



UGI Utilities, Inc.
1 UGI Drive
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April 21, 2023

VIA E-FILING

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

M-2023-3039027

**RE: UGI Utilities, Inc. – Electric Division
Quarterly Electric System Reliability Report
12 Months Ending March 31, 2023
Docket No. ~~M-2016-2522508~~**

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 No. M-2016-2522508, UGI Utilities, Inc. - Electric Division ("UGI") hereby files its Quarterly System Reliability Report. This report contains SAIDI, SAIFI, and CAIDI results on a 12-month rolling basis for the period ending March 31, 2023 along with the raw data from the same period. Also included is a breakdown of outages by cause for the 12 months ending March 31, 2023.

The Office of Consumer Advocate, the Office of Small Business Advocate, the Bureau of Audits, and the Bureau of Technical Utility Services are each being served with copies of this filing.

-Questions related to the attached report should be directed to Kyle Stair at (570) 407-2641 or email kstair@ugi.com.

Sincerely,

Eric Sorber
Vice President & General Manager - Electric Division

Attachment

cc: **VIA ELECTRONIC MAIL**

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UGI Utilities, Inc. – Electric Division
System Reliability Report:
Quarterly Update

April 21, 2023

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

§ 57.195(e)(1) – A description of each major event that occurred during the preceding quarter, including the time and duration of the event, the number of customers affected, the cause of the event and any modified procedures adopted in order to avoid or minimize the impact of similar events in the future.

A major event occurred on January 11, 2023 that resulted in a service interruption from 08:02 hours until 10:15 hours and affected 10,605 customers in total. The outage occurred when wildlife (i.e., a squirrel) contacted the grounded bus support structure and the energized bus connections to a 66kV/13kV transformer (#2 TFMR). The animal contact initiated the current differential protection scheme on the #2 TFMR and a sensitive sudden pressure relay on the #1 TFMR. As a result, both distribution transformers were interrupted at the Swoyersville substation impacting six distribution circuit breakers and interrupting service to the customers. This Major Event impacted Swoyersville Borough in Luzerne County.

Immediately following this outage, animal protection was installed on the substation bus structures at Swoyersville Substation with additional guards to be installed during a planned outage in June. UGI also recently increased animal protection in other existing substation yards and now includes animal protection standards as part of all substation design packages. Further, UGI ordered a sudden pressure relay test kit from the transformer manufacturer. Testing of transformer sudden pressure relays will be incorporated into the standard relay testing and maintenance program.

UGI was granted an exemption for this major event by Secretarial Letter dated February 7, 2023 at Docket No. M-2023-3037981. As such the interruption data related to this major event is excluded from the calculation of the metrics in this quarterly update.

§ 57.195(e)(2) – Rolling 12-month reliability index values (SAIFI, CAIDI, SAIDI and if available, MAIFI) for the EDC’s service territory for the preceding quarter. The report shall include the data used in calculating the indices, namely the average number of customers served, the number of sustained customer interruptions, the number of customers affected and the customer minutes of interruption.

The 12 month rolling reliability results for UGI’s service area are as follows:

	SAIDI	SAIFI	CAIDI
12-Month Standard	256	1.12	228
12-Month Benchmark	140	0.83	169
12 months Ended March 31, 2023	127	0.80	159

SAIDI: System Average Interruption Duration Index
 SAIFI: System Average Interruption Frequency Index
 CAIDI: Customer Average Interruption Duration Index

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

Raw Data: April 2022 through March 2023

Month	SI	TCI	TCB	TMCI
Apr-2022	44	3,339	62,619	1,839,206
May-2022	27	2,947	62,498	293,984
Jun-2022	54	7,697	62,561	662,471
Jul-2022	132	8,629	62,588	1,995,307
Aug-2022	55	3,836	62,512	229,286
Sep-2022	63	6,443	62,558	628,767
Oct-2022	40	1,059	62,434	257,124
Nov-2022	46	3,505	62,463	330,500
Dec-2022	55	2,259	62,499	288,226
Jan-2023	31	5,470	62,428	507,155
Feb-2023	32	2,951	62,650	632,356
Mar-2023	45	1,829	62,598	284,612
TOTAL	624	49,964	62,534 *	7,948,994

* 12-month arithmetic average

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

SAIDI

The SAIDI value for the 12 months ending March 2023 is 127. This result has decreased 6% from the results reported through December 2022.

SAIFI

The 12-month rolling SAIFI index is 0.80, which has decreased 8% since the result reported for the period ending December 2022.

CAIDI

The CAIDI result of 159 for the 12-month reporting period ending December 2022 has increased 2% from our last report.

SAIFI, SAIDI, and CAIDI are all below the 12-Month Standard and the 12-Month Benchmark. UGI conducted a review of the quarter and found that the most significant contributions to the reliability metrics were associated with high-wind weather events which had initiated off-right-of-way vegetation related outages. UGI continues to storm harden the system through infrastructure upgrades, such as constructing tie lines, relocations, adding sectionalizing points, and maintaining an aggressive vegetation management program to mitigate damages from frequent weather events.

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

§57.195(e)(5)–Rolling 12 month breakdown and analysis of outage causes during the preceding quarter, including the number and percentage of service outages, the number of customers interrupted, and the 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: April 2022 through March 2023

Cause	% of Total Incidents	Number of Interruptions	Customers Interrupted	Minutes Interrupted
Animal	15.54%	97	827	65,198
Company Agent	2.08%	13	13	998
Construction Error	0.16%	1	1,205	15,832
Customer Problem	0.00%	0	0	0
Dig In	0.64%	4	36	1,315
Equipment Failure	14.26%	89	9,496	899,911
Lightning	0.80%	5	645	80,882
Motor Vehicle	3.85%	24	2,784	584,875
Other	1.28%	8	383	13,371
Public	1.28%	8	1,418	358,755
Structure Fire	0.32%	2	94	17,079
Trees	50.80%	317	29,107	4,193,497
Unknown	7.05%	44	1,658	255,558
Weather Related	1.60%	10	2,296	1,461,234
Weather/Snow	0.00%	0	0	0
Weather/Ice	0.16%	1	1	171
Weather/Wind	0.16%	1	1	318
TOTAL	100.00%	624	49,964	7,948,994

Proposed Solutions to Identified Problems:

Off right-of-way tree related outages initiated by severe weather events continue to be the primary outage cause. UGI continues to focus on key capital reliability initiatives in addition to maintaining an aggressive vegetation management program to reduce the frequency of interruptions during high-wind weather events. Of note regarding vegetation management, UGI has added additional resources to increase hazard tree removals and to begin the process of reducing the vegetation trim cycles from nearly 6 years to a goal of 4.5 years. Construction of inter-substation tie-lines along with sectionalizing is a primary area of focus. To mitigate equipment failure outages, UGI continues to replace aging system components through our Long-Term Infrastructure Improvement Plan (LTIP), including wood poles, porcelain insulators, underground cable and open wire secondary. The Company has also recognized a high number of animal related outages recently and is re-evaluating its animal protection

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

standards to add further protection and find gaps in current substation and distribution protection. Finally, UGI continues to add Distribution Automation (DA) devices, controllable from its Control Center, reducing outage duration by providing remote switching capability. When eventually coupled with fault location, isolation and service restoration technology (FLISR), UGI expects to reduce the amount of sustained customer interruptions and customer minutes interrupted on many poorly performing feeders.