



UGI Utilities, Inc.
2525 N. 12th Street
Suite 360
PO Box 12677
Reading, PA 19612-2677

(800) 276-2722

VIA FEDERAL-EXPRESS

April 17, 2017

M-2016-2522508

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

**RE: Annual Electric System Reliability Report
3 Years Ending December 31, 2016
Docket Nos. L-00030161 and M-00991220**

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, 2016 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 Technical Utility Services have each been served with copies of this filing.

Questions related to the attached report should be directed to Mr. Vince DeGiusto, Jr. at (570) 830-1289 or email vdegiustojr@ugi.com.

Sincerely,

Eric Sorber
Electric Division, Director – Engineering & Operations

Attachment

RECEIVED

APR 17 2017

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

cc: **FEDERAL EXPRESS**

Tanya J. McCloskey
Office of Consumer Advocate
555 Walnut St.
5th Floor, Forum Place
Harrisburg, PA 17101-1921

John R. Evans
Small Business Advocate
Suite 1102, Commerce Bldg.
300 North Second St.
Harrisburg, PA 17101

Dennis P. Hosler, Director
Bureau of Audits
Pennsylvania Public Utility Commission
Commonwealth Keystone Bldg.
3rd Floor, F East
Harrisburg, PA 17101

David Washko, Deputy Director
Bureau of Technical Utility Services
Commonwealth Keystone Building
3rd Floor
400 North Street
Harrisburg, PA 17120

ELECTRONIC MAIL

David Washko, Deputy Director
Bureau of Technical Utility Services
dwashko@pa.gov

Date: April 17, 2017

RECEIVED

APR 17 2017

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU



Eric Sorber



RECEIVED
APR 17 2017
PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

**UGI Utilities, Inc. – Electric Division
Annual System Reliability Report
2016**

April 17, 2017

**UGI Utilities, Inc. – Electric Division
2016 Electric Service Reliability Annual Report**

§ 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 2016, UGI Utilities, Inc. – Electric Division’s (“UGI” or “Company”) SAIDI was 78 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 0.63, again, remaining well below its 12-month benchmark of .83 and 12-month standard of 1.12. UGI’s CAIDI was 125 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 Supervisory 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/line personnel on duty eight hours a day during weekdays and on Saturdays. An afternoon shift trouble-man is scheduled during weekdays to provide quick response to service interruption calls. Call-out rosters are in place to mobilize staff when service/line personnel are not on duty or when additional resources are required.

UGI Utilities, Inc. – Electric Division
2016 Electric Service Reliability Annual Report

UGI has an outage management 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 2015 – 2016 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 2016.

**UGI Utilities, Inc. – Electric Division
2016 Electric Service Reliability Annual Report**

§ 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.
 - b) 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

A major event occurring in 2014 has been discussed in previous reports. There were no major events during 2015 or 2016.

Modified Procedures

UGI initiated a program to install additional distribution sectionalizing devices. This includes automatic and manual type devices such as reclosers, air-breaks, switches and fuses. These facilities will increase reliability by reducing the number of customers exposed to an outage or by providing sectionalizing points which will isolate customers from damage and allow partial restoration of circuit sections. UGI field personnel are currently evaluating each feeder to identify appropriate device locations and generating work orders for the installation of the various devices. To date 75% of the distribution feeders have been reviewed resulting in the installation of 149 new devices. The balance of the feeders is expected to be completed in the next four years.

**UGI Utilities, Inc. – Electric Division
2016 Electric Service Reliability Annual Report**

§ 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:

2014 – 2016 Reliability Statistics

	SAIDI	SAIFI	CAIDI
3-Year Avg. Standard	170	0.91	186
UGI 3-Yr. Rolling Avg.	61	0.49	124

	SAIDI	SAIFI	CAIDI
12-Month Standard	256	1.12	228
12-Month Benchmark	140	0.83	169
2016 UGI Results	78	0.63	125
2015 UGI Results	41	0.40	103
2014 UGI Results	63	0.44	144

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.

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.

**UGI Utilities, Inc. – Electric Division
2016 Electric Service Reliability Annual Report**

	Raw Data				Reported Indices		
	SI	TCI	TCB	TMCI	SAIDI	SAIFI	CAIDI
January-2016	27	639	59,889	90,830	2	0.01	142
February-2016	40	9,830	59,889	1,258,214	21	0.16	128
March-2016	26	6,973	59,783	831,584	14	0.12	119
April-2016	46	1,672	59,519	449,736	8	0.03	269
May-2016	27	3,631	59,375	713,329	12	0.06	196
June-2016	38	1,060	60,944	127,727	2	0.02	120
July-2016	48	10,274	63,668	753,493	12	0.16	73
August-2016	49	1,140	63,653	150,282	2	0.02	132
September-2016	26	1,782	63,584	249,920	4	0.03	140
October-2016	33	578	63,644	120,393	2	0.01	208
November-2016	10	553	63,662	22,521	0	0.01	41
December-2016	12	777	63,666	78,310	1	0.01	101
<i>2016 Total</i>	<i>382</i>	<i>38,909</i>	<i>61,773</i>	<i>4,846,339</i>	<i>78</i>	<i>0.63</i>	<i>125</i>
January-2015	24	222	60,924	19,932	0	0.00	90
February-2015	17	1,830	60,835	331,606	5	0.03	181
March-2015	21	193	60,721	18,595	0	0.00	96
April-2015	34	546	60,417	77,730	1	0.01	142
May-2015	35	1,938	60,433	166,459	3	0.03	86
June-2015	48	9,447	60,294	988,740	16	0.16	105
July-2015	27	2,582	60,201	247,239	4	0.04	96
August-2015	33	823	60,069	99,527	2	0.01	121
September-2015	33	932	59,978	73,859	1	0.02	79
October-2015	20	1,377	59,903	69,335	1	0.02	50
November-2015	32	3,884	59,914	344,674	6	0.06	89
December-2015	22	348	59,879	40,669	1	0.01	117
<i>2015 Total</i>	<i>346</i>	<i>24,122</i>	<i>60,297</i>	<i>2,478,365</i>	<i>41</i>	<i>0.40</i>	<i>103</i>
January-2014	17	2,054	61,722	148,185	2	0.03	72
February-2014	13	145	61,738	15,794	0	0.00	109
March-2014	16	3,561	61,585	493,075	8	0.06	138
April-2014	34	3,052	61,507	240,757	4	0.05	79
May-2014	32	4,021	61,210	647,778	11	0.07	161
June-2014	21	2,100	61,060	734,190	12	0.03	350
July-2014	17	2,454	60,985	418,678	7	0.04	171
August-2014	27	1,824	60,972	229,463	4	0.03	126
September-2014	18	1,104	60,896	134,870	2	0.02	122
October-2014	25	2,472	60,939	342,952	6	0.04	139
November-2014	31	3,470	60,903	345,580	6	0.06	100
December-2014	21	628	60,886	111,439	2	0.01	177
<i>2014 Total</i>	<i>272</i>	<i>26,885</i>	<i>61,200</i>	<i>3,862,761</i>	<i>63</i>	<i>0.44</i>	<i>144</i>
3-YEAR AVERAGE	333	29,972	61,090 *	3,729,155	61	0.49	124

* annual arithmetic average

SI: System Interruptions
TCI: Total Customers Interrupted
TCB: Total Customer Base
TMCI: Total Minutes Customer Interrupted

**UGI Utilities, Inc. – Electric Division
2016 Electric Service Reliability Annual Report**

§ 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 2016 through December 2016

OUTAGE CAUSE	% OF TOTAL INCIDENTS	NUMBER OF INTERRUPTIONS	CUSTOMERS INTERRUPTED	MINUTES INTERRUPTED
Animal	17.02%	65	780	66,379
Company Agent	1.05%	4	55	1,662
Construction Error	0.00%	0	0	0
Customer Problem	0.26%	1	1	65
Dig In	0.79%	3	13	2,145
Equipment Failure	29.32%	112	15,887	1,541,006
Lightning	4.45%	17	462	93,893
Motor Vehicle	8.38%	32	4,371	877,719
Other	1.05%	4	8	730
Public	1.31%	5	66	13,291
Structure Fire	0.00%	0	0	0
Trees	26.96%	103	10,687	1,303,883
Unknown	1.83%	7	1,689	168,343
Weather Related	3.14%	12	1,625	85,418
Weather/Snow	0.00%	0	0	0
Weather/Ice	0.52%	2	616	47,960
Weather/Wind	3.93%	15	2,649	643,845
TOTAL	100.00%	382	38,909	4,846,339

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.

ORIGIN ID:RDGA (810) 798-3401
ANNEMARIE PETROVICH
UGI UTILITIES
2525 NORTH 12TH STREET
SUITE 360
READING, PA 19605
UNITED STATES US

SHIP DATE: 17APR17
ACTWGT: 0.50 LB
CAD: 110581705/NET3850

BILL SENDER

TO ROSEMARY CHIAVETTA, SECRETARY
PA PUBLIC UTILITY COMMISSION
COMMONWEALTH KEYSTONE BUILDING
400 NORTH STREET
HARRISBURG PA 17120

546.02/CFD653C1

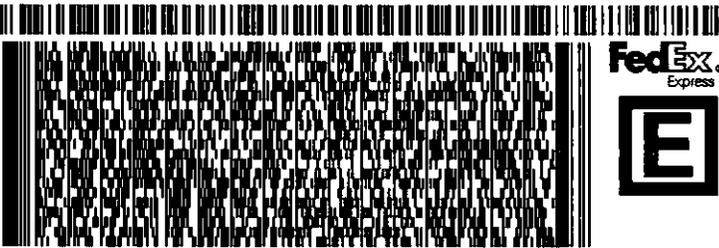
(717) 772-7777

REF: ANNUAL ELECTRIC SYSTEM REL REP

INV:

DEPT:

PO:



FedEx
Express



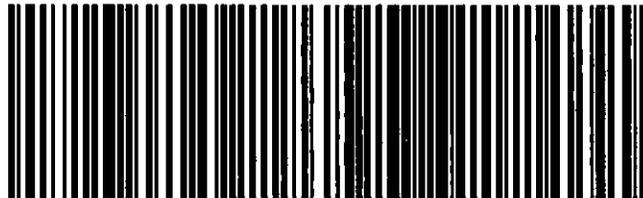
4111117121011111

TUE - 18 APR 3:00P
STANDARD OVERNIGHT

TRK#
0201 7789 1528 0246

EN MDTA

17120
PA-US MDT



After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number. Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.