Wellsboro Electric Company

P. O. Box 138 • 33 Austin Street • Wellsboro, PA 16901 • (570) 724-3516 • FAX (570) 724-1798

June 6, 2019

E-FILED

Ms. Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
2nd Floor, Room-N201
400 North Street
Harrisburg, PA 17120

Re: **Amended Wellsboro Electric Company 2018 Annual Electric Reliability Report**
Docket No. M-2016-2522508

Dear Secretary Chiavetta:

Please find enclosed for filing Wellsboro Electric Company's 2018 Annual Electric Reliability Report reflecting updated reliability indices in sections (b)(3) and (b)(4).

If you have any questions regarding the information contained in this filing, please contact me at (570)724-6701 or barneyf@ctenterprises.org.

Sincerely,

Byron Farnsworth Jr.
VP, Engineering & Operations/COO

Enclosure
c (w/ enc.):
Bureau of Technical Utility Services (dgill@pa.gov, dsearfoorc@pa.gov, dawashko@pa.gov)
Office of Consumer Advocate (TMcCloskey@paoca.org)
Office of Small Business Advocate (ra-sba@pa.gov)

Amended 2018 Annual Electric

Reliability Report to the

Pennsylvania Public Utility Commission

Wellsboro Electric Company
33 Austin Street
Wellsboro, PA 16901

May 1, 2019
Update June 6, 2019

WELLSBORO ELECTRIC COMPANY
ANNUAL ELECTRIC RELIABILITY REPORT

Filed May 1, 2019

52 Pa Code §57.195 Reporting Requirements

(a)(2) The name, title, telephone number and e-mail address of the persons who have knowledge of the matters, and can respond to inquiries.

Byron Farnsworth Jr. – VP, Engineering & Operations/COO
(570)724-6701, barneyf@ctenterprises.org

Tyler Mead – Line Supervisor/Field Planner
(570)724-6725, tylerm@ctenterprises.org

(b)(1) An overall current assessment of the state of the system reliability in the electric distribution company's service territory including a discussion of the electric distribution company's current programs and procedures for providing reliable electric service.

Wellsboro Electric Company experienced increases in reliability indices during 2018. Weather events throughout the year played a significant part in the increase. The Company experienced outages from spring wind, summer thunderstorms and heavy rain/wind events from August through the end of 2018. The Company will continue trimming a circuit or a portion of a circuit each year and then identifying hot spot trimming on 3 phase lines on the system. Danger trees are identified In and Out of ROW during the year and urgent removals are dealt with immediately and other Danger trees are cut as funding is available.

The Company purchased all remaining AMI meters in Dec 2018 and began installing them with an anticipated completion during 2Q2019. Voltage conversions were begun in 2018 and are expected to be completed in late 2019. These conversions are converting 4Kv to 12Kv and will move all circuits in Wellsboro to the newer substation and provide more opportunities for installing tie-points in the future. A GIS Asset Verification Project was completed during the 4Q2018 that has greatly improved OMS information. SCADA upgrades were begun in 2018 with an expected implementation during the 3Q2019.

The Company continues to participate in and gather information from various industry best practices groups. These groups include members from diverse utility groups such as the Pennsylvania Rural Electric Association, the Energy Association of Pennsylvania, and the National Rural Electric Cooperative Association. The Company will continue to implement best practices defined by these groups as appropriate.

The Company does not own or maintain any transmission facilities.

Current Maintenance Programs

Program	Description	Cycle
Infrared Inspection	All substation equipment monthly, and overhead lines as needed.	Monthly
Vegetation Management	Each year, primary lines are visually inspected on 4 circuits. This comprehensive field inspection allows us to identify areas that require trimming. We maintain a 7- year trimming cycle and the Boro is inspected annually to help identify unexpected "hot spots." Based on a bid the winning bidder trims the 60 miles by the end of the 3rd quarter.	2 Years – Visual 7 Years – Trimming
Visual Line Inspection	2 distribution circuits lines and pole hardware are visually inspected each year during preparation of tree trimming contract. Line sections receiving infrared inspection are also inspected visually during that process. Drones are used on a limited basis in tough to access ROWs to inspect structures, equipment and tree conditions.	2 Years
Overhead Transformer Inspection	Overhead equipment on 4 circuits are visually inspected each year to identify and correct any developing problems or safety concerns.	2 Years
Padmount Transformer Inspection	Padmounted equipment on 2 circuits are visually inspected each year to identify and correct any developing problems or safety concerns.	4 Years
Line Equipment Inspection	Airswitches, circuit tie switches, capacitors, regulators, and reclosers are visually inspected during the Line Inspections each year. Where applicable, proper operation of control equipment is verified and counter readings are recorded.	Annual
Pole Inspection	Poles are inspected and treated at the ground line. External and/or internal decay inhibitors are applied where appropriate.	8 Years
Reject Pole Replacements	Replace condemned poles identified during pole inspection.	As needed, annually
Substation Equipment Inspection	Entire station is visually inspected. Equipment batteries are tested, communications equipment operation is verified, fans are tested, various gauge and counter readings are recorded. An infrared inspection is performed on all equipment monthly.	Monthly
Regulator/OCR Maintenance	OCR counters recording faults are read and every 3 years hydraulic reclosers are removed from service and replaced with new/refurbished units. Regulators are visually inspected monthly	Monthly - Regulators Annually – OCR's

(b)(2) A description of each major event that occurred during the year being reported on, including the time and duration of the event, the number of customers affected, the cause of the event and any modified procedures adopted in order to avoid or minimize the impact of similar events in the future.

Date	Time	Duration of Event (Minutes)	#of Customers Affected	Cause
7/22/2018	5:35 AM	253	6,433	Penelec had a tree fall onto the 34.5Kv feed to WECO. This resulted in the entire WECO system losing supply.
12/2/2018	8:53 AM	262	947	Penelec had a post style insulator on their 34.5Kv system where we are underbuilt. The resulting fault on Penelec's system caused one phase of their 34.5Kv to drop onto WECO's 12Kv system burning taps off upstream of the fault and the fault broke a crossarm on our 3 phase. Customers were sectionalized and the final group was left out until Penelec completed their repairs.

(b)(3) A table showing the actual values of each of the reliability indices (SAIFI, CAIDI, SAIDI, and if available, MAIFI) for the electric distribution company's service territory for each of the preceding 3 calendar years. The report shall include the data used in calculating the indices, namely the average number of customers served, the number of sustained customer minutes interruptions, the number of customers affected, and the minutes of interruption. If MAIFI values are provided, the number of customer momentary interruptions shall also be reported.

RELIABILITY BENCHMARKS AND STANDARDS
Wellsboro Electric Company**

	SAIDI	SAIFI	CAIDI	MAIFI
2018	178	1.36	131	*
2017	105	1.06	99	*
2016	145	1.64	88	*
3 Year Average	140	1.35	104	*

* Sufficient information to calculate MAIFI is unavailable.
** System Performance Measures with Major Events and Planned Outages Excluded

Formulas Used in Calculating the Indices

$$\text{SAIFI} = \frac{\text{Number of Customers experiencing an Interruption}}{\text{Average Customers served}}$$

$$\text{SAIDI} = \frac{\text{(Total Cust.-minutes interrupted) - (Cust.-minutes for a major event)}}{\text{Average Customers served}}$$

CAIDI = SAIDI/SAIFI

Wellsboro performed a GIS Project from July-Dec2018 to verify assets within our CIS and Mapping system including poles, transformers and attachments. This led to more accurate outage data in the OMS system that Wellsboro can rely on during planned and unplanned outages and for reporting. The reliability indices were reviewed further and corrected after the 2018 Annual Reliability report was filed on May 1st, 2019. The 2016, 2017 and 2018 indices were updated due to Planned and Customer Caused outages being included in the indices. Planned and Customer Caused was removed along with any approved Exceptions for the for 2019 and the 2018 Annual Reliability Report . The confusion of what should have be included in the indices was impacted by a Management vacancy during late 2017 to late 2018 and has been corrected. Section (b)(3)'s indices have been updated using the updated data reported in (b)(4).

(b)(4) A breakdown and analysis of outage causes during the year being reported on, including the number and percentage of service outages and customer interruption minutes categorized by outage cause such as equipment failure, animal contact, tree related, and so forth. Proposed solutions to identified service problems shall be reported.

January 1, 2018 through December 31, 2018

Outage Cause	Number of Interruptions	% of Interruptions	Number of Customers Affected	Customer Interruption Minutes
Animal	77	21.2	1486	144,221
Vehicle	2	0.6	122	5,100
Decay	1	0.3	10	11,650
Elec Overload	1	0.3	5	164
Equipt Failure	39	10.7	1502	144,554
Fire	1	0.3	17	4,239
Lightning	5	1.4	7	255
No Cause Code	17	4.7	349	14,651
Public Contact	7	1.9	165	51,253
Tree, On, R.O.W.	80	22.0	1930	390,685
Tree, Off R.O.W.	48	13.2	1733	262,015
Unknown	80	22.0	1130	91,440
Wind	5	1.4	109	6,675
Total	**363**	**100**	**8565**	**1,126,900**

January 1, 2017 through December 31, 2017

Outage Cause	Number of Interruptions	% of Interruptions	Number of Customers Affected	Customer Interruption Minutes
Animal	67	36.0	372	16,861
Vehicle	1	0.5	51	377
Decay	1	0.5	17	1,049
Elec Overload	1	0.5	1	88
Equipt Failure	25	13.4	1601	53,558
Lightning	2	1.1	7	415
No Cause Code	1	0.5	1	15
Tree, On, R.O.W.	6	3.2	572	59,065
Tree, Off R.O.W.	61	32.8	3354	334,601
Unknown	17	9.1	494	109,649
Wind	4	2.2	205	32,943
Total	**186**	**100**	**6675**	**608,621**

January 1, 2016 through December 31, 2016

Outage Cause	Number of Interruptions	% of Interruptions	Number of Customers Affected	Customer Interruption Minutes
Animal	66	30.0	696	48,759
Vehicle	1	0.5	42	8,005
Elec Overload	7	3.2	1101	95,440
Equipt Failure	58	26.4	5550	353,526
Lightning	7	3.2	107	4,614
Public Contact	3	1.4	93	121,615
Tree, On, R.O.W.	4	1.8	211	22,341
Tree, Off R.O.W.	68	30.9	2520	258,026
Unknown	4	1.8	4	355
Wind	2	0.9	24	1,802
Total	**220**	**100**	**10348**	**914,482**