

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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

CUMBERLAND VALLEY ELECTRIC, INC.'S
RESPONSE TO COMMISSION STAFF'S DATA REQUESTS

Filed: February 8, 2021

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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

VERIFICATION OF MARK ABNER

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF KNOX)

Mark Abner, Manager of Engineering of Cumberland Valley Electric, Inc., being duly sworn, states that he has supervised the preparation of certain responses to request for information in the above-referenced case and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Mark Abner
Mark Abner

The foregoing Verification was signed, acknowledged and sworn to before me this 5th day of February, 2021, by Mark Abner.

Barbara Elliott

Notary Commission Number: 616281

Commission expiration: 2-13-23

Cumberland Valley Electric, Inc.
Case No. 2020-00393
Commission Staff's Data Requests

1. Refer to Cumberland Valley's Application, Exhibit 3, unnumbered page 3, which states: "No meter shall remain in service without periodic test for a period longer than twenty-five (25) years."
 - a. Provide details about what method Cumberland Valley will use to determine which meters have not been selected for random sample testing so they do not remain in service more than 25 years without a test.
 - b. Given that a meter only has a 15-year useful life, explain whether a different level of testing be used.

Response:

- a. At the beginning of each year Cumberland Valley will query the meter test data located in our billing system database. Using the last meter test date of each meter Cumberland Valley will run a report to identify any meter that has been in service for 25 years. Any meters that meets the 25-year criteria will be tested along with the standard number of meters randomly selected for testing during the current test year.
- b. Cumberland Valley included the statement that "no meter shall remain in service without periodic test for a period longer than twenty-five (25) years" in order to comply with 807 KAR 5:041 Section 16 (4)(b). This section of the law states "Provided, however, that no meter shall remain in service without periodic test for a period longer than twenty-five (25) years." Cumberland

Valley designed its meter test plan to provide a high level of confidence in the accuracy of individual lots regardless of the age of the meters within each lot. It is also important to note that if the results of sample testing of a lot are unacceptable Cumberland Valley will test the entire lot over an 18-month period. This requirement gives Cumberland Valley even further confidence in its new meter testing plan.

Cumberland Valley Electric, Inc.
Case No. 2020-00393
Commission Staff's Data Requests

2. Refer to Cumberland Valley's Application, Exhibit 3, unnumbered page 3, which states the following: "An annual report (showing each lot's performance) and a copy of the manufacturer's new meter test data will be provided to the PSC." Provide details on the type/example of annual report (showing each lot's performance) that will be submitted to the PSC.

Response:

Cumberland Valley has attached to this response an example of the report that will be provided to the Commission on an annual basis. The report is modeled after the annual report Nolin RECC submits to the Commission each year under a similar approved meter testing plan¹. The report provides the test data for each tested meter by lot and also shows if the lot passed or failed the accuracy requirements.

¹ See, *In the Matter of: Request of Nolin Rural Electric Cooperative Corporation to Adopt Scientific Sample Meter Testing for Single Phase Meters*, Case No. 2016-00275.

CUMBERLAND VALLEY ELECTRIC, INC.
SAMPLE TEST REPORT (35 Meters)
LOT # 1
TEST RESULTS PER ANSI/ASQC Z1.9-2003
DOUBLE SPECIFICATION LIMIT
VARIABILITY UNKNOWN - STANDARD DEVIATION METHOD
ONE AQL VALUE FOR BOTH UPPER AND LOWER SPECIFICATION LIMIT COMBINED
AQL = 2.5% - INSPECTION LEVEL II "J" - NORMAL INSPECTION
SAMPLE TEST FOR LOT SIZE FROM 501 TO 1,200
TABLE A-2, TABLE B-3, & TABLE B-5

INFORMATION NEEDED	VALUE OBTAINED	DEVICE #	TEST DATA	DEVICE #	TEST DATA	DEVICE #	TEST DATA
Sample Size: n	35		0.00		0.00		0.00
Sum of Measurements: Sum X	0.00		0.00		0.00		0.00
Sum of Squared Measurements: Sum X ²	0.00		0.00		0.00		0.00
Correction Factor (CF): (Sum X) ² /n	0.00		0.00		0.00		0.00
Corrected Sum of Squares (SS): Sum X ² - CF	0.00		0.00		0.00		0.00
Variance (V): SS/(n - 1)	0.0000		0.00		0.00		0.00
Estimate of Lot Standard Deviation s: V ^{0.5}	0.0000		0.00		0.00		0.00
Sample Mean Xbar: Sum X/n	0.00		0.00		0.00		0.00
Upper Specification Limit: U	102.00		0.00		0.00		0.00
Lower Specification Limit: L	98.00		0.00		0.00		0.00
Quality Index: Q _u = (U - Xbar)/s	#DIV/0!		0.00		0.00		0.00
Quality Index: Q _L = (Xbar - L)/s	#DIV/0!		0.00		0.00		0.00
Estimate of Lot Percent Ncf. Above U: p _u (Table B-5)	0.000%		0.00		0.00		0.00
Estimate of Lot Percent Ncf. Above U: p _L (Table B-5)	0.000%		0.00		0.00		0.00
Total Estimate Percent Ncf. In Lot: p = p _u + p _L	0.000%		0.00		0.00		0.00
Maximum Allowable Percent Ncf.: M	5.580%						
Acceptability Criterion: Compare p = p _u + p _L with M	PASS						
PASS: The lot meets the acceptability criterion, if p=p _u +p _L is <= M							
FAIL: The lot fails the acceptability criterion, if p=p _u +p _L is > M							

Cumberland Valley Electric, Inc.
Case No. 2020-00393
Commission Staff's Data Requests

3. Refer to Cumberland Valley's Application, Exhibit 3, unnumbered page 3, which states the following: "If Cumberland Valley should suffer an operational hardship due to this requirement, a request for deviation may be filed." Provide an explanation of this statement.

Response:

As an example, the possible failure of several meter test lots during the same test year could present something of an operational hardship in completing tests of the entirety of each failed lot in the allotted 18-month time period. In that event or something similar, Cumberland Valley would timely advise the Commission and may seek an appropriate remedy to address the situation.

Cumberland Valley Electric, Inc.
Case No. 2020-00393
Commission Staff's Data Requests

4. Provide the number of jurisdictions in the United States that require meter testing and of those, which allow for the use of sampling techniques similar to those proposed by Cumberland Valley.

Response:

Cumberland Valley is currently unaware of the number of U.S. jurisdictions that require meter testing, or the subset of those that use sampling techniques similar to those proposed in this case. Cumberland Valley is also unaware of any accessible publications summarizing the information requested. Likewise, time constraints prevent Cumberland Valley from conducting research to reliably respond to the request. However, because the Commission has previously considered similar requests from at least two other Kentucky distribution cooperatives², Cumberland Valley attempted to model its meter testing plan from those cases, while simultaneously complying with 807 KAR 5:041, Section 15 and/or 16.

² See, *In the Matter of: Application of Farmers Rural Electric Cooperative for Adoption of a Sample Meter Testing Procedure*, Case No. 2013-00186; and, *In the Matter of: Request of Nolin Rural Electric Cooperative Corporation to Adopt Scientific Sample Meter Testing for Single Phase Meters*, Case No. 2016-00275.

Cumberland Valley Electric, Inc.
Case No. 2020-00393
Commission Staff's Data Requests

5. Confirm the date on which Cumberland Valley completed installation of its Advanced Metering Infrastructure system.

Response:

Cumberland Valley's goal was to complete installation of its new AMI system by December 31, 2020. This goal has largely been met with 99.99% of meters changed out. The lone remaining step for the project to be fully completed is the optimization of the AMI network. This will occur over the following months as Cumberland Valley works with our vendor to make sure the system is operating at its full capabilities and to achieve one hundred percent read rates of deployed meters.