

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF GRAYSON RURAL	)	
ELECTRIC COOPERATIVE CORPORATION OF	)	CASE NO.
GRAYSON, KENTUCKY, FOR COMMISSION	)	2017-00419
APPROVAL PURSUANT TO 807 KAR 5:001	)	
AND KRS 278.020 FOR A CERTIFICATE OF	)	
PUBLIC CONVENIENCE AND NECESSITY TO	)	
INSTALL AN ADVANCED METERING	)	
INFRASTRUCTURE (AMI) SYSTEM	)	

ORDER

On October 24, 2017, Grayson Rural Electric Cooperative Corporation (Grayson RECC) filed an application requesting approval for a Certificate of Public Convenience and Necessity (CPCN) to upgrade its existing metering system. Grayson RECC proposes to purchase, among other things, 15,000 single-phase advanced metering infrastructure (AMI) meters; 161 polyphase AMI meters; radio frequency (RF) routers and collectors; RF software license and communications adapter; and training and support.<sup>1</sup> The total estimated capital cost for the proposed AMI upgrade project is \$3.38 million.<sup>2</sup> The estimated annual operating and maintenance cost of the proposed AMI upgrade is approximately \$16,600.<sup>3</sup> According to Grayson RECC, financing of the proposed meter project will be submitted to the Rural Utility Services in conjunction with

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<sup>1</sup> Revised and Amended Application, Landis+Gyr attachment at 2–3.

<sup>2</sup> Revised and Amended Application at 4.

<sup>3</sup> *Id.* at 5.

Grayson RECC's next construction work plan, which is anticipated to be filed in the last quarter of 2018.<sup>4</sup>

A procedural Order was issued on November 11, 2017, establishing deadlines for intervention requests, one round of discovery upon Grayson RECC's application, and a deadline for any party to this matter to request a hearing or that the case be submitted for a decision based upon the evidentiary record. There are no intervenors in this proceeding and Grayson RECC responded to one round of discovery. On January 12, 2018, Grayson RECC filed a motion requesting that the matter be submitted for a decision based upon the record. Based on the following reasons, the Commission will approve Grayson RECC's application.

#### BACKGROUND

Grayson RECC currently has 14,706 meters, both in the field and in inventory.<sup>5</sup> Of those, 7,650 are Landis+Gyr TS1 type meters, which are capable of communicating in one direction.<sup>6</sup> The remaining 7,056 meters are Landis+Gyr TS2 meters, which are capable of communicating in two directions utilizing Power Line Carrier (PLC) communication technology.<sup>7</sup> Grayson RECC states that it originally installed the TS1 meters in 2000 and began implementing TS2 meters in 2010.<sup>8</sup>

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<sup>4</sup> *Id.* at 6.

<sup>5</sup> Grayson RECC's response to Commission Staff's First Request for Information (Staff's First DR), Item 1.a.

<sup>6</sup> Application, Exhibit 2, Assessment, Research and Vendor Selection.

<sup>7</sup> *Id.*

<sup>8</sup> *Id.*

Grayson RECC indicates that the TS1 meters were originally installed in 2000 and that over the past few years have experienced more communication failures due to the age of those meters.<sup>9</sup> Grayson RECC notes that its current TS1 meters are not capable of being remotely disconnected or providing pre-pay service.<sup>10</sup> Lastly, Grayson RECC informs that the current TS1 meters take approximately 27 hours to transmit usage data from the meter to its computer system.<sup>11</sup>

Grayson RECC states that it had initially planned in 2014 to replace all the TS1 meters with TS2 meters.<sup>12</sup> Grayson RECC subsequently learned from Landis+Gyr that all Landis+Gyr meter systems utilizing the PLC communication platform would no longer be manufactured by Landis+Gyr and that Landis+Gyr would no longer provide support for such meters.<sup>13</sup> Grayson RECC was informed by a Landis+Gyr representative in 2015 of the company's intentions to ultimately convert all PLC-based metering equipment to the PLX communication platform by 2020.<sup>14</sup> Grayson RECC states that, according to the Landis+Gyr representative, the PLX system is a power line carrier technology that allows for faster transmission of data.<sup>15</sup> Because of this required conversion by 2020, Grayson RECC asserts that it decided to not upgrade to TS2

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<sup>9</sup> Grayson RECC's response to Commission Staff's First DR, Item 1.c.

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> See PSC Staff Opinion 2014-016A addressing Grayson RECC's 2015–2018 Construction Work Plan.

<sup>14</sup> Grayson RECC's response to Commission Staff's First DR, Item 1.c.

<sup>15</sup> *Id.*

meters and began a process of investigating other meter technology to determine the optimal solution for its metering needs.<sup>16</sup>

Throughout 2017, Grayson RECC met with several electric distribution cooperatives<sup>17</sup> and meter vendors<sup>18</sup> to assess and evaluate the various meter system alternatives to replace its existing system. Grayson RECC issued requests for proposals to four vendors: Aclara, Eaton, Landis+Gyr, and Sensus.<sup>19</sup> Grayson RECC's search focused on RF-based meter systems, which communication system, according to Grayson RECC, provided a number of benefits. These benefits included the ability to provide demand data in 15-minute intervals that could be integrated into Grayson RECC's existing Meter Data Management System; automated outage reporting; ensures timely disconnection of pre-pay customers; remote disconnect and reconnect; the ability to self-heal because the data can be delivered to an alternate communications path even when a portion of the system is down; remote meter evaluation; and the ability for the local gas and water utilities to utilize Grayson RECC's RF infrastructure thereby providing a potential revenue stream.<sup>20</sup>

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<sup>16</sup> Application, Exhibit 2, Assessment, Research and Vendor Selection.

<sup>17</sup> These electric distribution cooperatives include Licking Valley RECC, Clark Energy, Adams Rural Electric (Ohio), Buckeye Rural Electric Cooperative Corporation (Ohio), and South Kentucky RECC. See Grayson RECC's response to Commission Staff's First DR, Item 1.b., Exhibit A.

<sup>18</sup> These vendors include Landis+Gyr, Sensus, Eaton, and Aclara. See Grayson RECC's response to Commission Staff's First DR, Item 1.b., Exhibit A.

<sup>19</sup> Application, Exhibit 2, Assessment, Research and Vendor Selection. See *also* Revised and Amended Application, Exhibit B.

<sup>20</sup> Application, Exhibit 4. See *also* Grayson RECC's response to Commission Staff's First DR, Item 1.b., Exhibit A. Grayson RECC provides that it has engaged in discussion with Grayson Utilities and Rattlesnake Water District regarding the potential for those two utilities to utilize any potential RF-based metering system that Grayson RECC would implement in the future. Both utilities expressed interest in the offer. Grayson RECC indicated that it would negotiate a rate through a contractual agreement with those utilities that desire to utilize Grayson RECC's RF infrastructure.

Although it sought proposals focused on RF systems, Aclara provided proposals for both RF and PLC capabilities.<sup>21</sup> Grayson RECC quickly eliminated Sensus from consideration, noting that the Sensus RF system required 90-foot direct line of sight communication towers.<sup>22</sup> Because it did not own such towers, Grayson RECC states that it would have to either purchase or lease the property to construct the towers, which would have been too cost prohibitive.<sup>23</sup> The Aclara RF and PLC proposals were \$7.15 million and \$3.99 million, respectively, with annual fees for the RF system at \$126,465 and the PLC system at \$49,390.<sup>24</sup> The Eaton RF proposal was \$4.78 million with an annual fee of \$9,700.<sup>25</sup> The Landis+Gyr RF proposal was \$3.38 million with an annual fee of \$16,600.<sup>26</sup> Grayson RECC ultimately selected the Landis+Gyr RF proposal based on cost and other factors such as longevity, security, speed and accuracy of data transmission, reliability, future capabilities, and ease of integration into Grayson RECC's existing customer information system and outage management system.<sup>27</sup>

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<sup>21</sup> *Id.*

<sup>22</sup> Revised and Amended Application, Exhibit B.

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

<sup>27</sup> Application, Exhibit 2, Assessment, Research and Vendor Selection.

Grayson RECC points out that the savings to be achieved from the proposed meter upgrade would result from avoiding additional investment in its current PLC meter system, which is likely to become obsolete in the immediate future.<sup>28</sup> Grayson RECC states that the projected next book value of its current meters at the end of 2019, which is the anticipated completion date of the upgrade, to be \$883,695.<sup>29</sup> Grayson RECC further states that it intends to request Commission approval for “an extraordinary retirement of the net book value [of the existing meters] and amortize the remaining balance over a five-year period.”<sup>30</sup>

### DISCUSSION

The Commission’s standard of review of a request for a CPCN is well settled. No utility may construct or acquire any facility to be used in providing utility service to the public until it has obtained a CPCN from this Commission except as provided in KRS 278.020(1) and (2) and 807 KAR 5:001, Section 15(3), which are provisions not applicable to this matter. To obtain a CPCN, a utility must demonstrate a need for such facilities and an absence of wasteful duplication.<sup>31</sup>

“Need” requires:

[A] showing of a substantial inadequacy of existing service, involving a consumer market sufficiently large to make it economically feasible for the new system or facility to be constructed or operated.

[T]he inadequacy must be due either to a substantial deficiency of service facilities, beyond what could be

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<sup>28</sup> Grayson RECC’s response to Commission Staff’s First DR, Item 3.a.

<sup>29</sup> Grayson RECC’s response to Commission Staff’s First DR, Item 1.g.

<sup>30</sup> Grayson RECC’s response to Commission Staff’s First DR, Item 1.i.

<sup>31</sup> *Kentucky Utilities Co. v. Public Service Comm’n*, 252 S.W.2d 885 (Ky. 1952).

supplied by normal improvements in the ordinary course of business; or to indifference, poor management or disregard of the rights of consumers, persisting over such a period of time as to establish an inability or unwillingness to render adequate service.<sup>32</sup>

“Wasteful duplication” is defined as “an excess of capacity over need” and “an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties.”<sup>33</sup> To demonstrate that a proposed facility does not result in wasteful duplication, we have held that the applicant must demonstrate that a thorough review of all reasonable alternatives has been performed.<sup>34</sup> Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.<sup>35</sup> All relevant factors must be balanced.<sup>36</sup>

Having reviewed the record and being otherwise sufficiently advised, the Commission finds that Grayson RECC has sufficiently demonstrated that there is a need to upgrade its existing meter system. We note that the evidence shows that Grayson RECC’s current meter system consists of TS1 and TS2 meters utilizing a PLC communication system. In recent Commission decisions, we have noted that TS1 meters, consisting of one-way communication technology, are obsolete in light of the

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<sup>32</sup> *Id.* at 890.

<sup>33</sup> *Id.*

<sup>34</sup> Case No. 2005-00142, *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for the Construction of Transmission Facilities in Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky* (Ky. PSC Sept. 8, 2005).

<sup>35</sup> See *Kentucky Utilities Co. v. Public Service Comm’n*, 390 S.W.2d 168, 175 (Ky. 1965). See also Case No. 2005-00089, *Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity for the Construction of a 138 kV Electric Transmission Line in Rowan County, Kentucky* (Ky. PSC Aug. 19, 2005), Final Order.

<sup>36</sup> Case No. 2005-00089, *East Kentucky Power Cooperative, Inc.* (Ky. PSC Aug. 19, 2005), Final Order at 6.

movement to more robust two-way communication technologies and the unavailability of any replacement parts for these type of meters.<sup>37</sup> Recent Commission decisions have also found that TS2 meters would soon become obsolete given Landis+Gyr's decision to discontinue manufacturing and selling TS2 meters as of December 31, 2016, and that support for TS2 meters would eventually be discontinued by 2020.<sup>38</sup> In addition, Grayson RECC has provided information in this matter indicating that Landis+Gyr will be transitioning from its PLC communications platform to a PLX structure by 2020, which is consistent with the discontinuance of Landis+Gyr's support for the TS2 meters. In light of the fact that Grayson RECC's current metering system is obsolete, or will soon become obsolete, the Commission finds that it has established a need to replace and upgrade its metering system in order to provide safe and reliable electric service to its customers.

The Commission also finds that Grayson RECC has demonstrated that the proposed upgrade to the Landis+Gyr RF system is the most reasonable least-cost alternative to address Grayson RECC's metering needs and is not a wasteful duplication of facilities. The proposed metering system will allow Grayson RECC to

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<sup>37</sup> Case No. 2016-00077, *Application of Licking Valley Rural Electric Cooperative Corporation for an Order Issuing a Certificate of Public Convenience and Necessity* (Ky. PSC Jan. 10, 2017). See also 2016-00220, *Application of Clark Energy Cooperative, Inc. for a Certificate of Public Convenience and Necessity to Install an Advanced Metering Infrastructure (AMI) System* (Ky. PSC Dec. 22, 2016).

<sup>38</sup> Case No. 2016-00077, *Licking Valley RECC*. See also Case No. 2018-00056, *Application of Cumberland Valley Electric, Inc. for Commission Approval for a Certificate of Public Convenience and Necessity to Install an Advanced Metering Infrastructure (AMI) System Pursuant to 807 KAR 5:001 and KRS 278.020* (Ky. PSC July 9, 2018).

provide its customers with near real-time usage information; the ability to perform remote connection and reconnection; distribution automation; integrate into Grayson RECC's meter data management system, outage management system, and customer information system; and provide RF meter communication service to the local water and gas utilities.

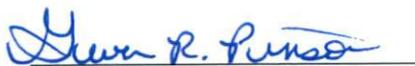
IT IS THEREFORE ORDERED that Grayson RECC's request for a CPCN to purchase and install an AMI system as described in its application is approved.

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By the Commission

ENTERED  
JUL 16 2018  
KENTUCKY PUBLIC  
SERVICE COMMISSION

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