

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF CLARK ENERGY	)	
COOPERATIVE, INC. FOR A CERTIFICATE OF	)	CASE NO.
PUBLIC CONVENIENCE AND NECESSITY TO	)	2016-00220
INSTALL AN ADVANCED METERING	)	
INFRASTRUCTURE (AMI) SYSTEM	)	

COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION TO  
CLARK ENERGY COOPERATIVE, INC.

Clark Energy Cooperative, Inc. ("Clark Energy"), pursuant to 807 KAR 5:001, is to file with the Commission the original and ten copies of the following information, with a copy to all parties of record. The information requested herein is due on or before September 2, 2016. Responses to requests for information shall be appropriately bound, tabbed and indexed. Each response shall include the name of the witness responsible for responding to questions related to the information provided.

Each response shall be answered under oath or, for representatives of a public or private corporation or a partnership or association or a governmental agency, be accompanied by a signed certification of the preparer or the person supervising the preparation of the response on behalf of the entity that the response is true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry.

Clark Energy shall make timely amendment to any prior response if it obtains information which indicates that the response was incorrect when made or, though correct when made, is now incorrect in any material respect. For any request to which

Clark Energy fails or refuses to furnish all or part of the requested information, it shall provide a written explanation of the specific grounds for its failure to completely and precisely respond.

Careful attention shall be given to copied material to ensure that it is legible. When the requested information has been previously provided in this proceeding in the requested format, reference may be made to the specific location of that information in responding to this request. When filing a paper containing personal information, Clark Energy shall, in accordance with 807 KAR 5:001, Section 4(10), encrypt or redact the paper so that personal information cannot be read.

1. Refer to Clark Energy's application ("Application"), paragraph 3, which states that the proposed Automated Metering Infrastructure ("AMI") system will be installed over a 48-month period. Explain in detail why a four-year installation period was chosen rather than any other time period, and whether there is a deadline to be met.

2. Refer to the Application, paragraph 4.

- a. Provide a cost breakdown of the meters, meters with remote service switch, radio frequency ("RF") collectors, and RF routers associated with the proposed RF AMI system. The breakdown of these costs should be provided in a format similar to the one provided in Case No. 2016-00077<sup>1</sup> by Licking Valley Rural Electric Cooperative Corporation's Application, Exhibit 4, a copy of which is attached hereto as Appendix A.

---

<sup>1</sup> Case No. 2016-00077, *Application of Licking Valley Rural Electric Cooperative Corporation for an Order Issuing a Certificate of Public Convenience and Necessity* (filed Feb. 15, 2016).

b. Explain the difference between Meters and Meters with Remote Service Switch.

3. Refer to the Application, paragraph 5. Provide a detailed breakdown showing the various components that make up the anticipated annual cost of operations.

4. Refer to the Application, paragraph 6. Provide a copy of the Rural Utilities Service ("RUS") approval notice for the AMI implementation, and indicate when RUS loan funds will be needed and provided.

5. Refer to the Application, Exhibit 2.

a. Provide the total number of meters that are currently in use and a breakdown of the number of TS1 and TS2 meters that are currently in use.

b. State whether the currently installed TS1 meters are solid-state, electromechanical, or a combination of both.

c. If the answer to Item 5.b. above indicates both types of TS1 meters are in service, provide the number of each type.

d. Provide the number of TS1 solid-state, TS1 electromechanical, and TS2 meters that Clark Energy has in inventory.

e. Exhibit 2 states that "due to limitations with PLC technology TS2 would not fully function as needed for Clark Energy. This limitation would not allow Clark Energy to offer energy conservation\direct load control (DLC) or prepaid metering programs to all consumers across Clark Energy's system." This statement seems to indicate that the mentioned program options would be available to some, but not all, of Clark Energy's consumers with TS2 technology meters. Provide the time periods when

Clark Energy was informed of the limitations in PLC technology, a detailed description of those limitations, and the date when Clark Energy stopped the deployment of TS2 infrastructure.

f. Provide the anticipated length of time that Clark Energy plans to simultaneously operate a power line carrier-based system and a radio frequency (“RF”)-based communication system.

(1) Explain in detail under what conditions the simultaneous operation will continue.

(2) Explain in detail what is anticipated in the “end of product life” of previously installed TS1 and TS2 meters, if different than above.

g. Provide information regarding the three AMI vendors that Clark Energy researched and assessed, and state whether pricing of those AMI systems was the primary factor in the decision made.

h. Clark Energy indicated several performance criteria desired in its evaluation. Provide a detailed explanation of NISC Software Compatibility and MultiSpeak Compliance and why these criteria are required and desired.

i. Provide a copy of any formal evaluation performed by Clark Energy in its analysis of the proposals submitted by General Electric, Sensus, and Landis & Gyr. If none was performed, explain why Clark Energy did not conduct such an analysis.

6. Refer to the Application, Exhibit 3. Provide details of whether Clark Energy expects to purchase only new AMI meters for residential use, or for commercial and industrial use also.

7. Refer to the Application, Exhibit 3, which states that “data is transmitted utilizing multiple channels in the 902-928 MHz bandwidth.” Provide details on the number of channels to be used by Clark Energy’s system, if different from the 80 available channels indicated.

8. Refer to the Application, Exhibit 3, which states: “This RF infrastructure will communicate with the existing Landis&Gyr AMR\AMI software system already in place for the existing TS1 and TS2 systems.”

- a. Provide details about the software system and its adequacy.
- b. Explain whether additional software and/or patches will be needed.
- c. Provide the cost and timing of any additional software indicated as needed in Item 8.b. above.

9. Refer to the Application, Exhibit 3, the Gridstream RF Network Layers Flow Chart. It is illustrated that the collectors will communicate utilizing the World Wide Web.

- a. Explain in detail how the collectors access and connect to the World Wide Web.
- b. Once connected to the World Wide Web, the collectors then communicate information directly to what, whom, and where?

10. Refer to the Application, Exhibit 3, page 3. The information provided states that “[t]he E350 FOCUS AX-SD incorporates a 200A, motor-driven, cam action disconnect/connect switch under the meter cover.” Confirm that the E330 does not have a built-in switch and the E350 does have a built-in switch, thus any need for an external device is eliminated.

11. Explain in detail Clark Energy's intent concerning the placement of remote disconnect/connect meters.

a. State the number of meters having remote connect/disconnect functionality.

b. Explain the decision process for installing a remote connect/disconnect meter.

c. State whether each residential member will receive a meter capable of remote disconnect/reconnect.

12. Refer to the Application, Exhibit 3, page 5. Explain whether the RF system would include battery back-up at the router and at the collector; if not, explain why.

13. Refer to the Application, Exhibit 3, page 5. Explain what and how many other smart grid applications and functions Clark Energy anticipates utilizing.

14. Refer to the Application, Exhibit 3, page 7. Two RF Collectors are mentioned, one is Ethernet only, and the other uses a wireless modem; explain which model Clark Energy intends to purchase and use, or whether both will be purchased and used at specific and selected locations.

15. Refer to the Application, Exhibit 4, Pre-pay Metering, which states, "Clark Energy will be able to develop and offer a Pre-pay metering tariff to all residential customers." Explain whether Clark Energy anticipates filing a tariff for a pre-pay metering program, and provide the estimated date it intends to submit the tariff filing.

16. Refer to the Application, Exhibit 4, Voltage Data. The information provided indicates that this system has the capability to “provide system wide voltage levels instead of rotating voltage recorders on the end of individual feeders around the system as required by the PSC.” State in detail the intent of Clark Energy in regard to meeting 807 KAR 5:041, Section 7.

17. Explain in detail Clark Energy’s plans for the existing meters that will be replaced, including testing for accuracy in accordance with 807 KAR 5:041, Section 15(3).

18. Explain in detail whether the meters being replaced have been, or will be, fully depreciated.

19. Provide a copy of the minutes from the Board of Directors meeting approving this RF AMI system.

20. In PSC Staff Opinion 2016-003A, attached hereto as Appendix B, it is noted that Clark Energy would be purchasing 10,638 new AMI meters and 1,920 new upgraded meters with built-in remote service switch devices as part of Clark Energy’s 2016–2019 Construction Work Plan (“CWP”).<sup>2</sup>

a. Confirm that the number of new AMI meters and new upgraded meters with built-in remote service switch devices (totaling 12,558 meters) to be purchased under the 2016–2019 CWP is the same number of meters to be purchased in the instant case.

b. Clark Energy currently has approximately 26,029 customers. If Item 20.a. above is confirmed, and assuming Commission approval of the instant case,

---

<sup>2</sup> PSC Staff Opinion 2016-003A at 3.

explain Clark Energy's plans to expand the RF-based AMI metering system for the remaining 13,471 customers.



Talina R. Mathews  
Talina R. Mathews  
Executive Director  
Public Service Commission  
P. O. Box 615  
Frankfort, Kentucky 40602

DATED AUG 19 2016

cc: Parties of Record

Case No. 2016-00220



APPENDIX A

APPENDIX TO A REQUEST FOR INFORMATION OF THE KENTUCKY PUBLIC  
SERVICE COMMISSION IN CASE NO. 2016-00220 DATED **AUG 19 2016**

**Estimated Project cost**

<b>Equipment</b>	<b>Number of Devices</b>	<b>Cost</b>	<b>Total</b>
RF C6500 Series Collector	5	\$ 6,500.00	\$ 32,500.00
RF C5400 Series Collector Mounting Kit	5	\$ 850.00	\$ 4,250.00
RF Routers	486	\$ 1,615.00	\$ 784,890.00
Meters with Communication Modules Landis +Gyr RF Focus - Residential	17000	\$ 156.88	\$ 2,666,960.00
Meters with Communication Modules Landis +Gyr RF Focus AX Polyphase Meter with Communication Modules for Commercial & Industrial	300	\$ 251.75	\$ 75,525.00
Services & Training			\$ 45,400.00
RF Tools			\$ 4,900.00
Labor - Routers & Collectors 2 men 1 -1/2 hour each@ 30.25	496	\$ 90.75	\$ 45,012.00
Labor - Meters 1 man 1/2 hour @ 30.25	17000	\$ 15.12	\$ 257,040.00
Transportation \$25.00 per hour			
Routers 1.5 x 25.00	496	\$ 37.50	\$ 18,600.00
Meters 1/2 hour X 25.00	17300	\$ 12.50	\$ 216,250.00
Labor - Overhead Cost @ 90%			\$ 271,846.80
<b>Total Cost For CPCN Meter Project</b>			<b>\$ 4,423,173.80</b>

APPENDIX B

APPENDIX TO A REQUEST FOR INFORMATION OF THE KENTUCKY PUBLIC  
SERVICE COMMISSION IN CASE NO. 2016-00220 DATED **AUG 19 2016**



Matthew G. Bevin  
Governor

Charles G. Snaveley  
Secretary  
Energy and Environment Cabinet

Commonwealth of Kentucky  
**Public Service Commission**  
211 Sower Blvd.  
P.O. Box 615  
Frankfort, Kentucky 40602-0615  
Telephone: (502) 564-3940  
Fax: (502) 564-3460  
psc.ky.gov

James W. Gardner  
Chairman

Daniel E. Logsdon, Jr.  
Vice Chairman

J. Roger Thomas  
Commissioner

March 28, 2016

**PSC STAFF OPINION 2016-003A**

Todd Peyton  
Manager of Engineering  
Clark Energy Cooperative  
2640 Iron Works Rd.  
Winchester, KY 40391

Re: Clark Energy Cooperative's 2016-2019 Construction Work Plan

Dear Mr. Peyton:

On February 22, 2016, Commission Staff issued PSC Staff Opinion 2016-003 regarding Clark Energy Cooperative's ("Clark Energy") 2016-2019 Construction Work Plan ("CWP") wherein Commission Staff was not able to determine, based upon information provided at that time, whether the individual projects contained in Clark Energy's 2016-2019 CWP satisfy the "ordinary course of business" exemption to the Certificate of Public Convenience and Necessity requirement. Commission Staff requested Clark Energy to provide certain additional information concerning the load forecast, the security lights project, and the automated metering infrastructure ("AMI") upgrade.

On February 29, 2016, Clark Energy submitted a letter providing additional information as requested. In the February 29, 2016 letter, Clark Energy stated that the mild winter load growth projections support the 154 MW winter peak demand, but that Clark Energy also factored in an extreme weather scenario reflecting a projected peak load of 167 MW at minus 15 degrees. Clark Energy states that, after discussions with its RUS Field Services Agent, it chose the minus 15 degrees assumption and 167 MW as its planning criteria and that this had no impact on its 2016-2019 CWP as Clark Energy developed its plan based on the 167 MW projected winter peak. As to the security lights project, Clark Energy indicates that the 2,525 lights as shown in Table 2-7 of its 2016-2019 CWP reflects the accurate number of lights projected to be installed during the CWP period. Clark Energy further indicates that the projected per unit cost of the security lights has increased due to the switch to more energy efficient LED lighting fixtures, which are approximately 2.5 times more than traditional lighting fixtures.

Regarding the upgrade to a new Radio Frequency ("RF") based AMI platform, Clark Energy states that it currently uses a hybrid Power Line Carrier ("PLC") system consisting of Landis+Gyr TS1 and TS2 meters. As part of its 2010-2014 CWP, Clark Energy began replacing its TS1 meters with TS2 meters because replacement components for the TS1 meters were no longer available. Clark Energy subsequently learned that it would not be able to offer all energy efficiency, demand reduction, and prepay programs due to limitations with the PLC technology. Clark Energy then began looking at RF AMI technology to support the company's desire to improve its demand-side management offerings to its customers. Clark Energy noted that RF technologies are becoming more reliable and cost effective with better long term functionality as compared to TS2 meters. Clark Energy further noted that RF-based equipment does not have the limitations in bandwidth, ready delay, and communications bottlenecks as compared to PLC technology. Lastly, Clark Energy states that newly installed meters would operate utilizing RF technology and that the proposed deployment of the Landis+Gyr RF-based AMI system would also allow it to fully utilize existing TS1 and TS2 meters and equipment until the end of their useful lives.

According to its 2016-2019 CWP, Clark Energy proposes construction identified by the following RUS Codes: (1) Code 100 construction for new services at an estimated total cost of \$4,438,720; (2) Code 300 line conversion and replacement at an estimated total cost of \$3,639,000; (3) Code 600 for miscellaneous distribution equipment, including AMI meter replacements and upgrading meters with remote service switch devices at an estimated total cost of \$11,708,712; (4) Code 702 security lights at an estimated total cost of \$1,450,789; and (5) Code 705 for upgrading all substation areas to radio frequency capability at an estimated total cost of \$999,000.

KRS 278.020(1) provides, in relevant part, as follows:

No person, partnership, public or private corporation, or combination thereof shall commence providing utility service to or for the public or begin the construction of any plant, equipment, property, or facility for furnishing to the public any of the services enumerated in KRS 278.010, except retail electric suppliers for service connections to electric consuming facilities located within its certified territory and ordinary extensions of existing systems in the usual course of business, until that person has obtained from the Public Service Commission a certificate that public convenience and necessity require the service or construction.

Regarding the exception to the CPCN requirement, Administrative Regulation 807 KAR 5:001, Section 15(3) provides, in full, as follows:

Extensions in the ordinary course of business; A certificate of public convenience and necessity shall not be required for

extensions that do not create wasteful duplication of plant, equipment, property, or facilities, or conflict with the existing certificates or service of other utilities operating in the same area and under the jurisdiction of the commission that are in the general or contiguous area in which the utility renders service, and that do not involve sufficient capital outlay to materially affect the existing financial condition of the utility involved, or will not result in increased charges to its customers.

In analyzing whether the proposed projects would materially affect Clark Energy's financial condition, Commission Staff takes notice of Clark Energy's 2014 Annual Report, which shows Clark Energy has a net utility plant of approximately \$87,333,005 as of December 31, 2014. With the exception of the Code 601 and Code 705 projects, each proposed construction project when reviewed individually based on its estimated cost would not materially impact Clark Energy's existing financial condition. Therefore, each construction project, except for the Code 601 and Code 705 projects, is generally considered to be an extension in the ordinary course of business. Likewise, the cost estimate of each project considered separately in the 2016-2019 CWP, with the exception of the Code 601 and Code 705 projects, will not have an immediate or significant impact on Clark Energy's rates. Lastly, except for the Code 601 and Code 705 projects, the individual construction projects would not result in wasteful duplication of facilities or conflict with the service of other utilities. Thus, Commission Staff is of the opinion that each of the proposed projects set out in Clark Energy's 2016-2019 CWP satisfies the "ordinary course of business" exemption from CPCN requirement with the exception of the Code 601 and Code 705 projects.

Based on the information provided in the CWP and in Clark Energy's February 29, 2016 letter, Commission Staff is of the opinion that the Code 601 project involving, among other things, purchasing 10,638 new AMI meters and 1,920 new upgraded meters with built-in remote service switch devices, and the Code 705 project involving upgrading all substation areas to RF-based AMI technology do not satisfy the "ordinary course of business" exemption and would, therefore, require a CPCN authorization from the Commission prior to commencing these two projects. Consistent with Commission Staff's position when the new CWP review process was being developed, the replacement of a significant amount of existing meters would require an electric utility proposing the CWP to obtain a CPCN prior to engaging in the project.<sup>1</sup> Likewise, the associated Code 705 project involving the transition from a communications platform based on PLC technology to one based on RF technology is interrelated to the meter

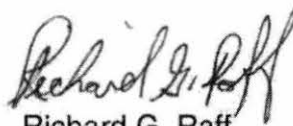
---

<sup>1</sup> See, PSC Staff Opinion 2014-016 at 3, is attached as an Appendix to this letter.

replacement project and would, therefore, also require CPCN authorization before Clark Energy could engage in the implementation of that project.<sup>2</sup>

This letter represents Commission Staff's interpretation of the law as applied to the facts presented. This opinion is advisory in nature and not binding on the Commission should the issues herein be formally presented for Commission resolution. Questions concerning this opinion should be directed to Quang D. Nguyen at (502) 782-2586.

Sincerely,



Richard G. Raff  
General Counsel

QN/ph

Attachment

---

<sup>2</sup> See, Case No. 2016-00077, *Application of Licking Valley Rural Electric Cooperative Corporation for an Order Issuing a Certificate of Public Convenience and Necessity* (Application for system wide implementation of RF-based AMI metering technology filed February 15, 2016). See also, Case No. 2014-00436, *Application of Nolin Electric Cooperative Corporation for an Order Pursuant to 807 KAR 5:001 and KRS 278.020 Requesting the Granting of a Certificate of Public Convenience and Necessity to Install an AMI System* (Ky. PSC Feb. 13, 2015).

APPENDIX





Steven L. Beshear  
Governor

Leonard K. Peters  
Secretary  
Energy and Environment Cabinet

Commonwealth of Kentucky  
**Public Service Commission**  
211 Sower Blvd.  
P.O. Box 615  
Frankfort, Kentucky 40602-0615  
Telephone: (502) 564-3940  
Fax: (502) 564-3460  
psc.ky.gov

David L. Armstrong  
Chairman

James W. Gardner  
Vice Chairman

Linda Breathitt  
Commissioner

November 14, 2014

**PSC STAFF OPINION 2014-016**

Mrs. Carol Ann Fraley  
President and CEO  
Grayson Rural Electric Cooperative Corporation  
109 Bagby Park  
Grayson, KY 41143

RE: Grayson Rural Electric Cooperative Corporation 2015-2018 Construction Work Plan

Dear Mrs. Fraley:

Commission Staff acknowledges receipt of your letter dated October 27, 2014, and received by the Commission on October 29, 2014, on behalf of Grayson Rural Electric Cooperative Corporation ("Grayson"), in which you request a Staff Opinion on Grayson's 2015-2018 Construction Work Plan. Although the letter did not specifically set forth the purpose of the request, Commission Staff will consider this a request as to whether any or all projects contained in Grayson's 2015-2018 Construction Work Plan ("CWP") will require a Certificate of Public Convenience and Necessity ("CPCN") or whether the projects fall within the "ordinary course of business" exemption and, therefore, do not require a CPCN.

Pursuant to the Commission's decision that each construction project contained in a CWP should be analyzed on an individual basis to determine whether that individual project is exempt from the requirement in KRS 278.020(1) to obtain a CPCN, Commission Staff has met and reviewed the projects contained in Grayson's 2015-2018 CWP. This letter represents Commission Staff's opinion, which is advisory in nature and not binding on the Commission should the issues herein be formally presented for Commission resolution.

As with all legal opinions requesting a determination of the exemption from the requirements of a CPCN, Commission Staff's review does not consider the reasonableness or the need for each project. Therefore, because reasonableness and need are not considered herein, or in other non-rate cases, the cost of such a project can be denied recovery in a rate case if found to be unreasonable or unnecessary.

Mrs. Carol Ann Fraley  
November 14, 2014  
Page 2

According to the 2015-2018 CWP and based upon the summary of the construction projects, Grayson proposes construction identified by the following RUS Codes: (1) Code 100 construction for new services at an estimated total cost of \$3,261,906; (2) Code 300 line conversion and replacement at an estimated total cost of \$2,853,380; (3) Code 600 for miscellaneous distribution equipment and pole changes at an estimated total cost of \$13,225,105; (4) Code 701 security lights at an estimated total cost of \$563,880; and (5) Code 1501 geographic information systems at an estimated total cost of \$800,930.

KRS 278.020(1) provides, in relevant part, as follows:

No person, partnership, public or private corporation, or combination thereof shall commence providing utility service to or for the public or begin the construction of any plant, equipment, property, or facility for furnishing to the public any of the services enumerated in KRS 278.010, except retail electric suppliers for service connections to electric consuming facilities located within its certified territory and ordinary extensions of existing systems in the usual course of business, until that person has obtained from the Public Service Commission a certificate that public convenience and necessity require the service or construction.

Regarding the exception to the CPCN requirement, Administrative Regulation 807 KAR 5:001, Section 15(3) provides, in full, as follows:

Extensions in the ordinary course of business. A certificate of public convenience and necessity shall not be required for extensions that do not create wasteful duplication of plant, equipment, property, or facilities, or conflict with the existing certificates or service of other utilities operating in the same area and under the jurisdiction of the commission that are in the general or contiguous area in which the utility renders service, and that do not involve sufficient capital outlay to materially affect the existing financial condition of the utility involved, or will not result in increased charges to its customers.

In analyzing whether the proposed projects would materially affect Grayson's financial condition, Commission Staff takes notice of Grayson's 2013 Annual Report, which shows Grayson has a net utility plant of approximately \$51,474,078 as of December 13, 2013. With the exception of the Meter Replacements project (identified in the CWP as Code 601 at an estimated cost of \$1,988,382), each proposed construction project when reviewed individually based on its estimated cost would not materially impact Grayson's existing financial condition. Therefore, each construction project, except for the Meter Replacements project, is generally considered to be an extension in the ordinary course of business. Likewise, the cost estimate of each project considered separately in the 2015-2018 CWP, with the exception of the Meter Replacements project, will not have immediate or significant impact on Grayson's rates. Lastly, except for the Meter Replacement project, the individual construction projects would not result in wasteful duplication of facilities or conflict with the service of other utilities. Thus, Commission Staff is of the opinion that each of the proposed projects set out in Grayson's 2015-2018 CWP satisfy the "ordinary course of business" exemption from CPCN requirement with the exception of the Meter Replacements project.

Based on the information provided in the CWP, Commission Staff is unable to conclude whether the project designated as Meter Replacements satisfies the "ordinary course of business" exemption. In Section 2.2, page 2-3, the CWP states that "[Grayson] will need to replace approximately 12,408 of their existing AMI meters during the 2015-2018 CWP period, because the manufacturer has discontinued the production and support of this model." This statement could be interpreted to mean that Grayson is replacing a significant amount of its existing AMI meters. If so, consistent with Staff's position when developing the new CWP review process, Grayson would be required to obtain a CPCN prior to engaging in this project. If this was not Grayson's intent, Grayson will need to clarify its intention and provide additional information supporting Grayson's proposal to replace 12,408 existing AMI meters, including, but not limited to, the manufacturer, type, and model of meter, the total amount of existing meters Grayson has in inventory, the reason why the manufacturer has discontinued production and support of these AMI meters, and when was such information made known to Grayson. In addition, provide how the cost information was derived for the Average Cost/Meter Replacement for each year of the 2015-2018 CWP period, including the derivation of the \$149 average cost for 2012-2013, as reflected in Section 2.2 of the CWP, at page 2-4.

Although Commission Staff is of the opinion that all of the projects contained in the CWP, with the exception of the Meter Replacements project, are not subject to the CPCN requirement, Commission Staff would like clarification on the information provided in Table 1-3 of the CWP. According to the CWP, Table 1-3 reflects historical and projected annual energy, demand, and consumer data based on the 2012 Load

Mrs. Carol Ann Fraley  
November 14, 2014  
Page 4

Forecast performed by East Kentucky Power Cooperative, Inc. for Grayson. Table 1-3 shows Grayson's winter non-coincident peak demand for 2011, 2012, 2013 and 2014 as being 70 MW, 60 MW, 63.3 MW, and 81.7 MW, respectively. Is the source of this data entirely from the 2012 Load Forecast? Or, is the peak demand data as presented in Table 1-3 a combination of the 2012 Load Forecast that has been adjusted to account for the actual winter peak that occurred during January 2014?

Within seven days from the date of this letter, Grayson shall submit either:

- 1) Written confirmation that the intent of the Meter Replacement project is to replace a significant amount of its existing AMI meters and that Grayson will file an application requesting a CPCN for that project; or
- 2) Clarification of what it intends to do with respect to the Meter Replacement project and provide the supporting information as previously mentioned in this letter.

The clarification concerning the peak demand data as contained in Table 1-3 should also be provided within seven days from the date of this letter. As a reminder, before the Meter Replacement project can be implemented, a CPCN must be granted or a staff opinion issued determining the project an "ordinary course of business" exemption.

This letter represents Commission Staff's interpretation of the law as applied to the facts presented. This opinion is advisory in nature and not binding on the Commission should the issues herein be formally presented for Commission resolution. Questions concerning this opinion should be directed to Quang D. Nguyen at (502) 782-2586.

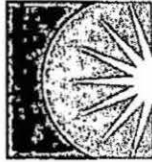
Sincerely,



Jeff Derouen  
Executive Director

QN/ch

Clark Energy Cooperative  
2640 Iron Works Road  
Winchester, Ky. 40391  
800.992.3269  
859.901.9236 Direct



CLARK ENERGY

A Touchstone Energy Cooperative

RECEIVED

FEB 29 2016

PUBLIC SERVICE  
COMMISSION

February 29, 2016

Mr. James W. Gardner  
Acting Executive Director  
Kentucky Public Service Commission  
211 Sower Boulevard  
P.O. Box 615  
Frankfort, KY 40602-0615

Mr. Gardner:

RE: PSC Staff Opinion 2016-003

PSC Staff issued Opinion 2016-003 on February 22, 2016 Concerning Clark Energy's 2016-2019 Construction Work Plan ("CWP"). PSC Staff questions and Clark Energy's responses are listed on the following pages.

Please contact me should you have any questions or need additional information.

Respectfully,

Todd Peyton  
Manager of Engineering  
Clark Energy Cooperative  
859-901-9236  
[tpeyton@clarkenergy.com](mailto:tpeyton@clarkenergy.com)

**PSC Staff Question:** East Kentucky Power Cooperative, Inc.: 1) Section 1, pages 1-4 to 1-8, and 2) Appendix F, page 6. Figure 1-1 and Table 1-4 in Section 1 indicate that the forecasted winter demand is based on the actual winter 2014 peak of 154.2 MW with a forecast for the winter 2015 peak of 167 MW. Table 1-1 in Appendix F also shows 154.2 MW as the actual peak demand in the 2014 winter; however, the forecasted peak demand for the next five years is less than 154.2 MW and does not reach 167 MW at any time during the 20-year forecast period. Accordingly, Commission Staff requests that Clark Energy provide a response to the following questions relating to the load forecast:

1. Explain why there are differences in these two load forecast presentations.
2. Explain whether there are any impacts on Clark Energy's CWP resulting from the discrepancy in the projected load forecast.
3. Explain which level of winter peak demand growth supports Clark Energy's CWP.
4. Provide Clark Energy's actual 2015 winter peak demand.

**Clark Energy Response:**

1. Table 1-1 page 6 of the East Kentucky Power Cooperative, Inc. (EKPC) Load Forecast contains "normal" peak loading conditions typically occurring in a mild winter. Table 1-10 page 35 of the EKPC Load Forecast contains additional scenarios for the forecast. The extreme weather scenario was used based on recommendations from Mike Norman, RUS Field Services Agent, and actual observed temperatures from prior recent winters in order to adequately serve projected load of Clark Energy consumers. 167 MW was used based on the reasonable assumption that -15 temperatures will be observed within the planning cycle of Clark's 2016-2019 CWP. Per Table 1-10 for the winter of 2019-2020, the projected load at -12 degrees is 164 MW and 170 MW at -17 degrees, Clark, after consultations with RUS chose -15 degrees and 167 MW as our planning criteria.
2. No impacts as Clark Planned on 167 MW
3. Mild winter load growth projections support the 154.2 MW peak however as discussed in Response 1 extreme temperature peaks support the 167 MW peak.
4. Feb 2015 Clark System Peak 158 MW

**PSC Staff Question:** Also, with respect to security lights, Table 2-7 in Section 2.4 of the CWP shows the projected total number of security lights Clark Energy intends to install for this CWP period as 2,525. However, the 740C Detail printout represents the installed number of lights as 2,232. Please provide an explanation for this discrepancy.

Clark Energy's 2010-2014 CWP projected 1,476 security lights installed at an estimated cost of \$473,058, or \$321 per installed light. The 2016-2019 CWP – using numbers from the 740C Detail printout – projects 2,232 lights installed at an estimated cost of \$1,450,789, or \$650 dollars per installed light. Explain what accounts for the cost per light to have doubled from the prior CWP to the current CWP.

**Clark Energy Response:**

Number of lights Table 2-7 vs 740C Detail – 2,525 lights as shown in Table 2-7 is the actual number of lights projected to be installed during the 2016-2019 CWP period. The value 2,232 shown in the 740C Detail is a typo error that was not noticed before printing the document.

Cost per light 2010-2014 CWP vs 2016-2019 CWP – Data used for 2010-2014 CWP was obtained from 2007-2008 historical data, and the data for 2016-2019 CWP was obtained from 2013-2014 historical data. This represents 6 years history, which has revealed notable cost increases. Additionally, Clark has just recently switched to installing more energy efficient environmentally friendly LED lighting fixtures for all light installs, the material cost of LED lighting fixtures is approximately 2.5 times vs traditional lighting fixtures. Installed cost per light of \$574 as shown in Table 2-7 is correct based on 2,525 installed lights. The value of 2,232 as shown in the 740C is an error as discussed in the first response in this section.



**PSC Staff Question:** Lastly, in its 2010-2014 CWP, Clark Energy designated more than \$2,000,000 for replacement of meters and substation upgrades necessary for moving from a Hunt Turtle 1 to a Hunt Turtle 2 powerline system. In the 2016-2019 CWP, nearly

\$3,000,000 is allocated for upgrading Clark Energy's current AMR/AMI system to a Landis+Gyr RF Gridstream metering system. Please provide a detailed discussion of the currently installed metering system and Clark Energy's decision to install a new RF- based AMI platform. At a minimum, explain the rationale behind the AMI conversion, describe compatibility of the existing powerline connected meters with RF signaling, discuss the expected useful life of the new metering system, identify any issues or limitations that may result from the conversion, evaluate the extent and impact of any stranded investment associated with the replaced components including consequences affecting depreciation expenses.

**Clark Energy Response:**

Currently Installed Metering system: Clark currently has a hybrid Power Line Carrier (PLC) system of Landis+Gyr, formerly Hunt, TS1 and TS2 meters. The replacement program in the 2010-2014 CWP was the planned replacement of aging TS1 equipment for which replacement components are no longer available. This plan allowed TS1 and TS2 equipment to work within the same system while also allowing the gradual replacement of aging TS1 meters and infrastructure to get the full value from the prior installed TS1 equipment. During the replacement program to TS2 Landis+Gyr informed Clark that due to limitations with PLC technology TS2 would not function as needed at Clark Energy and that we would not be able to offer all energy conservation/demand reduction or prepaid metering programs to all consumers at Clark Energy. Clark halted TS2 equipment upgrades and began looking at RF AMI as the way to offer all of our consumers more options to reduce their energy consumption. Radio Frequency (RF) technologies have made advancements and began to be more reliable and cost effective with more long term functionality than planned TS2 equipment. Clark was also concerned that the recent developments in RF technologies was an indication of a shift away from PLC technologies by meter manufactures and therefore the possibility that PLC would not have long term technical support and available replacement components. RF does not have the limitations in bandwidth, reading delay, and communications bottlenecks that Powerline Carrier does. RF also gives Clark the opportunity to offer energy conservation/demand reduction and prepaid metering services to all consumers, as well as voltage information and distribution automation capabilities to further implement energy conservation measures. The proposed RF Gridstream system from Landis+Gyr is the natural progression from the older TS1 and TS2 systems. The deployment of the Landis+Gyr RF AMI system still allows Clark to fully utilize existing TS1 and TS2 equipment until end of life of those products while newly installed meters would be operating on the RF system infrastructure for the extent of its expected 15-20 year useful life. By utilizing the Landis+Gyr product family Clark Energy will have no stranded investments as currently installed components will continue to be utilized and therefore depreciated.



\*John S Pumphrey  
Grant, Rose & Pumphrey  
51 South Main Street  
Winchester, KENTUCKY 40391

\*Clark Energy Cooperative, Inc.  
2640 Ironworks Road  
P. O. Box 748  
Winchester, KY 40392-0748

\*Todd Peyton  
Clark Energy Cooperative, Inc.  
2640 Ironworks Road  
P. O. Box 748  
Winchester, KY 40392-0748