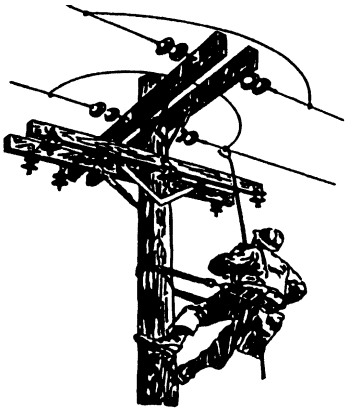

CITIZENS' ELECTRIC COMPANY

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April 25, 2017

Ms. Rosemary Chiavetta
Pennsylvania Public Utility Commission
PO Box 3265
Harrisburg, PA 17105-3265

RE: Docket M-2016-2522508

Dear Secretary Chiavetta,

Enclosed please find the 2016 Annual Reliability Report for Citizens' Electric Company.

Please contact me at 570-522-6143 or kelchnerj@citizenselectric.com if I can answer any questions.

Sincerely,

John A. Kelchner, PE
Vice President of Engineering & Operations

cc: Pennsylvania Office of Consumer Advocate
Pennsylvania Office of Small Business Advocate
Dave Washko (via email)
Dan Searfoorce (via email)

Citizens' Electric Company
Annual Electric Service Reliability Report
2016

Prepared by John A. Kelchner, PE
Vice President of Engineering & Operations
570-522-6143
kelchnerj@citizenselectric.com
04/24/2017

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

Citizens' Electric Company experienced increases in reliability indices during 2016. One significant component of the increases came from off right-of-way trees. Beginning in 2014, the Company committed additional resources to identify, prioritize and remove significant threats to reliability from target trees. This effort will be continued throughout 2017. Please see page five for further outage discussion.

To further enhance its reliability program, the Company has transitioned to a tablet-based tracking tool for all inspection and maintenance activities. This tool will provide near real-time status reports and allows crews to document locations visited and log their findings. Management reports provide completion statistics on a daily basis. Activities will be archived to ensure required data retention

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.

Citizens' Electric was again recognized in 2016 as a "Tree Line USA" utility. This award from the National Arbor Day Foundation recognized the Company for the fourteenth consecutive year for its use of nationally approved trimming techniques and procedures in its vegetation management program.

The Company does not own or maintain any transmission facilities.

Current Maintenance Programs

Program	Description	Cycle
Infrared Inspection	All substation equipment biennially, and 1/3 of all overhead lines each year.	3 years
Vegetation Management	Each year, all primary lines are visually inspected. This comprehensive field inspection allows us to identify areas that require trimming. We maintain a 4-year trimming cycle, but all areas are inspected annually to help identify unexpected "hot spots." All areas needing attention are trimmed by the end of the 3rd quarter.	Annual
Visual Line Inspection	All distribution lines and pole hardware are visually inspected during preparation of tree trimming contract. Line sections receiving infrared inspection are also inspected visually during that process.	Annual
Padmount Equipment Inspection	Padmounted equipment is visually inspected to identify and correct any developing problems or safety concerns.	4 Years
3Ø Padmount Transformer Oil Test	Insulating oil is tested from every 3Ø padmounted transformer on our system, and all substation power transformers.	Annual
Line Equipment Inspection	All airswitches, circuit tie switches, capacitors, regulators, and reclosers are visually inspected. Where applicable, proper operation of control equipment is verified and counter readings are recorded.	Annual
Pole Inspection and Treatment	Poles are inspected and treated at the ground line. External and/or internal decay inhibitors are applied where appropriate.	10 Years
Danger & 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 twice a year.	Monthly
Recloser Maintenance	Change oil, check and adjust mechanism, check contacts, test operation.	5 Years

§ 57.195(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 to avoid or minimize the impact of similar events in the future.

Date	Time	Duration of Event (Minutes)	# of Customers Affected	Cause
3/30/2016	8:39 AM	144	1,409	A suspension insulator failed, causing the feeder to lockout at the substation. Visual and infrared inspections are performed at this location annually. No signs of imminent failure were present before the event. No inclement weather was occurring at the time of the outage.
11/8/2016	11:36 AM	42	1,008	A homeowner was cutting a large tree on his property when he lost control and dropped the tree onto a three-phase primary feeder circuit. This resulted in a circuit lockout affecting 1,008 customers. A crew responded, removed the tree from the line and verified the condition of all affected facilities. Service was restored to all customers in 41 minutes.
11/19/2016	3:07 PM	431	1,833	Strong winds brought down trees/large limbs at three locations, causing downed wires, resulting in circuit lockouts. Peak winds of 42 mph were recorded at company headquarters.

§ 57.195(b)(3) A table showing the actual values of each of the reliability indices (SAIFI, CAIDI, SAIDI, and if available, MAIFI) for the EDC'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.

Year	SAIFI	SAIDI	CAIDI	Avg # of Customers Served	# of Interruptions	# of Customers Interrupted	Customer Interruption Minutes
2016	0.26	28	108	6,963	52	1,787	192,235
2015	0.19	18	91	6,909	41	1,333	121,876
2014	0.19	17	88	6,881	35	1,306	115,083

§ 57.195(b)(4) A breakdown and analysis of outage causes during the year being reported on, 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	Number of Interruptions	% of Interruptions	Number of Customers Affected	Customer Interruption Minutes
On R/W Trees	0	0	0	0
Animals	7	13	62	2,854
Equipment	16	31	1,166	142,904
Off R/W Trees	16	31	387	31,489
Weather	5	10	133	10,647
Vehicle	0	0	0	0
Other	8	15	39	4,341
Total	52		1,787	192,235

As discussed on page one, the Company experienced a significant increase in outages caused by off right-of-way trees. It sustained four outages from this cause in 2015, and sixteen in 2016. Many of these outages occurred during the unusually wet and windy period in late Summer and Fall, with otherwise healthy-looking trees simply uprooting. The Company also continued to see some outages caused by Ash trees impacted by borers. The Company's vegetation coordinator, line crews, and trimming contractors have all been advised to continue identifying and resolving target trees where possible.

A significant outage occurred on December 5, 2016 which affected 524 customers (short of the 696 required for consideration as a major event) for up to 192 minutes. This outage resulted when a lightning arrestor failed, causing significant damage to pole-top equipment and hardware. The crew quickly mobilized to sectionalize the problem and make repairs. The arrestor had been inspected visually and with infrared equipment within the last year and showed no signs of imminent failure.

The Company continues to build its system to standards that typically exceed the NESC and to monitor industry best-practices regarding storm-hardening. The Company is also continuing its efforts to address off right-of-way trees and the outages they cause. It is aggressively working with property owners to secure permission for removal of target trees as they are identified, and is dedicating significant effort to address the continued Ash tree issues being observed again this year.

§ 57.195(b)(6) A comparison of established transmission and distribution inspection and maintenance goals/objectives versus actual results achieved during the year being reported on. Explanations of any variances shall be included.

Program	Goal	Completed	Comment
Infrared Inspection	Substation and 1/3 of all overhead lines	100%	All planned areas were inspected.
Vegetation Management	Entire System (9 circuits), as needed	100%	9 circuits inspected, trimmed as needed.
Visual Line Inspection	Entire System (9 circuits)	100%	9 circuits inspected.
Padmount Equipment Inspection	167 Locations	100%	167 locations inspected
3Ø Padmount Transformer Oil Test	42 Transformers	98%	41 transformers tested. Quantity revised to reflect actual quantity in service at time of inspection.
Line Equipment Inspection	144 Locations	100%	144 locations inspected.
Pole Inspection and Treatment	529 Poles	100%	529 poles inspected.
Danger and Reject Pole Replacement	"Danger" poles identified: 1 "Reject" poles identified: 0	100%	One danger pole replaced.
Substation Equipment Inspection	12 Monthly Inspections	100%	12 inspections completed.
Recloser Maintenance	10 Reclosers	100%	Completed maintenance on 10 units.

§ 57.195(b)(7) A comparison of budgeted versus actual transmission and distribution operation and maintenance expenses for the year being reported on in total and detailed by the EDC's own functional account code or FERC account code as available. Explanations of any variances 10% or greater shall be included.

Program	Budget $	Actual $	Comment
Infrared Inspection		5,002	Not budgeted individually. 100% completed.
Vegetation Management	185,500	154,182	To help mitigate continued contractor price pressure, the Company changed its schedule to solicit bids earlier in the year for 2016. This yielded a return to more typical contractor costs for the current year, and an underrun of 17% versus budget. This amount still represents a significant increase over years prior to 2014.
Visual Line Inspection		494	Not budgeted individually. 100% completed.
Padmount Equipment Inspection		3,291	Not budgeted individually. 100% completed.
3Ø Padmount Transformer Oil Test		3,492	Not budgeted individually. 100% Completed.
Line Equipment Inspection		36,021	Not budgeted individually. 100% completed.
Pole Inspection and Treatment	23,500	19,517	100% completed. Underran budgeted amount by 17% due to favorable contractor bid results.
Substation Equipment Inspection		1,816	Not budgeted individually. 100% completed.
Recloser Maintenance		13,555	Not budgeted individually. 100% completed.
Total		237,370	

57.195(b)(8) A comparison of budgeted versus actual transmission and distribution capital expenditures for the year being reported on in total and detailed by the EDC's own functional account code or FERC account code as available. Explanations of any variances 10% or greater shall be included.

Project	Budget Amount $	Actual Expenditures $	Variance $	Comment
General Construction	824,110	807,249	-16,861	Variance = 2%
Transformers	111,615	123,767	12,152	Due to the nature of new connections in 2016, more large transformers were required, causing an increase in cost.
Meters	55,692	69,701	14,009	The Company accelerated its mechanical meter replacement program, necessitating a larger purchase of new meters.
River Road – Moore Tieline	130,209	206,231	76,022	Due to wet conditions, crews were not able to perform as much work from off-road locations. As a result, the Company experienced higher traffic control costs than budgeted. Crews also identified additional work needed once they got started.
Install Additional Capacitors	47,175	26,924	-20,251	Upon review of contingency conditions, the Company decided only two capacitors were needed. Four were originally budgeted.
Underground Cable Replacement – Fairfield	85,913	97,809	11,896	The bids for contract work on this project came in slightly higher than budgeted.
Total	1,254,714	1,331,681	76,967	

§ 57.195(b)(9) Quantified transmission and distribution inspection and maintenance goals/objectives for the current calendar year detailed by system area (that is, transmission, substation and distribution).

Program	Goal
Infrared Inspection	Substation and 3 circuits
Vegetation Management	Entire System (9 circuits), as needed
Visual Line Inspection	Entire System (9 circuits)
Padmount Equipment Inspection	223 Locations
3Ø Padmount Transformer Oil Test	41 Transformers
Line Equipment Inspection	156 Locations
Pole Inspection and Treatment	705 Poles
Danger and Reject Poles	To be determined from pole inspections
Substation Equipment Inspection	12 Monthly Inspections
Recloser Maintenance	8 Reclosers

All goals are in the substation and distribution areas. The Company does not own or operate any transmission facilities.

§ 57.195(b)(10) Budgeted transmission and distribution operation and maintenance expenses for the current year in total and detailed by the EDC's own functional account code or FERC account code as available.
(These items are not budgeted by FERC account.)

Program	Budget $	Comment
Infrared Inspection	N/A	Not budgeted individually
Vegetation Management	162,000	
Visual Line Inspection	N/A	Not budgeted individually
Padmount Transformer Inspection	N/A	Not budgeted individually
3Ø Padmount Transformer Oil Test	2,500 (estimated)	Not budgeted individually
Line Equipment Inspection	N/A	Not budgeted individually
Pole Inspection and Treatment	26,790	
Danger and Reject Poles	N/A	Not budgeted individually
Substation Equipment Inspection	N/A	Not budgeted individually
Recloser Maintenance	N/A	Not budgeted individually
Total		

§ 57.195(b)(11) Budgeted transmission and distribution capital expenditures for the current year in total and detailed by the EDC's own functional account code or FERC account code as available.

(These items are not budgeted by FERC account.)

Project	Budget Amount $
General Construction	761,192
Transformers	119,203
Meters	83,595
Rebuild Moore – Smoketown Rd.	181,260
UG Replacement – Wyndham Hills	144,106
Total	$1,289,356

§ 57.195(b)(12) Significant changes, if any, to the transmission and distribution inspection and maintenance programs previously submitted to the Commission.

No significant changes.