CITIZENS' Electric COMPANY
Over a Century of Service

April 30, 2025

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

RE: Docket No. M-2023-3039027 – Annual Reliability Report

Dear Secretary Chiavetta,

Enclosed please find the 2024 Annual Reliability Report for Citizens' Electric Company. Please contact me at 570-522-6143 or andersonp@citizenselectric.com if I can answer any questions.

Best Regards,

Patrick F. Anderson

Patrick F. Anderson
Senior Director of Engineering & Operations

cc: Dan Searfoorce (via email)
John Van Zant (via email)

Citizens' Electric Company
Annual Electric Service Reliability Report
2024

Prepared by Patrick F. Anderson
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4/30/2025

§ 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 all reliability indices across the board in 2024. Weather events including off right-of-way trees were the most significant contributor. There were 23 outages from outside the right-of-way trees. Of these 23 outages, four in the same area of the Moore line accounted for 73% of the total CMI for the year. Since then, the Company obtained permission from several property owners in this area to clear back further off the right-of-way on private property to prevent additional outages from dead ash trees falling into the three-phase line.

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 2024 as a "Tree Line USA" utility. This award from the National Arbor Day Foundation recognized the Company for the 22nd consecutive year for its use of nationally approved trimming techniques and procedures in its vegetation management program. The Company continues to partner with the Penn State Extension for its annual educational session. This event provides education not only for Company employees, but also the current vegetation management contractor, and local municipal road and public works crews. Topics covered include directional pruning techniques, 'Right Tree in the Right Place' planning, and updates on current and expected threats to Pennsylvania forests. By inviting local municipalities, we encourage cooperative relationships, as well as garner the mutual benefits of consistent vegetation management practices throughout the area.

Citizens' Electric Company does not own or maintain any transmission facilities.

Current Maintenance Program		
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 air switches, 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 *Recloser replacement program commenced in 2022. Recloser maintenance program is a voluntary initiative managed in parallel with the Company's approved I&M plan.*	N/A

§ 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 (Minutes)	Customers Affected	Cause
1/14/24	11:24	758	917	At approximately 11:24 hours on 1/14/24, a heavy snowfall caused several trees to sag down over the primary lines from outside the right-of-way. There were no broken trees or limbs that caused the outages, but many limbs had to be cleaned off or trimmed while the line was de-energized in order to gain appropriate clearances and safely restore customers. The largest outage was an interruption to 898 customers for two hours and ten minutes. The remaining four outages were small in size, caused by equipment failures and trees off right-of-way. Citizens' continues to focus on proactively replacing old porcelain cutouts to mitigate failures and identifying danger trees from outside the right-of-way.
7/22/24	16:44	183	1057	At approximately 16:44 on 7/22/24, birds made contact between the three-phase primary and insulating hardware on the pole causing tracking during a period of heavy rain. The breaker at the substation tripped to lockout interrupting 1,057 customers. Meanwhile, a downstream recloser on the same feeder locked out due to a failed anderlite bracket causing a phase to ground fault. An additional crew was called out to patrol the line and to perform switching for partial restoration of the backbone. The final customers were restored after repairs were made three hours from the initial breaker operation at 19:47

Date	Time	Duration (Minutes)	Customers Affected	Cause
8/9/24	16:36	150	1058	Hurricane Debby brought several inches of rain, causing multiple outages and a steady stream of non-outage calls. Crews were busy throughout the day and into the evening, assessing and repairing damage, and restoring outages. Restoration efforts were hampered by flooded roads and heavy rain. The greatest impact was a circuit interruption affecting 1,058 customers due to a tree off R/W.
8/25/24	13:05	107	771	At approximately 13:05 over the weekend on 8/25/24, a vehicle struck a three-phase pole near the substation causing the breaker to trip to lockout. It was a clear and calm day when 771 customers were interrupted. A crew was dispatched and made temporary repairs to the pole, bracing it in order to get customers back on sooner. The pole was then planned to be replaced at a later time after the situation was made safe. The breaker was restored at 14:53 for all 771 customers.

§ 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.

Prior 3 Years Reliability Indices							
Year	SAIFI	SAIDI	CAIDI	Avg # of Customers Served	# of Interruptions	# of Customers Interrupted	Customer Interruption Minutes
2024	0.45	64.3	143.7	7,176	59	3,209	461,213
2023	0.32	29.0	89.8	7,139	42	2,309	207,294
2022	0.27	27.5	100.5	7,103	62	1,947	195,608
2021	0.27	25.6	94.1	7,075	61	1,926	181,274

§ 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 Analysis by Cause				
Outage Cause	**Number of Interruptions**	**% of Interruptions**	**Number of Customers Affected**	**Customer Interruption Minutes**
Off R/W Trees	23	39%	2,521	401,097
On R/W Trees	0	0%	0	0
Animal	13	22%	220	11,550
Weather	1	2%	6	367
Equipment	13	22%	92	10,306
Vehicle	5	8%	125	17,685
Other	4	7%	245	20,208
Total	59		**3,209**	**461,213**

Trees were again the most impactful cause of outages in 2024, accounting for 39% of total outages. All tree-related outages were attributed to off right-of-way trees and accounted for 85% of the total CMI. The number of vehicle accidents increased this year, with the most impactful event being an excluded outage due to the location on the feeder just around the corner of the substation. The circuit was out impacting more than 10% of customers on the system, but could have been included in the year's metrics if another pole on a different feeder a few spans away was hit instead.

The company continues to emphasize hazard tree identification and removal with employees, tree contractors and customers. The Company continues to build its system to standards that typically exceed the NESC and to monitor industry best-practices regarding storm-hardening. New equipment, techniques and trends will continue to be evaluated for their benefit to reliability.

§ 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%	Substation, all three-phase and 1/3 of single-phase line 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	184	100%	184 locations inspected. *
3Ø Padmount Transformer Oil Test	50	100%	50 transformers tested. *
Line Equipment Inspection	162	100%	162 locations inspected. * • 22 Capacitors • 47 Reclosers • 12 Regulators • 81 Switches
Pole Inspection and Treatment	603	100%	603 Poles Inspected. *
Danger and Reject Pole Replacement	"Danger" poles identified: 3 "Reject" poles identified: 20	100%	3 "danger" poles replaced. 18 "reject" poles replaced.
Substation Equipment Inspection	12 Monthly Inspections	100%	12 inspections completed.
Recloser Maintenance		0%	Program discontinued. *Recloser replacement program commenced in 2022. Recloser maintenance program is a voluntary initiative managed in parallel with the Company's approved I&M plan.*

***** *Quantity revised to reflect equipment in service at time of inspection.*

§ 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		19,055	Not budgeted individually. 100% completed.
Vegetation Management	187,815	187,616	100% of planned work completed.
Visual Line Inspection			Not budgeted individually, included in Vegetation Management accounting. 100% completed.
Padmount Equipment Inspection		4,778	Not budgeted individually. 100% completed.
3Ø Padmount Transformer Oil Test		7,018	Not budgeted individually. 100% Completed.
Line Equipment Inspection		31,902	Not budgeted individually. 100% completed.
Pole Inspection and Treatment	39,000	30,274	100% completed.
Substation Equipment Inspection		1,973	Not budgeted individually. 100% completed.
Total		**282,616**	

§ 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	1,190,022	1,053,012	137,010	This line item is heavily influenced by customer driven work. When customer work does not materialize as expected, manhours are reallocated to mix of capital and O&M work as necessary.
Transformers	125,046	131,618	(6,572)	
Meters	89,334	205,827	(116,493)	Remaining proactive changeouts ordered in 2024, carried over from previous year and to be completed in the 1st half of 2025.
Wyndham Hills Relocation	115,213	146,306	(31,093)	Inflated material costs and added scope involving telecom company poles.
Creekside Ln Relocation	26,029	51,637	(25,608)	Inflated contractor costs beyond expected costs and scope changes in order to set up final relocation for tap in 2025 at lower costs.
Three Phase Recloser Pilot	38,056	66,695	(28,639)	Material cost increase from original quote and additional time and labor to replace defective unit from the manufacturer at initial installation.
Single Phase Recloser Replacements	72,919	74,265	(1,346)	
Total	**1,656,619**	**1,729,360**	**72,741**	

§ 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	240 Locations
3Ø Padmount Transformer Oil Test	50 Transformers
Line Equipment Inspection	162 Locations
Pole Inspection and Treatment	682 Poles
Danger and Reject Poles	To be determined from pole inspections
Substation Equipment Inspection	12 Monthly Inspections
Recloser Maintenance	N/A (program discontinued)

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	200,815	
Visual Line Inspection	N/A	Not budgeted individually
Aerial Line Inspection	37,000	New in 2025, beginning five year inspection cycle
Padmount Transformer Inspection	N/A	Not budgeted individually
3Ø Padmount Transformer Oil Test	N/A	Not budgeted individually
Line Equipment Inspection	N/A	Not budgeted individually
Pole Inspection and Treatment	39,000	
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	**$276,815***	*Only includes Vegetation Management, Aerial Line and Pole Inspection Programs

§ 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	1,479,053
Transformers	183,783
Meters	56,132
Strickler Rd Relocation	14,907
Melmar Dr Relocation	65,418
Three Phase Substation Recloser	37,907
Single Phase Recloser Replacements	28,800
Total	**1,866,000**

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

No significant changes.