

# WELLSBORO ELECTRIC COMPANY

QUARTERLY RELIABILITY REPORT  
57.195 REPORTING REQUIREMENTS

M-2016-2522508

Fourth Quarter 2017

Oct-Dec 2017

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PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

SUBMITTED BY



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Amended copy for fourth quarter reliability report. On the Index worksheet the SAIDI/CAIDI/SAIFI numbers originally were just the fourth quarter not the rolling 12 month average. The 3 year data was included and the consumer minutes were corrected in the 12 month data worksheet.

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## 57.195 Reporting Requirements

## Section (e) Item (5)

A rolling 12-month breakdown and analysis of outage causes during the receding quarter including the number and percentage of service outages, the number of customers interrupted, 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.

Outage Cause	# Customers Affected	# of Outages	Customer Minutes	Percentage of Outages
Animals	373	68	13725	34.2%
Vehicles	51	1	8005	0.5%
Contractor	17	1	1049	0.5%
Decay	0	0	0	0.0%
Dig-in	0	0	0	0.0%
Electrical Overload	1	1	87	0.5%
Equipment Failure	1655	27	53624	13.6%
Fire	0	0	0	0.0%
Ice,Sleet,Frost	0	0	0	0.0%
Lightning	8	2	434	1.0%
Public Contact	0	0	0	0.0%
Power Supplier	0	0	0	0.0%
Phone/Cable Co	0	0	0	0.0%
Rain	0	0	0	0.0%
Trees	0	0	0	0.0%
Tree, On R.O.W.	680	8	27564	4.0%
Tree, Off R.O.W.	3246	59	102308	29.6%
Unknown Cause	515	26	86789	13.1%
Vandalism	0	0	0	0.0%
Wind	205	4	4074	2.0%
Planned	65	2	142	1.01%
	6816	199	297801	100.00%

A description of each major event that occurred during the preceding quarter 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 of Event	Time Restored	# Cust Affected	Cause
No major events in the fourth quarter of 2017				

Cause	17-Apr	17-May	17-Jun	17-Jul	17-Aug	17-Sep	17-Oct	17-Nov	17-Dec	17-Jan	17-Feb	17-Mar	
<b>NUMBER OF OUTAGES</b>													
Animal	1	5	10	5	5	7	8	19	1	2	4	1	68
Vehicle	0	0	0	0	0	0	0	0	0	0	1	0	1
Contractor		1	0	0									1
Decay	0		0	0	0	0	0			0		0	0
Dig-in													
Elec Overload	0	0	0	0	0	0	0	1			0	0	1
Equipt Failure	5	1	5	1	2	2	1	0	2	4	2	2	27
Fire	0	0				0	0				0		0
Ice							0				0	0	0
Lightning	0	1	0	0	1	0	0		0		0	0	2
Major Storm		0											
Customer Caused	0						0	0	0			1	1
Planned								1	1				2
Power Supply						0			0	0		8	8
Public Contact	0	0	0	0	0	0		0	0			0	0
Phone/Cable Co	0		0										0
Rain													
Tree	0	0	0	0	0	0	0	0	0	0	0	0	0
Tree, Off R.O.W.	3	7	5	3	6	1	4	0	0	13	4	13	59
Tree, On R.O.W.	0	2	1	2	0	0	1	2	0	0			8
Unknown	0	3	2	0	0	0	5	9	7	0	0	0	26
Vandalism													
Wind	0	1				0	1	0	0		0	2	4
Contractor													
	9	21	23	11	14	10	20	32	11	19	11	27	208

Cause	17-Apr	17-May	17-Jun	17-Jul	17-Aug	17-Sep	17-Oct	17-Nov	17-Dec	17-Jan	17-Feb	17-Mar	
<b>CUSTOMERS AFFECTED</b>													
Animal	1	94	51	42	5	16	12	79	1	67	4	1	373
Vehicle	0	0	0	0	0	0	0	0	0	0	51	0	51
Contractor	17	0	0										17
Decay	0	0	0	0	0	0	0			0		0	0
Dig-in		0	0										
Elec Overload	0	0	0	0	0	0	0	1			0	0	1
Equipt Failure	327	1	8	1	393	4	62	0	726	43	36	54	1655
Fire	0	0	0			0					0		0
Ice	0	0	0								0	0	0
Lightning	0	1	1	0	6	0	0		0		0	0	8
Major Storm	0	0	0										
Customer Caused	0	0	0				0					1	1
Planned	0	0	0					13	52				65
Power Supply	0	0	0			0			0	0		57	57
Public Contact	0	0	0	0	0	0		0	0			0	0
Phone/Cable Co.	0	0	0										0
Rain	0	0	0										
Tree	0	0	0	0	0	0	0	0	0	0	0	0	0
Tree, Off R.O.W.	30	591	91	316	206	33	80	0	0	803	575	521	3246
Tree, On, R.O.W.	0	14	1	108	0	0	506	51	0	0	0	0	680
Unknown	0	294	4	0	0	0	17	28	172	0	0	0	515
Vandalism			0				0						
Wind	0	136	0	0	0	0	33	0			0	36	205
			0										
	375	1131	156	467	610	53	710	172	951	913	666	670	6874

Cause	17-Apr	17-May	17-Jun	17-Jul	17-Aug	17-Sep	17-Oct	17-Nov	17-Dec	17-Jan	17-Feb	17-Mar	
<b>Customer Minutes</b>													
Animal	25.2	6595.2	1840.8	2913	170	691	327	633	47	28	198	28	13494.2
Vehicle	0	0	0	0	0	0	0	0	0	0	7	0	7
Contractor		1049.4	0										1049.4
Decay	0		0	0	0	0	0			0		0	0
Dig-in													
Elec Overload	0	0	0.00	0	0	0	0	67			0	0	87
Equipt Failure	15952.8	46.8	2088.2	172	20433	161	103	0	188	136	124	115	39517.8
Fire	0	0				0			0		0		0
Ice											0	0	0
Lightning	0	71.4	0	0	344	0			0		0	0	415.4
Major Storm													
Customer Caused	0						0					188	188
Planned								67	75				142
Power Supply						0			0	0		515	515
Public Contact	0	0.00	0.00	0.00	0.00	0.00		0.00				0.00	0.00
Phone/Cable Co.	0		0.00										0.00
Rain			0										0
Tree	0	0	0	0	0	0	0	0	0	0	0	0	0
Tree, Off R.O.W.	3007.2	38337.6	5110.8	17287	19475	1404	348	0	0	1047	289	2224	88529.6
Tree, On R.O.W.	0	11801.6	111.6	15244	0	0	87	840	0	0			27564.2
Unknown	0	85865	206.4	0	0	0	182	275	444	0	0	0	86742.4
Vandalism		0											
Wind	0	1542	0	0		0	778	0			0	195	2515
Contractor							0						
	18985.2	144909	9355.8	35818	40422	2256	1778	1602	754	1211	818	3263	260767

Rolling 12-Month reliability index values (SAIFI,CAIDI,SAIDI) for the EDC'S service territory for the receding quarter. The report shall include the data used in calculating the indices, namely the average number of customers served, the number of sustained customers interruptions, the number of customers affected, and the customer minutes of interruption.

**WELLSBORO ELECTRIC COMPANY****ROLLING TWELVE MONTH INTERRUPTION INDEXES****Fourth Quarter 2017**

SAIDI
97.1

SAIFI
1.08

CAIDI
90.3

**ROLLING TWELVE MONTH STANDARD AS ESTABLISHED BY THE PUC**

SAIDI
278

SAIFI
1.66

CAIDI
167

**ROLLING THREE YEAR AVERAGE INTERRUPTION INDEXES**

SAIDI
124.667

SAIFI
1.27

CAIDI
90.15

**ROLLING THREE YEAR AVERAGE STANDARD AS ESTABLISHED BY THE PUC**

SAIDI
185

SAIFI
1.12

CAIDI
136

**AVERAGE NUMBER OF CUSTOMERS SERVED**

6321
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ROLLING THREE YEAR WORKSHEET

4th quarter 2017

QTR	SAIDI	SAIFI	CAIDI
4-16	363	2.81	130
3-16	113	1.16	97
2-16	96	1.05	92
1-16	86	1.12	77
4-15	81	1.06	76
3-15	82	1.14	72
2-15	80	0.97	82
1-15	54	0.72	75
4-17	20	0.286	69.8
3-17	143	1.35	105
2-17	175	1.78	98
1-17	203	1.88	108
	1496	15.326	1081.8
	124.6667	1.277167	90.15

The following programs and procedures are in place at Wellsboro Electric in an attempt to control outages, Animal related outages accounted for 34.2% of the total outages for this reporting period Wellsboro has had a animal cover-up program in place for the last several years, our policy is to install an insulated animal guard on each pole mount distribution transformer that is installed, we review outage data in an attempt to find customers or a particular area that is experiencing multiple outages from animal contacts and placing animal guards at these location, also at the time we install animal guards, we also install an insulated lead wire from the transformer to the cutout and or line. All new transformers on our 12 kV system is an internally fused transformer thus preventing the need to install a fused cutout and one less piece of equipment to cover up and maintain. Equipment failures accounted for 13.6% of our outages for this period.

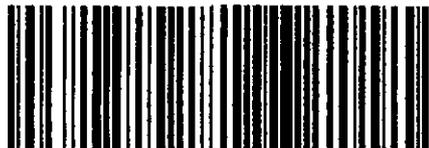
Mainly do to the failure of porcelian cutouts, Wellsboro no longer uses this style of cutout.

All new cutouts are the polymer type, Visual inspection of our circuits has helped with replacing porcelian cutouts before they fail.

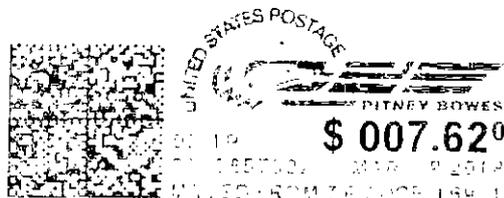
Tree contact accounted for 33.6% of the outages, broken down by the following

Off ROW 29.6% and On ROW 4%, Unknown outages accounted for 13.1% of the outages.

CERTIFIED MAIL



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