South Kentucky chose TWACS technology.
   3) Comparison of costs between the different AMI systems.
   4) Is South Kentucky aware of any other electric utility in Kentucky that uses the TWACS technology that South Kentucky is proposing to install?

If yes, name the utility and indicate its experience with the TWACS technology.

R. 11a Yes

R. 11b (1) TWACS – Big Sandy, Jackson Energy and Farmers
Turtle – Cumberland Valley and Bluegrass
Cannon – Owen

R. 11b (2) See response to question #1

R. 11b (3) Turtle is not a complete advanced two way system. Cannon and TWACS pricing was very similar.

R. 11b (4) Yes

Big Sandy RECC, Farmers RECC, Jackson Energy Cooperative, Taylor County RECC, Pennyrile Electric, Tri-County EMC, Warren RECC, Kenergy, and Duke Energy. All cooperatives which were contacted about the TWACS system were very pleased.

RESPONSE TO P.S.C FIRST DATA REQUEST

Q. Refer to Exhibit G, page 2 of 2.

a. Explain how the 1,500,000 under the column "Labor & Overhead" was derived. Provide all supporting calculations.
b. Explain how the values under the column "Total Operating Costs" were derived. Provide all supporting calculations.
c. Explain how the values under the column "Net Borrowings" were derived. Provide all supporting calculations.

R. 12a The $1.5 million is an estimated figure and is for in-house labor and fringe benefits. Several employees will be involved in the project all at varying levels. Employees who will have all or a portion of their time devoted to this project include:

1. Engineering Team Leader	1,040 hours per year (estimate)
2. Technical Services Team Leader	1,560 hours per year (estimate)
3. I.T. Team Leader	520 hours per year (estimate)
4. Metering Team Leader	1,664 hours per year (estimate)
5. Member Relations Team Leader	520 hours per year (estimate)
6. Regulatory Administrator	1,040 hours per year (estimate)
7. (2) Dispatchers	520 hours per year (estimate) each
8. AMI Data Coordinator	2,080 hours per year (estimate)
9. Public Relations Coordinator	520 hours per year (estimate)
10. Customer Service Representative	1,040 hours per year (estimate)
11. (2) Meter Technicians	1,664 hours per year (estimate) each
12. (4) Electrical Linemen	1,040 hours per year (estimate) each
13. Accounting Team Leader	520 hours per year (estimate)
14. President and CEO	312 hours per year (estimate)
15. Vice President of Engineering and Operations	1,040 hours per year (estimate)
16. Vice President of Finance	520 hours per year (estimate)
17. Vice President of Member Services	520 hours per year (estimate)
18. (7) Meter Installers	2,080 hours per year (estimate) each

R. 12b Total Operating Cost is the sum of the Meter Reading, Meter Replacement, Labor for AMI Technician, DSL, and Software & Hardware.

R. 12c Net Borrowings is the Total Project Cost Less in House Labor & Benefits less DOE Reimbursement.