

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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| APPLICATION OF LICKING VALLEY RURAL |) | |
| ELECTRIC COOPERATIVE CORPORATION FOR A |) | CASE NO. |
| CERTIFICATE OF PUBLIC CONVENIENCE AND |) | 2012-00013 |
| NECESSITY FOR ITS 2012-2015 CONSTRUCTION |) | |
| WORK PLAN |) | |

ORDER

Licking Valley Rural Electric Cooperative Corporation ("Licking Valley") filed its 2012-2015 Construction Work Plan ("CWP") on February 28, 2012, requesting a Certificate of Public Convenience and Necessity for certain proposed construction improvements and additions to its existing plant. On June 12, 2012, the Commission issued an Interim Order granting Licking Valley a Certificate of Public Convenience and Necessity ("CPCN") to construct the facilities described in its 2012-2015 CWP with the exception of the proposed retrofit to the single-phase and three-phase meters. The Commission ordered that this matter remain open to allow for further investigation concerning the reasonableness of the proposed meter retrofits. Also on June 12, 2012, the Commission staff issued a Notice of Informal Conference ("IC"), with questions attached, to discuss the outstanding issues in this matter. The IC was held on June 19, 2012 and Licking Valley provided responses to the questions at that time. The matter now stands submitted for a decision on the remaining issues surrounding the proposed meter retrofits.

BACKGROUND

In addition to those projects already mentioned in the June 12, 2012 Interim Order, Licking Valley's 2012-2015 CWP includes the installation of 1,350 single-phase advance metering infrastructure ("AMI") meters at an estimated total cost of \$161,559, which represents an average cost of \$120 per meter. The new meters that Licking Valley plans to purchase are Hunt Turtle 2 System ("TS2") meters.¹ Licking Valley is converting its existing Turtle 1 System ("TS1") automated meter reading system ("AMR") to a TS2 AMI metering system. This conversion will allow for two-way communication which is needed for demand-side management opportunities such as time-of-use metering, remote disconnect/connect, and voltage monitoring.² Other benefits of the TS2 meters include outage restoration validation, voltage readings, and load profiles.³

Licking Valley also proposes to retrofit 1,400 existing single-phase meters in order to be capable of two-way communication, at an estimated total cost of \$213,308, which represents an average cost of \$152 per meter. Licking Valley notes that a Hunt TS2 communication module will be added to either an existing electro-mechanical meter or an existing digital meter if a customer needs the added functionality provided by a TS2 meter. The cost to retrofit an existing meter is 26 percent higher than the cost to install a new meter due to the fact that the existing meter has to be brought to Licking

¹ Licking Valley's response to Item 7.a. of Commission Staff's First Request for Information ("Staff's First Request").

² Licking Valley's response to Item 8 of Commission Staff's Second Request for Information ("Staff's Second Request").

³ Application, page 1, Section IV-C.

Valley's metering department to attach the TS2 module, which results in additional labor costs.

Concerning its three-phase meters, Licking Valley plans to purchase 22 new three-phase AMI meters at a projected cost of \$14,092, or a per meter cost of approximately \$640. Licking Valley also plans to retrofit 10 three-phase meters to AMI capable meters at a total projected cost of \$8,468, a per meter cost of approximately \$847.

DISCUSSION

Licking Valley states that it proposes to retrofit existing meters because the utility does not want to prematurely dispose of functional meters.⁴ Licking Valley acknowledges that the upfront cost to retrofit the mechanical meters is higher than the cost of replacing them with digital meters. In response to a request for information, Licking Valley provided a cost comparison table that showed the cost to purchase 1,350 digital TS2 single-phase meters and retrofitting 1,400 electro-mechanical single-phase meters with TS2 modules, as proposed in its 2012-2015 CWP, was \$10,216 higher than the cost to purchase 2,750 new single-phase TS2 meters. Licking Valley stated that a comparable calculation for the three-phase meters showed that retrofitting existing meters was \$900 more expensive than purchasing all new three-phase TS2 meters. However, Licking Valley contends that there will be a net savings by using the existing functional mechanical meters as long as possible due to the economic life expectancy of the non-digital meters.⁵ In addition, Licking Valley states that if it became necessary

⁴ Licking Valley's response to Item 7.b. of Staff's First Request.

⁵ Licking Valley's response to Item 4.g. of Staff's Second Request.

to add surge protection to the digital meters in the future, it would nullify the cost difference.⁶

Over 70 percent of the meters on Licking Valley's system are electro-mechanical meters that have been retrofitted with TS1 modules. Licking Valley maintains that the mechanical meters are more reliable than digital meters, advising that the failure of mechanical meters is less than 0.2 percent as compared to a 1.2 percent failure rate for digital meters. Licking Valley argues that there is a financial and maintenance benefit in continuing to maintain and use the electro-mechanical meters for as long as possible.⁷

Having reviewed the record and being otherwise sufficiently advised, the Commission finds that Licking Valley's Application for a CPCN for its 2012-2015 CWP related to the proposed retrofit to the single-phase and three-phase meters should be approved. The Commission also finds that Licking Valley should be required to provide information related to the retrofits annually with its annual report as set forth in the ordering paragraphs below.

OTHER METER RELATED ISSUES

As reported by Licking Valley, the total cost for new digital AMI meters, retrofit of existing electro-mechanical AMI meters, and AMI equipment included in this CWP is \$689,227. Of that amount, the cost to retrofit existing meters is \$221,776. This is of minimal cost in comparison to a \$19.8 million CWP. However, the issues addressed in this proceeding are prime examples of the technology and economic complexities the utilities and the Commission face regarding smart meters and the Smart Grid.

⁶ Licking Valley's response to Item 1 of the questions attached to the June 12, 2012 Commission Staff's Notice of Informal Conference.

⁷ Licking Valley's response to Item 4.g. of Staff's Second Request.

Licking Valley has made a decision to upgrade its TS1 AMR system to a TS2 AMI system that allows for two-way communication in an effort to provide demand-side management functionality to members requesting that service. However, as Licking Valley has reported, there are approximately 15,000 electro-mechanical TS1 AMR meters on its system that are still fully functional. The electro-mechanical meters have a 30-year life span and are not fully depreciated. In addition, at the IC, Licking Valley stated that it has only converted three substations to the new TS2 AMI system at this time. Therefore, not having TS2 AMI capability throughout the system and not wanting to prematurely dispose of functional meters, Licking Valley is not proposing a one-time full scale conversion to TS2 AMI. Instead, Licking Valley plans to retrofit existing TS1 meters with a TS2 module which will provide the same functionality as a new digital TS2 meter. Because it can no longer purchase electro-mechanical meters, Licking Valley will have to purchase a number of digital meters in addition to performing the retrofits.

As stated earlier, the cost to retrofit the TS1 meters is \$152 per meter as opposed to a \$120 cost for a new digital meter. The retrofit cost includes the cost of the module, plus Licking Valley's cost for labor, mileage and testing.

The information provided in this case raised a number of questions relating to smart meters which the Commission pursued answers for through requests for information. Licking Valley did not perform a formal feasibility study in connection with its decision to upgrade to a TS2 AMI system nor did it request a CPCN for its initial investment. Licking Valley is not proposing a full scale transition to a TS2 AMI system which would require a significant capital expenditure and result in stranded costs resulting from the removal of meters that are not fully depreciated. Instead, Licking

Valley has opted for a transition which may take up to 10 years based on the retrofits planned in this CWP.

In the October 6, 2011 Order in Administrative Case No. 2008-00408 (“Admin 2008-00408”),⁸ the Commission indicated its intention to initiate a new administrative proceeding to address Smart Grid and smart meter issues. The Commission reinforced its intentions regarding the new Smart Grid administrative case in its August 6, 2012 Order on rehearing in Admin 2008-00408. This case will address, in a comprehensive collaborative way, many of the issues raised in Licking Valley’s CWP.

IT IS THEREFORE ORDERED that:

1. Licking Valley is granted a Certificate of Public Convenience and Necessity to retrofit 1,400 single-phase and 10 three-phase meters as described in its 2012-2015 CWP.

2. Licking Valley shall file a supplement to its annual report for each year of the CWP which includes the following information:

a. The number of single-phase electro-mechanical meters Licking Valley has retrofitted during the year and placed into inventory.

b. The number of single-phase electro-mechanical meters Licking Valley has retrofitted during the year and returned to service.

c. The number of three-phase electro-mechanical meters Licking Valley has retrofitted during the year and placed into inventory.

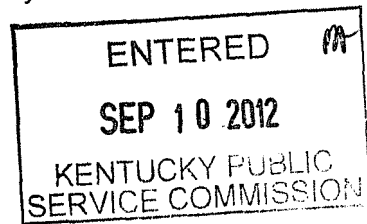
d. The number of three-phase electro-mechanical meters Licking Valley has retrofitted and returned to service.

⁸ Administrative Case No. 2008-00408, Consideration of the New Federal Standards of the Energy Independence and Security Act of 2007 (Ky. PSC Oct. 6, 2011).

e. The remaining useful lives of the meters that were retrofitted and placed into inventory.

f. The remaining useful lives of the meters that were retrofitted and returned to service.

By the Commission



ATTEST:

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