

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF	)	
CUMBERLAND VALLEY ELECTRIC, INC.	)	CASE NO.
FOR APPROVAL OF CHANGES TO ITS	)	2020-00393
METER TESTING PLAN	)	

ORDER

On January 8, 2021, Cumberland Valley Electric, Inc. (Cumberland Valley Electric) filed an application requesting approval to implement a sample meter testing procedure for its single-phase meters. Commission Staff issued, and Cumberland Valley Electric responded to, one round of discovery requests. There are no intervenors and the matter now stands submitted for a decision based upon the evidentiary record.

Cumberland Valley Electric is a not-for-profit, member-owned rural electric distribution cooperative organized under KRS Chapter 279 and is engaged in the business of distributing retail electric power to approximately 23,682 members in the Kentucky counties of Bell, Clay, Harlan, Knox, Laurel, Leslie, Letcher, McCreary, and Whitley.<sup>1</sup>

Cumberland Valley Electric avers that it currently tests its single-phase meters periodically on an 8-year cycle as required under 807 KAR 5:041, Section 15(3). Cumberland Valley Electric proposes to adopt a sample meter-testing program utilizing statistical protocols established under American National Standard Institute/American Society for Quality Control (ANSI/ASQC) Z1. 9-2003 (R2013) (Sampling Procedures

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<sup>1</sup> Application at 1.

and Tables for Inspection).<sup>2</sup> Cumberland Valley Electric states that each set of its single-phase meters will be divided into lots of 1,000 meters, with each lot representing a homogenous population of meters consisting of the same type, size, and manufacturer.<sup>3</sup> The lots will also include meters that have serial numbers with a range of values, which would indicate similar manufacturing methods and controls for the lots. Similar meters may be further divided by serial number break points. Newly purchased or installed meters will be added to the proper lot and will be eligible for sample testing the following year.<sup>4</sup> New meters from a different manufacturer or with different characteristics/features will require the formation of a new group.<sup>5</sup> New meters, as purchased and prior to being placed in service, will be sample tested in lots established for those meters and will be subject to a more stringent Acceptance Quality Level of 1.0 percent nonconforming.<sup>6</sup> The maximum population of any lot will not exceed 1,000 with the group listed above being divided into lots of 1,000 based on serial number.<sup>7</sup>

Each test lot will be randomly sampled by a computerized process, and Cumberland Valley Electric will use an Excel spreadsheet to randomly select meters from each test group.<sup>8</sup> The randomly selected meters will be tested under full load, light load, and at 50 percent power factor at full load in accordance with 807 KAR

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<sup>2</sup> Exhibit 3 at unnumbered page 2.

<sup>3</sup> *Id.* at unnumbered page 1.

<sup>4</sup> *Id.* at unnumbered page 2.

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

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

<sup>7</sup> *Id.*, footnote 1.

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

5:041, Section 17(1).<sup>9</sup> Watthour meters shall be retired when the error in registration exceeds 1 percent at either light load or full load.<sup>10</sup>

Randomly selected meters from each lot will be tested in the field. If the selected meter is damaged or non-registering (due to lightning strikes, fires, etc.) that is not a manufacturer's defect or the meter was exposed to abnormal conditions, these meters will be replaced by another random selection.<sup>11</sup> Cumberland Valley Electric will track non-registering meters to determine if there is any pattern related to external forces, which may be a root cause for non-registering meters.

According to Cumberland Valley Electric's proposed plan, a lot performance will be deemed acceptable if the full load and light load performance of the meters tested satisfy the acceptability criteria of the ANSI standard.<sup>12</sup> Cumberland Valley Electric asserts that when a lot is classified as failed, Cumberland Valley Electric will test the entire lot of meters within 18 months once it has failed the applicable governing standard.<sup>13</sup>

Cumberland Valley Electric states that no meter will remain in service for more than 25 years without testing.<sup>14</sup> This will be in addition to the proposed sample testing. An annual report showing each lots performance and a copy of the

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<sup>9</sup> Exhibit 3 at unnumbered page 3.

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

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

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

<sup>13</sup> *Id.*

<sup>14</sup> *Id.*

manufacturer's new meter test data will be provided to the Commission.<sup>15</sup>

Cumberland Valley Electric contends that the proposed change to a sample meter-testing plan for its single-phase meters will result in cost savings to Cumberland Valley Electric and its members in the amount of approximately \$623,280 over an 8-year period.<sup>16</sup> Cumberland Valley Electric also maintains that the resultant cost savings would not compromise meter-testing accuracy or the overall integrity of its metering system.<sup>17</sup>

Having reviewed the record and being otherwise sufficiently advised, the Commission finds that Cumberland Valley Electric's proposed sample meter-testing program is reasonable and in conformity with 807 KAR 5:041, Section 16. The Commission further finds that Cumberland Valley Electric's application should be approved. However, to ensure that the proposed sample meter-testing plan effectively measures the accuracy of meters in service, the Commission will require additional reporting requirements from Cumberland Valley Electric.

IT IS THEREFORE ORDERED that:

1. Cumberland Valley Electric's application requesting approval to implement a sample meter-testing program for its single-phase meters is approved
2. Cumberland Valley Electric shall comply with all applicable meter-testing requirements set forth in 807 KAR 5:006 and 807 KAR 5:041, including maintaining all test records related to its sample meter testing in accordance with 807 KAR 5:006, Section 18.

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

<sup>16</sup> Application at 2.

<sup>17</sup> Application at 3.

3. Cumberland Valley Electric shall provide the additional information below with its Quarterly Meter Reports, which are required to be filed by 807 KAR 5:006, Section 4(4), and include an electronic version compatible with Microsoft Excel.

a. A detailed report in tabular format that records the following information for each meter, including new meters, tested under the sampling plan:

- (1) Serial Number;
- (2) Date/Time of Test;
- (3) Manufacturer;
- (4) Model/Form/Type;
- (5) Version/Firmware;
- (6) As Found Meter Registration, Full Load, Light Load, and Power Factor Results;
- (7) As Left Meter Registration, Full Load, Light Load, and Power Factor Results;
- (8) Description of Any Billing Adjustment.

a. An “exception” report in a tabular format that lists the following information for each meter removed from a sample and replaced with another unit due to a “non-registering” condition or any other condition that prevents the meter from being tested:

- (1) Serial Number of Replaced Meter;
- (2) Manufacturer;
- (3) Model/Form/Type;
- (4) Version/Firmware;
- (5) Serial Number of Replacement Meter;

(6) Date of Replacement;

(7) Description of Meter Condition and Suspected Cause of Damage/Defect; and

(8) Description of any Billing Adjustment.

4. Cumberland Valley Electric shall notify the Commission in writing of any intentions to adjust, alter, amend, or otherwise deviate from the sample testing plan approved herein, including notice of a decision to abandon sample testing and return to periodic testing as prescribed by 807 KAR 5:041, Section 15.

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By the Commission

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KENTUCKY PUBLIC  
SERVICE COMMISSION

ATTEST:

  
\_\_\_\_\_ for  
Executive Director

Case No. 2020-00393

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