

# CITIZENS' ELECTRIC COMPANY

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April 29, 2010

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

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Dear Ms. Chiavetta,

Enclosed please find an original and six copies of the 2009 Annual Reliability Report for Citizens' Electric Company.

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

Sincerely,

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



APR 29 2010

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

cc: Pennsylvania Office of Consumer Advocate Pennsylvania Office of Small Business Advocate Darren Gill (via email) Citizens' Electric Company Annual Electric Service Reliability Report 2009 Prepared by John A. Kelchner, PE Vice President of Engineering & Operations 570-522-6143 <u>kelchnerj@citizenselectric.com</u> 04/29/2010

### § 57.195(b)(1) <u>An overall current assessment of the state of the system</u> 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's 2009 reliability statistics showed a slight improvement over 2008 numbers. With the exception of a few strong summer thunderstorms, and a wind event in early October, the weather was favorable throughout the year.

During 2009, Citizens' completed validation of data generated by its new Outage Management System (OMS) by conducting parallel analysis of the old and new systems for the entire year. Statistics generated from both systems were found to be consistent and accurate. Moving forward, Citizens' will deactivate its old system in 2010.

Citizens' also integrated its OMS with its Automatic Meter Reading system during 2009. This integration allows the system to automatically verify customer outages by attempting to communicate with the customer's meter immediately upon receipt of an outage call. If an outage is verified, the system will begin testing meters upline from the customer to determine the extent of the outage. As a result, dispatchers will quickly know how many customers are affected and the likely location of affected fault sectionalizing equipment. This information helps speed outage analysis and restoration time. Once an outage is restored, the system again tests affected meters to ensure that all customers are back in service.

Citizens' Electric was again recognized in 2009 as a "Tree Line USA" utility. This award from the National Arbor Day Foundation recognizes Citizens' for using nationally approved trimming techniques and procedures in its vegetation management program.

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



### APR 29 2010

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU •

Program	Description	Cycle
Infrared Inspection	All substation equipment biennially, and 1/3 of all	3 years
	overhead lines each year.	
Vegetation Management	Each year, all primary lines are visually inspected.	Annual
	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	
	3 <sup>rd</sup> quarter.	
Visual Line Inspection	All distribution lines and pole hardware are visually	Annual
	inspected during preparation of tree trimming	
	contract. Line sections receiving infrared inspection	-
	are also inspected visually during that process.	
Padmount Equipment	Padmounted equipment is visually inspected to	4 Years
Inspection	identify and correct any developing problems or safety	
	concerns.	
30 Padmount Transformer	Insulating oil is tested from every 3Ø padmounted	Annual
Oil Test	transformer on our system, and all substation power	
	transformers.	
Line Equipment Inspection	All airswitches, circuit tie switches, capacitors,	Annual
	regulators, and reclosers are visually inspected. Where	
	applicable, proper operation of control equipment is	
	verified and counter readings are recorded.	
Pole Inspection and	Poles are inspected and treated at the ground line.	10 Years
Treatment	External and/or internal decay inhibitors are applied	
	where appropriate.	
Danger & Reject Pole	Replace condemned poles identified during pole	As needed, annually
Replacements	inspection.	
Substation Equipment	Entire station is visually inspected. Equipment	Monthly
Inspection	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.	
Recloser Maintenance	Change oil, check and adjust mechanism, check	Manufacturer's
	contacts, test operation.	Recommendations

§ 57.195(b)(2) <u>A description of each major event that occurred during the year</u> being reported on, including the time and duration of the event, the number of <u>customers affected</u>, 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
1/25/2009	8:58 AM	129	1,314	A vertical post insulator failed allowing the overhead primary line to contact the neutral conductor. This interrupted the entire circuit at the substation. The failed insulator had been visually inspected within the past year and gave no indication of imminent failure. Service was restored to all customers in 129 minutes.
8/9/2009	4:21 PM	1,424	2,323	A severe thunderstorm moved across the Citizens' Electric service territory on Sunday evening, 8/9/09. Wind gusts of 53 mph were recorded at the Union County Emergency Services Center. Numerous off right-of-way trees were blown onto overhead lines. Two distribution circuits were interrupted and several overhead services were damaged.

§ 57.195(b)(3) <u>A table showing the actual values of each of the reliability indices</u> (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
2009	0.20	15	75	6,814	51	1,358	102,265
2008	0.26	17	64	6,791	62	1,776	113,239
2007	0.25	16	62	6,735	68	1,700	105,981
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§ 57.195(b)(4) <u>A breakdown and analysis of outage causes during the year being</u> reported on, including the number and percentage of service outages, the number of <u>customers interrupted</u>, and customer interruption minutes categorized by outage <u>cause such as equipment failure</u>, 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	19	37	171	8,754
Equipment	12	24	324	30,380
Off R/W Trees	7	14	554	40,463
Weather	7	14	264	19,939
Vehicle	1	2	3	315
Other	5	10	42	2,414
Total	51		1,358	102,265

Off right-of-way trees contributed the most interruption minutes during 2009, largely due to a few strong wind events. The Company's vegetation management efforts continue to include a focus on identifying high risk trees outside the right-of-way and working with property owners to obtain permission for removals where prudent.

Work also continued during 2009 to identify locations prone to animal contact and install protective equipment or redesign the location to minimize outage risk. While still the largest single cause, outages due to animals decreased from 23 in 2008 to 19 in 2009.

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

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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	154 Locations	91%	140 locations inspected. Quantity adjusted to reflect actual number of units due for inspection in 2009
30 Padmount Transformer Oil Test	33 Transformers	100%	33 transformers tested.
Line Equipment Inspection	174 locations	83%	144 locations inspected. Quantity adjusted to include total number of units in service as of date inspection performed.
Pole Inspection and Treatment	600 Poles	105%	Quantity revised to 627 to allow efficient completion of all inspections within a map section.
Danger and Reject Pole Replacement	9 Poles	89%	8 "reject" poles were replaced during 2009. One pole was carried over into 2010 and has been completed. No "danger" poles were identified.
Substation Equipment Inspection	12 Monthly Inspections	100%	12 inspections completed.
Recloser Maintenance	8 Reclosers	100%	Completed maintenance on all units due.

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

Program	Budget \$	Actual \$	Comment
Infrared Inspection		5,225	Not budgeted individually. 100% completed.
Vegetation Management	72,700	67,518	100% of system completed.
Visual Line Inspection		1,754	Not budgeted individually. 100% completed.
Padmount Equipment		4,923	Not budgeted individually. 100% completed.
Inspection			
30 Padmount		3,297	Not budgeted individually. 100% Completed.
Transformer Oil Test			
Line Equipment		16,163	Not budgeted individually. 100% completed.
Inspection			
Pole Inspection and	24,000	26,077	Extra poles were tested to allow for efficient completion of a
Treatment			map section. The total cost was 109% of budgeted amount.
Substation Equipment		3,033	Not budgeted individually. 100% completed.
Inspection			
Recloser Maintenance		16,208	Not budgeted individually.
Total		\$144,198	

§ 57.195(b)(8) <u>A comparison of budgeted versus actual transmission and</u> 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	Actual	Variance	Comment
-	Amount \$	Expenditures \$	\$	
Rt. 192 Circuit Rebuild	\$192,121	\$108,448	-\$83,673	A section of this project was
				delayed to allow crews to focus on
				the expanded scope of the Rt. 192
				Regulator job, The remaining
				work on this project was
				completed in early 2010.
Rt. 192 Regulators	\$56,217	\$86,771	\$30,554	This job was expanded to allow
				for the efficient replacement of
				conductor in the area of the
				regulator installations.
Form 6 Substation Recloser	\$8,443	\$8,032	-\$411	
Control				
Danger and Reject Pole		\$23,435		Not budgeted individually.
Replacement				
Unplanned Capital		\$61,256		Not budgeted individually.
Improvements				Primarily consists of employee-
				reported problems.
Total	\$256,781	\$287,942		

§ 57.195(b)(9) <u>Quantified transmission and distribution inspection and</u> 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	198 Locations
Inspection	
3Ø Padmount	33 Transformers
Transformer Oil Test	
Line Equipment	144 Locations
Inspection	
Pole Inspection and	730 Poles
Treatment	
Danger and Reject Poles	To be determined from pole
	inspections
Substation Equipment	12 Monthly Inspections
Inspection	
Recloser Maintenance	To be determined from counter readings.

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

# § 57.195(b)(10) <u>Budgeted transmission and distribution operation and</u> <u>maintenance expenses for the current year in total and detailed by the EDC's own</u> <u>functional account code or FERC account code as available.</u>

(These items are not budgeted by FERC account.)

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Program	Budget \$	Comment
Infrared Inspection	N/A	Not budgeted individually
Vegetation Management	\$78,250	
Visual Line Inspection	N/A	Not budgeted individually
Padmount Transformer Inspection	N/A	Not budgeted individually
30 Padmount Transformer Oil Test	\$3,600 (estimated)	Not budgeted individually
Line Equipment Inspection	N/A	Not budgeted individually
Pole Inspection and Treatment	\$30,250	
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	\$112,100	

# § 57.195(b)(11) <u>Budgeted transmission and distribution capital expenditures</u> 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
Rt. 192 Reconductor – Phase 2	\$190,302
UG Replacement in Spruce Hills	\$66,484
Bucknell UG Relocation	\$176,968
Form 6 Substation Recloser Controls	\$28,211
Total	\$461,965

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

No significant changes.

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