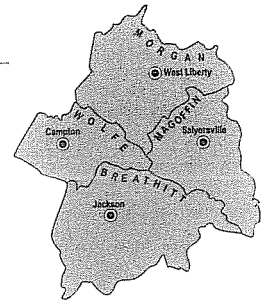


**LICKING VALLEY**  
RURAL ELECTRIC COOPERATIVE CORPORATION  
P. O. Box 605 • 271 Main Street  
West Liberty, KY 41472-0605  
(606) 743-3179



February 13, 2013

Mr. Jack Conway  
Attorney General  
1024 Capital Center Drive, Suite 200  
Frankfort KY 40602

**RECEIVED**

**MAR 22 2013**

**PUBLIC SERVICE  
COMMISSION**

RE: Case No. 2012-00428

Mr. Conway:

Please find enclosed the original and fourteen copies of Licking Valley Rural Electric Cooperative Corporation's responses to, Attorney General's initial Request for Information to the Companies in Case No. 2012-00428 -- Consideration of the Implementation of Smart Grid and Smart Meter Technologies.

Should you have any questions and/or need any additional information, please let me know at 606-743-3179 or email at [kkhoward@lvrecc.com](mailto:kkhoward@lvrecc.com).

Sincerely,

  
Kerry K. Howard  
General Manager/CEO

Enclosure

## TABLE OF CONTENTS

- Exhibit 1: Response to Request 1 - 50
- Exhibit 2: Affidavit attesting that information is true and accurate to the best of preparer's knowledge.
- Exhibit 3: Information concerning testimony of witness.

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION**

**In re the Matter of:**

<b>CONSIDERATION OF THE IMPLEMENTATION</b>	)	
<b>OF SMART GRID AND SMART METER</b>	)	<b>CASE NO.</b>
<b>TECHNOLOGIES</b>	)	<b>2012-00428</b>

**RESPONSES TO ATTORNEY GENERAL'S**  
**INITIAL DATA REQUESTS TO THE COMPANIES**  
**DATED FEBRUARY 27, 2013**

**Request 1.** Since the Commission initiated Consideration of *the New Federal Standards of the Energy Independence and Security Act of 2007*, Administrative Case No. 2008-00408, has the company changed its position regarding Smart Grid? If so, how?

1. Licking Valley RECC references the response to AG Request # 1 as submitted by EKPC and adopts that response as its own.

**Request 2.** Are the technologies pertaining to the implementation of Smart Grid definitely known and proven?

- a. If yes, explain in detail every aspect from the use of each technology from the company to the end-user.
  - b. If not, explain in detail what technologies are already advancing/improving as well as those that are envisioned on the immediate time horizon.
2. Technologies pertaining to the implementation of Smart Grid are not definitely known.
    - a. N/A
    - b. AMR's now are being replaced by AMI's because AMI's have two way communication which allows for better voltage reports and sometimes outages and trouble spots on the lines can be detected. AMI's allows for remote disconnects and reconnects. AMI's allows for prepay metering to be implemented with appropriate tariff changes.

**Request 3.** In light of recent catastrophic storms over the past ten years (for example, the various ice storms, tornadoes, and strong winds), which electric companies have experienced, and for which the company may ultimately have sought regulatory assets, can the company affirmatively state that its basic infrastructure, including all of its generation, transmission and distribution facilities, have proven to be reliable 24 hours a day, seven days a week, 365 days a week? If not, for each and every storm that it affected the utility in excess of two days, please provide the following:

- a. The number of days before the company's last ratepayer's electricity was restored for each storm.
- b. The average number of days, or hours if applicable, that the average ratepayer's outage lasted for each storm.
- c. The average financial loss for the average ratepayer for each storm, if known.

3. No, we were unable to provide our members electricity 24/7/365.

- a. Some members were without power 18 days following the Ice Storm of 2009. After the Tornadoes hit our system February 29<sup>th</sup> and March 2<sup>nd</sup> some members were without power for 6 days. We also experienced an ice storm in 2003 when some members were without power for 4 days.
- b. The average number of days or hours has not been calculated for each outage.
- c. The average financial loss for the average ratepayer for each storm has not been calculated. We were able to recoup 87% of the cost from FEMA and KyEm.

**Request 4.** Does the company agree with the Attorney General that electricity is not considered a luxury service but a necessary commodity of modern life? If not, why not?

4. Licking Valley RECC believes that electricity is a necessary service that supports the modern lifestyle.

**Request 5.** Does the company agree that the fundamental reliability of its electric grid- i.e., the delivery of electricity to the end-user 24/7/365- is paramount to the end-user's ability to monitor and/or conserve his/her demand or electricity consumption? If not, why not?

5. Licking Valley RECC references the response to AG Request # 5 as submitted by EKPC and adopts that response as its own.

**Request 6.** Please state whether the company is aware of any cybersecurity breaches effecting the electric and gas industries that have either occurred in the United States or internationally. If the answer is in the affirmative, please explain the details of the breaches without exposing information that is not already in the public domain.

6. Licking Valley RECC is now aware of any cyber security breaches effecting the electric and gas industries that have occurred in the United States or internationally.

**Request 7.** Please confirm that the company is aware that the prior United States Secretary of Defense Leon Panetta, in speaking on the vulnerability of the nation's electric grid with the consequential safety and security concerns that ensue, warned the Senate Appropriations Committee on Defense that the risk to the United States could even be considered the equivalent of a "digital Pearl Harbor".

- a. Is this concern of the vulnerability of the nation's electric grid shared by the company? If not, why not?

7. Yes, I am aware of the security concerns of the nation's electric grid and share the concern.

**Request 8.** With regard to cybersecurity in general, can the company unequivocally confirm that its system reliability is not vulnerable to a cybersecurity attack? If not, what could be the consequences? Please explain in detail as much as possible for the following:

- a. the company, and
- b. the company's ratepayers.

8. Licking Valley RECC cannot unequivocally confirm that its system reliability is not vulnerable to a cybersecurity attack.

- a. Consequences of a cybersecurity attack to the company could be false meter readings, unplanned line switching, control of equipment in the substations could cause unforeseen problems. This could cause high or low voltage on the system.

- b. Consequences to the company's ratepayers if an attack occurred could be the possibility of disconnection or reconnection and a number of unknown issues.

**Request 9.** Please provide the names of the standards, protocols or policies which the company observes and/or implements in its maintaining its system reliability from cybersecurity threats.

9. Licking Valley RECC's distribution lines are not protected from cyber-attacks or threats from the substation point out to the line-users. Our software provider, NISC, provides fire-wall protection to deter hackers and back-up is stored at remote locations for Customer information files and Meter information files. Customer and meter information files stored on our computers are password protected.

**Request 10.** Please provide copies of the standards, protocols or policies which the company observes and/or implements in its maintaining its system reliability from cybersecurity threats.

10. Licking Valley RECC does not have copies of standards, protocols or policies observed in maintaining system reliability from cybersecurity threats.

**Request 11.** With regard to cybersecurity in general, can the company unequivocally confirm that its ratepayers' privacy of data cannot be compromised or otherwise divulged to any individual or entity not associated with the company, or a qualified third-party which has issues a non-disclosure statement or the ratepayers? If not, what could be the consequences? Please explain in detail as much as possible for the following:

- a. the company, and
- b. the company's ratepayers.

11. Licking Valley RECC can not unequivocally confirm that its ratepayers'

privacy of data cannot be compromised or divulged.

- a. When information is breached the loss could be financially devastating and the public image of Licking Valley RECC could be destroyed.
- b. The company's ratepayers could suffer financial losses if their identity were stolen.

**Request 12.** If a qualified third-party that has agreed to a non-disclosure statement and obtains ratepayers' private information, what guarantees exist that the information will not be disclosed, whether intentionally or unintentionally?

12. There is no guarantee that the information would not be disclosed.

**Request 13.** Please provide the names of the standards, protocols or policies which the company observes and/or implements in its maintaining its ratepayers' privacy data from cybersecurity threats.

13. Licking Valley RECC's software provider, NISC, provides fire-wall protection to deter hackers and back-up is stored at remote locations for Customer information files and Meter information files. Access to our Customer and meter information files stored on our computers are password protected.

**Request 14.** Please provide copies of the standards, protocols or policies which the company observes and/or implements in its maintaining its ratepayers' privacy data from cybersecurity threats.

14. Not available

**Request 15.** Given the vulnerability of the electric grid to cyberattacks, describe what analog (non-digital) means the company will have in place to insure reliability, including but not limited to the maintenance of legacy systems.



15. None

**Request 16.** What are the company's estimated costs to invest in order to fully implement Smart Grid?

a. Do any cost estimates include results of any modeling that may show the degree of exposure to the following risks: (a) hacking; (b) electronic magnetic pulses (EMPs, whether related to solar flares or otherwise); and/or (c) weather events? If so, provide a list of the modeling software used to produce any estimates, the scenarios and sensitivities examined, and any and all such results.

16. Licking Valley RECC references the response to AG Request # 16 and 16a as submitted by EKPC and adopts that response as its own.

**Request 17.** Please explain in detail what benefits, if any, the company expects its ratepayers to realize because of Smart Grid?

a. Does the company believe that societal benefits are to be considered in evaluating benefits? If so, detail those societal benefits and how they may be used in evaluations? If not, why not?

17. Licking Valley RECC references the response to AG Request # 17 and 17a as submitted by EKPC and adopts that response as its own.

**Request 18** Would the company agree to strict limits and/or caps on ratepayer costs? If not, why not?

18. Licking Valley RECC references the response to AG Request # 18 as submitted by EKPC and adopts that response as its own.

**Request 19.** Would the company agree to allow ratepayers to opt-out of smart meter deployment? If not, why not?

19. Licking Valley RECC references the response to AG Request # 19 as submitted by EKPC and adopts that response as its own.

**Request 20.** Can the company quantify measureable and significant benefits that the ratepayers will realize, including a monetary quantification of net savings (if any) to ratepayers?

20. Licking Valley RECC references the response to AG Request # 20 as submitted by EKPC and adopts that response as its own.

**Request 21.** Please explain in detail what detriments, if any, the company expects its ratepayers to realize because of Smart Grid? Include in the explanation both new costs as well as stranded costs.

21. Licking Valley RECC references the response to AG Request # 21 as submitted by EKPC and adopts that response as its own.

**Request 22.** What are the company's estimated costs which the company expects the ratepayers to realize?

22. Licking Valley RECC references the response to AG Request # 22 as submitted by EKPC and adopts that response as its own.

**Request 23.** What are the company's estimated costs which the company expects its shareholders, if any, to realize? Include in the explanation both new costs as well as stranded costs.

23. Licking Valley RECC references the response to AG Request # 23 as submitted by EKPC and adopts that response as its own.

**Request 24.** Does the company agree that its costs to invest and implement Smart Grid will be different than other utility companies? If not, why not?

24. Licking Valley RECC references the response to AG Request # 24 as submitted by EKPC and adopts that response as its own.

**Request 25.** Does the company agree that its ratepayers' benefits, whether financial or otherwise, may differ from one utility to another upon implementation of any Smart Grid technology? If not, why not?

25. Licking Valley RECC references the response to AG Request # 25 as submitted by EKPC and adopts that response as its own.

**Request 26.** Can the company guarantee that the deployment of Smart Grid will not interfere with the regulatory compact whereby the ratepayers will receive safe, adequate and reliable service at fair, just and reasonable costs? If not, why not? Explain in detail.

26. Licking Valley RECC references the response to AG Request # 26 as submitted by EKPC and adopts that response as its own.

**Request 27.** Answer the above question with the definition of "fair, just and reasonable costs" as being economically feasible for the end-user.

- a. Provide any cost-benefit analysis that the company has run or will run to make the determination of economically feasible to the end-user.

27. Licking Valley RECC references the response to AG Request # 27 and 27a as submitted by EKPC and adopts that response as its own.

**Request 28.** Regarding time of use (TOU) rates, can the company confirm that low-income ratepayers will not be disproportionately affected more than non-low-income

customers? If not, why not? (Provide in the answers in any studies, reports, analyses and relevant data.)

28. Licking Valley RECC is not familiar with studies or reports done to reflect the effect that TOU rates will have on low or non-low ratepayers.

**Request 29.** With regard to TOU rates, does the company have any history with any such programs? If so, explain in detail with particular facts as to:

- a. the number of customers who participated;
- b. whether they remained on the program;
- c. whether they saved money on their bills; and
- d. whether the customers ultimately reduced their usage.

29. In 1986 – 1987 Licking Valley RECC participated in a research project with EKPC.

29a. 12 customers participated

29b. Program only lasted 12 months.

29c. Yes money was saved by the member because of the TOU rates.

29d. Customers did not reduce their usage with life style changes.

**Request 30.** What proposals will the company present to deal with technological impediments to the broad use of Smart Grid, including but not limited to the following:

- a. low and fixed-income individuals who do not have Internet resources at their home
- b. multiple forms of telecommunications technology used to access information (i.e., analog, cellular, VOIP); and
- c. multiple and proprietary technology and software options in the market that may lead to issues of compatibility?

30. Licking Valley RECC is upgrading to an AMI meter technology.

- a. AMI's send the signal via power lines.

- b. Licking Valley RECC has not investigated telecommunications technologies used to access information.
- c. Licking Valley RECC has not investigated multiple and proprietary technologies and software options in the market that may lead to issues of compatibility.

**Request 31.** Assume: Full deployment of Smart Grid at the residential ratepayer level consisting of a household with only Energy Star appliances, an HVAC system with at least a 15 SEERS rating, etc. and any smart grid apparatuses/equipment for interconnectivity with the electricity provider (including generation, transmission and distribution).

- a. Does the company agree that if full deployment of the magnitude described in the above question occurs, the average residential ratepayer could experience a significant capital outlay?
- b. If so, what are the projected costs?
- c. If no costs are anticipated by the electric provider, why not?

31. Licking Valley RECC references the response to AG Request # 31a, b, & c as submitted by EKPC and adopts that response as its own.

**Request 32.** In regard to appliances, such as refrigerators or lighting, does the company agree that in the long run, it is cheaper for the end-user himself/herself to make that capital outlay for the purchase of the appliance or lighting than have the company provide the appliance(s) and build the costs into the company's ratebase which would then include a profit component for the company on an on-going basis?

32. Licking Valley RECC references the response to AG Request # 32 as submitted by EKPC and adopts that response as its own.

**Request 33.** Confirm that the Smart Grid depends, at least in part, if not exclusively, on telephony (whether landline, fiber optic, wireless or VOIP) at the end-user level for the end-user to participate in his/her altering his/her electricity usage patterns or behavior.

33. The End-user does not need a landline with AMI's, but a landline is needed in the substation for communication from there back to Licking Valley RECC or EKPC for control purposes, meter readings, or other data collection.

**Request 34.** If the answer to the above question is in the affirmative, confirm that limited access or even complete absence of access to telephony will interfere with, if not prevent, the deployment of the Smart Grid at the end-user level.

34. Licking Valley RECC can collect data with a laptop computer at the substation location, but DLC cannot be deployed without telephone service into the substation. The end-user does not need telephone service.

**Request 35.** If the company intends to install infrastructure/software allowing for the transmission of Smart Grid/Smart Meter data over its distribution/transmission conductors and networks, provide estimates, or actual numbers, for the costs of doing so.

35. Licking Valley RECC currently uses AMR (Automatic Meter Readings) on all substations. We are upgrading our system to use AMI meters which allows for two way communication. The cost to implement our entire system to AMI's will be approximately \$1,000,000.00.

**Request 36.** Is there a standard communications' protocol that the company will deploy in its Smart Grid that will be interoperable regardless of the communications provider?

- a. If not, explain how the company plans on addressing any problems that might arise.

36. There is not a standard communications protocol that the company will deploy in its Smart Grid that will be interoperable regardless of the

communications provider.

**Request 37.** If improved reliability is the goal of Smart Grid/Smart Meter, would it not be more cost-effective to invest in infrastructure hardening (for example, utilizing protocols and standards developed and implemented by many utilities in hurricane-prone regions)?

37. Licking Valley RECC references the response to AG Request # 37 as submitted by EKPC and adopts that response as its own.

**Request 38.** Describe the company's plans to avoid obsolescence of Smart Grid/Smart Meter infrastructure (both hardware and software) and any resulting stranded costs. (This question and the subparts should be construed to relate to both the Smart Grid Investment Standard as well as the Smart Grid Information Standard.)

- a. Describe who would pay for stranded costs resulting from obsolescence.
- b. With regard to the recovery of any obsolete investment, explain the financial accounting that should be used (as in account entry, consideration of depreciation, time period involved, etc.).

38. Licking Valley RECC references the response to AG Request # 38a & b as submitted by EKPC and adopts that response as its own.

**Request 39.** With regard to interoperability standards, does the company agree that Smart Grid equipment and technologies as they currently exist, and are certain to evolve in the future, are not a one size fits all approach to the Commonwealth?

39. Licking Valley RECC references the response to AG Request # 39 as submitted by EKPC and adopts that response as its own.

**Request 40.** Is dynamic pricing strictly defined as TOU?

- a. If not, explain why not.

b. Is the company requesting that dynamic pricing be voluntary or involuntary, if at all?

40. Licking Valley RECC references the response to AG Request # 40a & b as submitted by EKPC and adopts that response as its own.

**Request 41.** Please explain in detail whether the company has any dynamic programs in place in Kentucky.

- a. For each program, provide the number of participants.
- b. For each program, state whether those participants on aggregate have saved costs on their bills.
- c. For each program, state whether those participants on aggregate have saved costs on their bills.
- d. For each program, state whether each participant has saved costs on his/her/its bills. (The question is not intended to request any private identifier information.)

41. Licking Valley RECC does not have any dynamic programs in place.

**Request 42.** Does the company recommend the Commission to formally adopt the EISA 2007 Smart Grid Investment Standard? If not, why not?

42. Licking Valley RECC references the response to AG Request # 42 as submitted by EKPC and adopts that response as its own.

**Request 43.** Does the company recommend the Commission to formally adopt the EISA 2007 Smart Grid Information Standard? If not, why not?

43. Licking Valley RECC references the response to AG Request # 43 as submitted by EKPC and adopts that response as its own.



**Request 44.** Does the company recommend issuing an IRP Standard?

a. If so, what concerns does the company have with a standard, including "priority resource," especially as it relates to cost-effectiveness?

b. What concerns would the company have with a standard as it affects CPCN and rate applications?

44. Licking Valley RECC references the response to AG Request # 44a & b as submitted by EKPC and adopts that response as its own.

**Request 45.** Does the company agree that any investment in grid modernization infrastructure should be done before deploying TOU rates or dynamic pricing? If not, why not?

45. Licking Valley RECC references the response to AG Request # 45 as submitted by EKPC and adopts that response as its own.

**Request 46.** Regarding the Kentucky Smart Grid Roadmap Initiative (KSGRI), does the company believe that it provides the fundamental basis for the Commonwealth as a whole to proceed with Smart Grid given its lack of incorporating all electric utilities such as municipalities and the TVA, along with its distribution companies? If yes, please explain why. If not, please explain why not.

46. Licking Valley RECC references the response to AG Request # 46 as submitted by EKPC and adopts that response as its own.

**Request 47.** Does the company believe that the Commonwealth's electric industry is, or will become, so interconnected that all electric entities in any way involved or associated with the generation, transmission and/or distribution of electricity should be included and participate to some degree with Smart Grid if it is to come to fruition? If yes, please explain why. If not, please explain why not.

47. Licking Valley RECC references the response to AG Request # 47 as submitted by EKPC and adopts that response as its own.

**Request 48.** Does the company believe that any Smart Grid Investment will trigger a CPCN case? If not, why not?

48. Licking Valley RECC references the response to AG Request # 48 as submitted by EKPC and adopts that response as its own.

**Request 49.** Does the company believe that Dynamic Pricing should be economically feasible for the end-user and be supported by a cost- benefit analysis?

49. Licking Valley RECC references the response to AG Request # 49 as submitted by EKPC and adopts that response as its own.

**Request 50.** If additional education is contemplated with the deployment of the Smart Grid, please explain in detail if known or contemplated.

50. Licking Valley RECC references the response to AG Request # 50 as submitted by EKPC and adopts that response as its own.

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF


AN EXAMINATION BY THE PUBLIC SERVICE )  
COMMISSION OF THE CONSIDERATION OF ) CASE NUMBER 2012-00428  
THE IMPLEMENTATION OF SMART GRID )  
AND SMART METER TECHNOLOGIES )

ATTORNEY GENERAL'S INITIAL REQUESTS FOR INFORMATION TO  
LICKING VALLEY RURAL ELECTRIC COOPERATIVE CORPORATION.

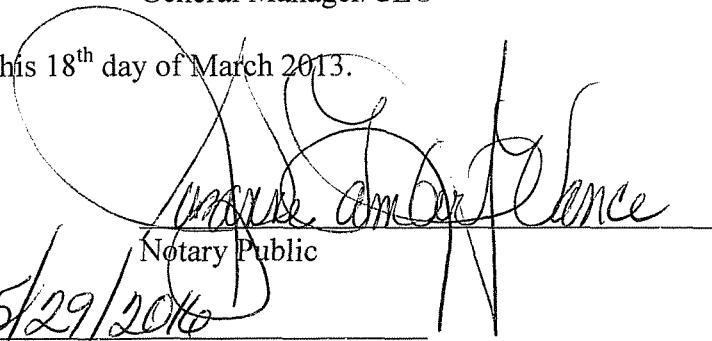
AFFIDAVIT

The affiant, Kerry K. Howard, General Manager/CEO of Licking Valley Rural Electric Cooperative Corporation, Post Office Box 605, West Liberty, Kentucky 41472, states that the information provided in this response is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

Witness my hand this 18<sup>th</sup> day of March 2013.

  
\_\_\_\_\_  
Kerry K. Howard  
General Manager/CEO

Subscribed and sworn before me this 18<sup>th</sup> day of March 2013.

  
\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

05/29/2016

TESTIMONY OF WITNESSES

Exhibit 1. Kerry Howard

Exhibit 2. Kerry Howard

Exhibit 3. Kerry Howard