



UGI Utilities, Inc.  
1 UGI Drive  
Denver, PA 17517

February 1, 2021

**VIA E-FILING**

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

**RE: UGI Utilities, Inc. – Electric Division  
Quarterly Electric System Reliability Report  
12 Months Ending December 31<sup>st</sup>, 2020  
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 December 31<sup>st</sup>, 2020 along with the raw data from the same period. Also included is a breakdown of outages by cause for the 12 months ending December 31<sup>st</sup>, 2020. The actual statistics are favorable to both the benchmark and standard adopted for UGI.

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](mailto: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

February 1, 2021

**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 November 23<sup>rd</sup>, 2020 at 08:57 affecting 10,665 customers for a duration of 9 minutes. The event occurred while utilizing a new 66/13kV mobile substation to carry customer load as part of a larger substation upgrade project. During the project, a protection scheme on the mobile substation operated causing the mobile substation to trip offline and interrupt service to customers. The onsite employees quickly identified the trip as a mis-operation and restored the customers. It was determined based on a subsequent investigation that the neutral current transformer on the mobile substation was wired incorrectly from the factory. This wiring issue caused a protection scheme to operate when the mobile substation transformer reached a loading threshold, opening circuit breakers to clear the transformer and interrupting service to customers. As a result of this occurrence, the modified practice moving forward (per manufacturer’s suggestion) will be to disable the neutral (REF) settings (when used) until proper neutral polarity and magnitude is confirmed.

UGI was granted an exemption for this major event by Secretarial Letter dated December 22, 2020 at Docket No. M-2020-3023360. 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
<b>12-Month Standard</b>	<b>256</b>	<b>1.12</b>	<b>228</b>
<b>12-Month Benchmark</b>	<b>140</b>	<b>0.83</b>	<b>169</b>
12 months Ended December 31, 2020	66	0.40	163

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

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System Reliability Report**

**Raw Data: January 2020 – December 2020**

<b>Month</b>	<b>SI</b>	<b>TCI</b>	<b>TCB</b>	<b>TMCI</b>
Jan-2020	26	827	62,115	70,758
Feb-2020	17	1,363	62,086	550,810
Mar-2020	15	500	62,052	136,123
Apr-2020	73	5,724	62,022	771,886
May-2020	33	685	62,037	72,785
Jun-2020	47	2,442	61,990	142,415
Jul-2020	59	1,777	62,008	232,425
Aug-2020	49	3,385	61,993	1,085,902
Sep-2020	35	679	62,009	82,773
Oct-2020	29	759	62,370	60,295
Nov-2020	91	6,458	62,341	831,071
Dec-2020	20	511	62,398	57,739
<b>TOTAL</b>	<b>494</b>	<b>25,110</b>	<b>62,118 *</b>	<b>4,094,982</b>

\* 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 December 2020 is 66. This result is 18.5% lower than results reported through September 2020.

**SAIFI**

The 12-month rolling SAIFI index decreased from 0.48 in our last quarterly report to 0.40 for the period ending December 2020.

**CAIDI**

The CAIDI result of 163 for the 12-month reporting period ending December 2020 has decreased 1.8% 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 contribution to the reliability metrics was a series of weather events (rain/snow with high winds) that impacted the territory throughout November. UGI has several ongoing reliability projects and continues to evaluate and prioritize reliability projects for other poor performing areas of the system. This includes additional sectionalizing, distribution automation, line relocations and development of tie-lines.

**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: January 2020 – December 2020**

<b>Outage Cause</b>	<b>% Of Total Incidents</b>	<b>Number of Interruptions</b>	<b>Customers Interrupted</b>	<b>Minutes Interrupted</b>
Animal	19.43%	96	3,648	181,360
Company Agent	1.21%	6	112	3,788
Construction Error	0.00%	0	0	0
Customer Problem	0.00%	0	0	0
Dig In	0.20%	1	51	5,451
Equipment Failure	21.05%	104	2,685	397,012
Lightning	1.82%	9	1,122	207,439
Motor Vehicle	2.63%	13	1,020	186,312
Other	0.61%	3	11	804
Public	2.02%	10	1,563	19,318
Structure Fire	0.20%	1	18	1,710
Trees	46.15%	228	14,226	3,011,071
Unknown	4.05%	20	592	70,479
Weather Related	0.00%	0	0	0
Weather/Snow	0.20%	1	58	9,744
Weather/Ice	0.00%	0	0	0
Weather/Wind	0.40%	2	4	494
<b>TOTAL</b>	<b>100.00%</b>	<b>494</b>	<b>25,110</b>	<b>4,094,982</b>

**Proposed Solutions to Identified Problems:**

UGI continues to focus on two (2) critical reliability cause categories, trees and equipment failures. With respect to equipment, UGI replaced a significant number of porcelain insulators on our 66kV transmission system during the last 12 months. In addition, as part of our distribution LTIP, porcelain insulators and cutouts are being identified and replaced at numerous locations. UGI continues to experience an elevated number of tree related outages and associated interruption minutes. To address this UGI has an ongoing hazard tree removal program that is expecting to accelerate removals of off right-of-way danger trees. 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 (FLSR), UGI expects to reduce customer outage minutes on several worst performing feeders.