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April 30, 2014

Ms. Rosemary Chiavetta, Secretary Pennsylvania Public Utility Commission Commonwealth Keystone Building 400 North Street Harrisburg, PA 17120 RECEIVED

APR 3 0 2014

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

RE: Annual Electric System Reliability Report 3 Years Ending December 31, 2013

Dear Secretary Chiavetta:

Pursuant to the Commission's May 7, 2004 Final Rulemaking Order amending Electric Service Reliability Regulations (52 Pa. Code §§57.191 - 57.197) at Docket Nos. L-00030161 and M-00991220, UGI Utilities, Inc. - Electric Division ("UGI") hereby files its Annual System Reliability Report. This report contains SAIDI, SAIFI, and CAIDI results on a 3-year rolling basis for the period ending December 31, 2013 along with the raw data from the same period. Also included are the Inspection & Maintenance Goals, Operations & Maintenance Expense, and Capital Budget data.

The Office of Consumer Advocate, the Office of Small Business Advocate, the Bureau of Audits, and the Bureau of Conservation, Economics and Energy Planning have each been served with copies of this filing.

Questions related to the attached report should be directed to Ms. Abigail J. Hemmerich at (610) 796-3431 or email <a href="mailto:ahemmerich@ugi.com">ahemmerich@ugi.com</a>.

Sincerely,

Richard E. Gill

Richard E. Bill

Electric Division, Director – Engineering & Operations

Attachment



# UGI Utilities, Inc. – Electric Division Annual System Reliability Report 2013



APR 3 0 2014

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

April 30, 2014

§ 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.

For the twelve month period ending December 2013, UGI Utilities, Inc. – Electric Division's ("UGI" or "Company") SAIDI was 85 minutes. This is below both its 12 month benchmark of 140 minutes and standard of 256 minutes. UGI's SAIFI for the 12 month period was .77 occurrences, and, while higher than 2012, remained well below its 12 month benchmark of .83 and 12 month standard of 1.12. UGI's CAIDI was 110 minutes for the most recent 12 month period. This is also below its 12 month benchmark of 169 minutes and 12 month standard of 228 minutes.

UGI's objective is to provide its customers with safe, reliable electric service. Providing reliable service is not a program unto itself, but rather it is an inherent part of every element of the service delivery process. Each segment of service delivery, including system design, construction, and operation and maintenance, has service reliability as its main objective.

#### System Design

System design is fundamental to providing reliable electric service. To that end, UGI has incorporated service reliability into all aspects of its system design. Planning standards, construction standards, component selection, engineering, engineering training, engineering instructions and System Control and Data Acquisition ("SCADA") integration programs all have service reliability as a fundamental consideration.

#### Construction

No matter how well an electrical system is designed, the components making it up must be properly assembled in order for it to function as intended. UGI construction personnel possess the knowledge and skills necessary to effectively perform their duties. Post construction inspection programs assure that additions and improvements to the system are completed properly.

#### Operation

A continuously staffed operations center is in place to assure quick response to interruptions on the delivery system. The center is staffed by system operators who diagnose system problems and mount a rapid and appropriate response to trouble on the system.

There are service personnel on duty eight hours a day during weekdays and on Saturdays. An evening shift service person is scheduled during weekdays to provide quick response to service interruption calls. Call-out rosters are in place to mobilize staff when service personnel are not on duty or when additional resources are required.

UGI has a trouble reporting system in place, which allows it to gather information on system interruptions. The information accumulated in this system is analyzed to spot equipment failure trends and outage clusters. This information is also used to spot weaknesses in the system and to make decisions on allocation of resources for maintenance and/or system upgrades.

#### Maintenance

UGI has inspection and maintenance programs in place to monitor all equipment on its system and to address any problems identified through these programs. UGI implemented the 2012 – 2013 Bi-annual I&M Plan filed with the Commission and has found no significant system equipment issues during performance of the I&M Plan initiatives in 2013.

§ 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.

- (i) Under Title 52, Pa. Code §57,192, a major event is defined as either:
  - a) An interruption of electric service resulting from conditions beyond the control of the electric distribution company which affects at least 10% of the customers in the EDC's service territory during the course of the event for a duration of 5 minutes each or greater. The event begins when notification of the first interruption is received and ends when service to all customers affected by the event is restored.
  - An unscheduled interruption of electric service resulting from an action taken by an electric distribution company to maintain the adequacy and security of the electrical system, including emergency load control, emergency switching and energy conservation procedures, as described in §57.52 (relating to emergency load control and energy conservation by electric utilities), which affects at least one customer.
- (ii) A major event does not include scheduled outages in the normal course of business or an electric distribution company's actions to interrupt customers served under interruptible rate tariffs.

#### **Major Events**

No major events occurred during the 2013 reporting year. Major events occurring in 2011 and 2012 have been discussed in previous reports.

#### **Modified Procedures**

UGI completed implementation of an automated Outage Management System (OMS), going live on September 3, 2013. The OMS includes an interface to an Interactive Voice Response (IVR) system and a web-based outage map. These new features assure efficient processing of customer outage calls and provide the public with up-to-date outage counts by political sub-division.

§ 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.

The reliability results for UGI's service area over the last three years are as follows:

## 2011 - 2013 Reliability Statistics

	SAIDI	SAIFI	CAIDI
3-Year Avg. Standard	170	0.91	186
UGI 3-Yr. Rolling Avg.	87	0.72	120

	SAIDI	SAIFI	CAIDI
12-Month Standard	256	1.12	228
12-Month Benchmark	140	0.83	169
2013 UGI Results	85	0.77	110
2012 UGI Results	54	0.44	122
2011 UGI Results	121	0.95	128

The 3-year rolling averages for SAIFI, SAIDI and CAIDI are performing within the standards established by Commission Order at Docket No. M-00991220 on May 7, 2004. It is important to note that with the exception of the two major events, the moderate weather during 2012 favorably impacted UGI's reliability results.

Data necessary to calculate a Momentary Average Interruption Frequency Index (MAIFI) is not available for UGI's service area. As previously discussed with the Commission, UGI currently has no plan to install the equipment required to track momentary interruptions on the hundreds of operating distribution devices located throughout its territory. The basis for this decision is the high cost associated with the purchase and installation of these devices with little commensurate benefit.

Reported Indices **Raw Data** CAIDI SI TCI **TCB** TMCI SAIDI **SAIFI** January-2013 22 5,504 62,162 137,647 2 0.09 25 616,741 10 0.08 125 13 4.917 February-2013 62,120 7 0 0.00 105 19,158 March-2013 182 61,958 61,767 672,419 11 0.06 171 April-2013 48 3,935 May-2013 23 629 61,714 64,732 1 0.01 103 7 141 42 61,908 444,316 0.05 June-2013 3,146 53 13,058 61,815 869,458 14 0.21 67 July-2013 887,559 14 0.07 206 August-2013 26 4,299 61,828 6 149 41 2,609 387,971 0.04 September-2013 61,770 12 61,760 5 0.02 216 October-2013 1,487 320,989 12 37 0.10 114 November-2013 6.489 61,813 737,874 2 December-2013 16 1.644 61.831 116.023 0.03 71 85 0.77 340 61,871 5,274,887 110 2013 Total 47,899 January-2012 21 2,028 62.165 217,850 4 0.03 107 February-2012 13 62,250 69,350 1 0.01 141 491 17 157,891 3 0.02 114 March-2012 1.390 62,453 1 212 April-2012 21 391 62,137 82,741 0.01 6 May-2012 33 4.832 62,100 353,481 0.08 73 5 317.213 106 June-2012 35 2.988 62.027 0.05 July-2012 71 2,866 61,994 539,896 9 0.05 188 36 2 89 August-2012 1,341 62,044 119,814 0.02 September-2012 31 1,009 62,033 199,231 3 0.02 197 October-2012 10 32 4,368 62,013 649,659 0.07 149 1 November-2012 26 823 0.01 105 62,068 86,775 9 December-2012 18 4.890 62,118 540,319 0.08 110 2012 Total 354 62,117 3,334,220 54 0.44 122 27,417 19 32,556 1 140 January-2011 232 62,315 0.00 February-2011 27 1.852 62.344 259,124 4 0.03 140 March-2011 62,339 810,734 13 0.03 388 44 2,091 April-2011 54 9,026 62,219 1,398,878 22 0.15 155 May-2011 62,121 175,408 3 0.02 121 39 1,445 June-2011 25 0.24 102 49 14,923 62,095 1,527,657 70 July-2011 4,848 62,045 1,029,478 17 0.08 212 116 August-2011 34 6,011 62.033 698,334 11 0.10 September-2011 50 11,746 61,911 950,395 15 0.19 81 28 142,418 2 0.04 63 October-2011 2,278 61,870 November-2011 27 4,170 62,040 454,154 7 0.07 109 62,103 23,329 0 0.00 117 December-2011 16 199 2011 Total 457 121 0.95 128 58,821 62,120 7,502,465 120 3-YEAR AVERAGE 384 44,712 62.036 \* 5,370,524 87 0.72

SI: System Interruptions

TCI: Total Customers Interrupted

TCB: Total Customer Base

TMCI: Total Minutes Customer Interrupted

<sup>\*</sup> annual arithmetic average

§ 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 by Cause - January 2013 through December 2013

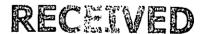
OUTAGE CAUSE	%OF TOTAL	NUMBER OF INTERRUPTIONS	L CÚSTOMERS INTERRUPTED	MINUTES INTERRUPTED
Animal	17.06%	58	846	66,597
Company Agent	0.29%	1	1,184	49,582
Construction Error	0.29%	1	17	850
Customer Problem	0.59%	2	2	353
Equipment Failure	32.65%	111	16,917	1,526,734
Lightning	5.00%	17	4,742	471,940
Motor Vehicle	5.59%	19	5,671	964,074
Other	0.88%	3	268	22,419
Public	4.71%	16	1,576	109,879
Structure Fire	1.18%	4	38	6,616
Trees	25.00%	85	12,813	1,411,644
Unknown	1.76%	6	1,329	231,332
Weather Related	0.59%	2	55	14,734
Weather/Snow	0.00%	0	0	0
Weather/Ice	0.00%	0	0	0
Weather/Wind	<u>4.41%</u>	<u>15</u>	<u>2,441</u>	<u>398,133</u>
TOTAL	100.00%	340	47,899	5,274,887

### Proposed Solutions to Identified Problems:

UGI has not identified any particular source of outage as problematic. As a small system, UGI is subject to a high level of variability in system damage due to weather.

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

There have not been any significant changes during 2013 to the transmission and distribution inspection and maintenance programs outlined in previous reports submitted to the Commission. Starting January 1, 2011 all of the Electric Division's distribution system equipment is being inspected and maintained consistent with its Bi-Annual Inspection and Maintenance Plan as filed with the Commission. The Plan's requirements do not significantly alter UGI's prior inspection and maintenance programs.



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PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

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