



## CITIZENS' ELECTRIC COMPANY

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April 24, 2013

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APR 24 2013

PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

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

L-00030161

Dear Ms. Chiavetta,

Enclosed please find an original and six copies of the 2012 Annual Reliability Report for Citizens' Electric Company.

Please contact me at 570-522-6143 or [kelchnerj@citizenselectric.com](mailto:kelchnerj@citizenselectric.com) if I can answer any questions.

Sincerely,

A handwritten signature in black ink that reads "John A. Kelchner". The signature is fluid and cursive, with a long horizontal stroke at the end.

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

cc: Pennsylvania Office of Consumer Advocate  
Pennsylvania Office of Small Business Advocate  
Darren Gill (via email)

Citizens' Electric Company  
Annual Electric Service Reliability Report  
2012

Prepared by John A. Kelchner, PE  
Vice President of Engineering & Operations  
570-522-6143  
[kelchnerj@citizenselectric.com](mailto:kelchnerj@citizenselectric.com)  
04/23/2013

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**§ 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.**

With the exception of hurricane Sandy, 2012 was a more settled period in the Citizens' Electric territory compared to the previous year. The Company experienced significant decreases in SAIFI, and SAIDI and a slight increase in CAIDI. However, as seen in the chart below, weather still played a large role in a number of outages, causing approximately 38% of outages during the year.

During 2012, the Company deployed new and enhanced capabilities for its AMI system. A software upgrade added proactive outage detection capabilities to the system. In addition to daily and hourly meter readings retrieved from all meters, analysis is automatically performed each day to identify meters that have failed to communicate and therefore may have lost power. Company system operators are alerted to these issues so they can initiate investigation and begin resolving any outages before a single customer outage call is received.

The Company began utilizing social media outlets to convey timely information to customers during the year. Prior to and during Hurricane Sandy's impact, the Company posted advisories regarding preparedness planning and restoration progress. Although the Company has few "followers" on these sites, and the storm outages were quickly restored, the event served as a good pilot for the use of the technology. The Company intends to continue developing its outreach via these outlets.

To provide additional information and convenience to customers who wish to interact with the Company electronically, a new web and mobile portal called SmartHub was deployed. Through a web site and accompanying smartphone applications, customers can conduct a wide variety of business with the Company. This includes the ability to report outages and receive outage status updates at the customer's account location. Outage information is updated in real time directly from the Company's Outage Management System.

Citizens' Electric was again recognized in 2012 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.

**Current Maintenance Programs**

<b>Program</b>	<b>Description</b>	<b>Cycle</b>
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 3 <sup>rd</sup> 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.**

<b>Date</b>	<b>Time</b>	<b>Duration (Minutes)</b>	<b>Customers Affected</b>	<b>Cause</b>
2/16/2012	4:30 PM	47	697	An unoccupied vehicle rolled away from its parking location and struck a pole. The impact caused the pole to lean and caused the attached primary conductors to slap together, resulting in a substation circuit lockout.
5/4/2012	2:02 AM	578	986	A series of strong thunderstorms moved across the area during the early morning hours. The storms contained frequent lightning, heavy rain and periods of strong winds. Crews worked throughout the night to restore scattered outages as they occurred.
10/29/2012	1:28 PM	3027	799	The remnants of Hurricane Sandy passed through the Company's service area beginning on 10/29 and lasting into the afternoon of 10/30. High winds and heavy rain impacted the area for the duration of the storm causing scattered outages. Most outages were caused by off right-of-way trees falling onto overhead lines. Damage included broken overhead primary conductors, downed service conductors and broken poles.

**§ 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.**

<b>Year</b>	<b>SAIFI</b>	<b>SAIDI</b>	<b>CAIDI</b>	<b>Avg # of Customers Served</b>	<b># of Interruptions</b>	<b># of Customers Interrupted</b>	<b>Customer Interruption Minutes</b>
2012	0.09	11	129	6,831	32	596	77,030
2011	0.35	44	126	6,823	56	2,390	300,660
2010	0.19	18	98	6,813	54	1,262	124,028
<b>Standard</b>	<b>0.27</b>	<b>38</b>	<b>141</b>				

**§ 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	2	6	3	503
Animals	10	31	77	4,147
Equipment	1	3	1	87
Off R/W Trees	5	16	81	10,006
Weather	12	38	399	48,094
Vehicle	1	3	3	273
Other	1	3	32	13,920
<b>Total</b>	<b>32</b>		<b>596</b>	<b>77,030</b>

Weather was the largest cause of outages during the year from both a quantity and customer minutes perspective. These outages generally involved lightning or wind. 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 danger trees as they are identified.

**§ 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.**

<b>Program</b>	<b>Goal</b>	<b>Completed</b>	<b>Comment</b>
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	170 Locations	98%	166 locations inspected. Quantity adjusted to reflect actual quantity in service at time of inspection.
3Ø Padmount Transformer Oil Test	35 Transformers	100%	35 transformers tested.
Line Equipment Inspection	140 Locations	100%	140 locations inspected. Quantity revised to reflect actual quantity in service at time of inspection.
Pole Inspection and Treatment	512 Poles	98%	503 poles inspected. Quantity revised to reflect actual quantity in service at time of inspection.
Danger and Reject Pole Replacement	22 Reject Poles – No Danger Poles identified	86%	19 poles replaced. The remaining 3 poles have site access limitations but will be replaced within 12 months of inspection date.
Substation Equipment Inspection	12 Monthly Inspections	100%	12 inspections completed.
Recloser Maintenance	11 Reclosers	100%	Completed maintenance on 11 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		2,454	Not budgeted individually. 100% completed.
Vegetation Management	92,800	71,252	Received favorable bids for contract work and had fewer unplanned removals than anticipated, resulting in lower than estimated costs.
Visual Line Inspection		933	Not budgeted individually. 100% completed.
Padmount Equipment Inspection		3,255	Not budgeted individually. 100% completed.
3Ø Padmount Transformer Oil Test		1,990	Not budgeted individually. 100% Completed.
Line Equipment Inspection		10,057	Not budgeted individually. 100% completed.
Pole Inspection and Treatment	24,200	17,531	Budget estimate included approximately 2% more poles than were actually in service in the area being tested. Also, the number of poles requiring preservative/insecticide treatment by contractor was lower than anticipated.
Substation Equipment Inspection		3,258	Not budgeted individually. 100% completed.
Recloser Maintenance		6,788	Not budgeted individually. 100% completed.
Total			

**§ 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	730,633	595,968	-134,665	Due to a large reimbursable "make-ready" project for fiber optic attachments, less charges accrued to the GC projects during the year.
Transformers	112,854	107,532	-5,322	
Meters	47,360	34,457	-12,903	Fewer new connections occurred than anticipated resulting in lower expenditures for new metering equipment.
Rt. 45 Circuit Reconductor	85,147	92,983	7,836	
Replace UG in Spruce Hills	133,848	139,847	5,999	
Total	1,109,842	970,787	-139,055	

**§ 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).**

<b>Program</b>	<b>Goal</b>
Infrared Inspection	Substation and 3 circuits
Vegetation Management	Entire System (9 circuits), as needed
Visual Line Inspection	Entire System (9 circuits)
Padmount Equipment Inspection	204 Locations
3Ø Padmount Transformer Oil Test	35 Transformers
Line Equipment Inspection	140 Locations
Pole Inspection and Treatment	610 Poles
Danger and Reject Poles	To be determined from pole inspections
Substation Equipment Inspection	12 Monthly Inspections
Recloser Maintenance	10 Reclosers

All goals are in the distribution area. 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.)

<b>Program</b>	<b>Budget \$</b>	<b>Comment</b>
Infrared Inspection	N/A	Not budgeted individually
Vegetation Management	92,250	
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	22,400	
Danger and Reject Poles	N/A	Not budgeted individually
Substation Equipment Inspection	N/A	Not budgeted individually
Recloser Maintenance	N/A	Not budgeted individually
<b>Total</b>	<b>117,150</b>	

**§ 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.)

<b>Project</b>	<b>Budget Amount \$</b>
General Construction	715,539
Transformers	117,224
Meters	46,284
Rt. 45 Circuit Reconductor	152,080
UG Replacement on Montcalm Pl.	107,839
<b>Total</b>	<b>1,138,966</b>

**§ 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.

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