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(610) 796-3400 Telephone

RECEIVED

November 1, 2011

OCT 31 2011

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

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

#### SENT VIA FEDERAL EXPRESS

#### RE: Quarterly Electric System Reliability Report 12 Months Ending September 30, 2011

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 an original and six copies of its Quarterly System Reliability Report. This report contains SAIDI, SAIFI, and CAIDI results on a 12-month rolling basis for the period ending September 30, 2011 along with the raw data from the same period. The actual statistics continue to be favorable to the standard adopted for UGI. Also included is a breakdown of outages by cause for the 12 months ending September 30, 2011.

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 ahemmerich@ugi.com.

Sincerely,

Robert R. Stoyko Vice President – Northern Region

Attachment

#### c: <u>FEDERAL EXPRESS</u>

Irwin A. Popowsky Office of Consumer Advocate 555 Walnut St. 5<sup>th</sup> Floor, Forum Place Harrisburg, PA 17101-1921

William R. Lloyd Office of Small Business Advocate Suite 1102, Commerce Bldg. 300 North Second St. Harrisburg, PA 17101

#### Carl Lesney Bureau of Audits Pennsylvania Public Utility Commission Commonwealth Keystone Bldg. 3<sup>rd</sup> Floor, F East Harrisburg, PA 17101

OCT 31 2011

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

Darren Gill Supervisor of Electric Reliability Bureau of Conservation, Economics and Energy Planning Commonwealth Keystone Building 400 North Street Harrisburg, PA 17120

#### **ELECTRONIC MAIL**

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PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU



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

November 1, 2011

#### UGI Utilities, Inc. - Electric Division System Reliability Report

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## PA PUBLIC UTILITY COMMISSION § 57.195(e)(1) – A description of each major event that occurred during the SECRETARY'S BUREAU 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.

On September 30, 2011, UGI filed two Requests for Exclusion of Major Outage for Reliability Reporting Purposes pursuant to the Amended Reliability Benchmarks and Standards for Electric Distribution Companies, Docket No. M-00991220. All indices contained in this quarterly System Reliability Report, and the raw data used to calculate them, exclude the numbers related to these two major events.

#### Hurricane Irene

Outages associated with Hurricane Irene affected 35,975, or approximately 58%, of UGI's customers. The first service interruptions were reported at 0227 hours on August 28, 2011. Service to the last affected customer was restored on September 7, 2011. A total of 106 utility workers and others were assigned specifically to the repair work.

The storm, which was the worst in UGI's recent history, caused the outage of five UGI 66 kV sub-transmission lines, affecting five substations. Restoration of these facilities was a priority and was completed by August 29, 2011. Damage was sustained to twentysix (59%) of UGI's forty-four distribution feeders. All facility damage was caused by high winds that blew off-right-of-way trees and tree branches into UGI lines. Specifically, UGI made 1,152 work assignments to its line clearance crews, many of which involved multiple trees. This is an extraordinary number given the relatively small size of UGI's service territory.

#### **Tropical Storm Lee**

On September 9, 2011, rains from Tropical Storm Lee hit the UGI service region causing service interruptions to 11,940 or 19% of UGI customers. The first service interruption notification from this storm occurred at 0325 hours on September 9. Service was fully restored later that day at 1327 hours. A total of 37 utility workers and others were assigned to repairs.

UGI's Kingston Substation, located in Kingston Borough is within the 100 year floodplain of the Susquehanna River and is protected by the Wyoming Valley Flood Protection Levee System. Due to the expected high river crest and concern about the ability of the levee to withstand the burden placed upon it, the Luzerne County Office of Emergency Management evacuated the Kingston area. As a precaution on September 8, 2011 UGI transferred the load from the Kingston Substation to adjacent substations and evacuated critical equipment.

UGI's Plymouth and Hunlock substations are located above the 100-year floodplain as defined by the Hurricane Agnes Flood of 1972. On September 8, 2011, observers stationed at the Plymouth Substation noticed the floodwaters were rising above the 100 vear flood level and were threatening that substation. Consequently, Plymouth Substation was removed from service on an emergency basis and its load was transferred

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

to the Hanover and Hunlock Substations. Additionally, vital equipment was moved to higher ground. At that time, access to Hunlock Substation was not possible as it became surrounded by floodwaters. September 9, 2011 the Susquehanna River crested 21.6 feet above Flood Stage, two feet higher than the 1972 Hurricane Agnes flood event. The floodwater made contact with the relay control equipment causing the Hunlock substation to trip out of service. In addition, the loss of three adjacent distribution substations in the Susquehanna River Flood plain led to an overload condition at the Hanover Substation causing portions of it to automatically trip out of service as well.

In response to these events, UGI has initiated several projects and or actions that will help to minimize the impact of these large events going forward. The key factor in minimizing restoration time is resources. UGI is already a member of the Mid Atlantic Mutual Assistance Group (MAMA). In addition to the MAMA Group, UGI has approved an agreement with Pennsylvania Rural Electric Association (PREA) member companies. If approved by PREA, membership will provide UGI with an additional source of external resources to aid with storm restoration. UGI has refined the internal process for accessing and authorizing external resources. Finally, UGI has committed to the implementation of an Outage Management System that will aid in the assessment, prioritization, and communication of outages and outage related information. § 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.

	SAIDI	SAIFI	CAIDI
12-Month Standard	256	1.12	228
12-Month Benchmark	140	0.83	169
12 months Ended September, 2011	116	0.88	132

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

SAIDI: System Average Interruption Duration Index

SAIFI: System Average Interruption Frequency Index

CAIDI: Customer Average Interruption Duration Index

#### Raw Data: October 2010 - September 2011

Month	SI	TCI	тсв	TMCI
Oct-2010	30	1,347	62,095	112,884
Nov-2010	18	206	62,248	28,030
Dec-2010	22	874	62,271	210,550
Jan-2011	ຸ 19	232	62,315	32,556
Feb-2011	27	1,852	62,344	259,124
Mar-2011	44	2,091	62,339	810,734
Apr-2011	54	9,026	62,219	1,398,878
May-2011	39	1,445	62,121	175,408
Jun-2011	49	14,923	62,095	1,527,657
Jul-2011	70	. 4,848	62,045	1,029,478
Aug-2011	34	6,011	62,033	698,334
Sep-2011	<u>50</u>	<u>11,746</u>	<u>61,911</u>	<u>950,395</u>
TOTAL	456	54,601	62,170 *	7,234,028

\* 12-month arithmetic average

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

Note: The numbers used in calculating these indices exclude the major events that occurred on August 28 and September 9, 2011.

#### SAIDI

The SAIDI value for the 12 months ending September 2011 is 116. This result is 29% higher than results reported through June 2011.

#### SAIFI

The 12-month rolling SAIFI index increased 22% from 0.72 in our last quarterly report to 0.88 for the period ending September 2011.

#### CAIDI

The CAIDI result of 132 for the 12-month reporting period ending September 2011 is up 5% from our last report.

Despite excluding the major event data detailed above in § 57.195(e)(1), the UGI territory still experienced a significant amount of outage occurrences due to lightning, trees, and wind during the current reporting period.

It is important to note that, even though weather conditions like these are beyond UGI's control, they affect reliability index results. Although the SAIFI index for this reporting period is above its benchmark level, both the SAIDI and CAIDI indices remain below their benchmarks and all three reliability indices are below their respective standard levels.

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

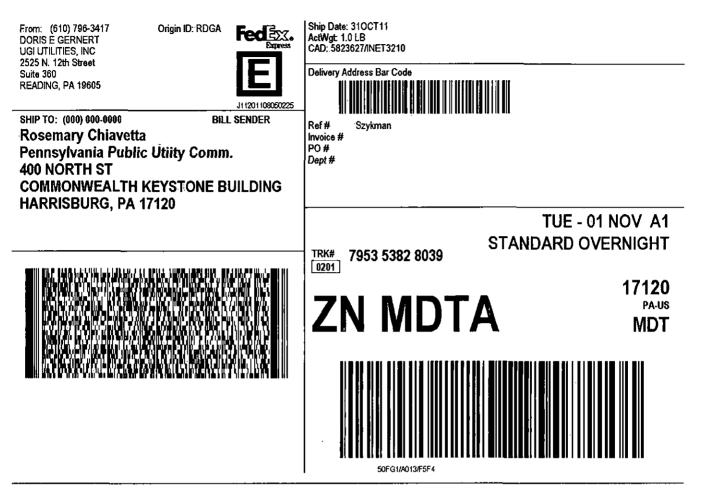
§57.195(e)(5)-Rolling 12 month breakdown and analysis of outage causes during the preceding quarter, including the number and percentage of service outages, the number of customers interrupted, and the customer interruption minutes categorized by outage cause such as equipment failure, animal contact, tree related and so forth. Proposed solutions to identified service problems shall be reported.

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Cause	% of Total Incidents	Number of Interruptions	Customers Interrupted	Minutes Interrupted
Animal	10.53%	48	257	25,453
Company Agent	0.22%	1	1,081	17,296
Construction Error	0.00%	0	0	0
Customer Problem	0.00%	0	0	0
Equipment Failure	32.02%	146	13,763	1,177,954
Lightning	12.06%	55	10,366	1,106,065
Motor Vehicle	2.19%	10	238	66,653
Other	0.88%	4	831	328,318
Public	3.73%	17	267	32,296
Structure Fire	0.44%	2	16	1,450
Trees	22.37%	102	17,497	2,433,908
Unknown	4.61%	21	2,733	280,514
Weather Related	1.54%	7	522	115,063
Weather/Snow	1.75%	8	216	39,540
Weather/Ice	0.22%	1	3	354
Weather/Wind	<u>7.46%</u>	<u>34</u>	<u>6,811</u>	<u>1,609,164</u>
TOTAL	100.00%	456	54,601	7,234,028

### Outage by Cause: October 2010 – September 2011

#### Proposed Solutions to Identified Problems:

UGI continuously examines its system for reliability enhancements. The solutions mentioned in § 57.195(e)(1) relative to major events will aid in minimizing restoration times regardless of the size of the occurrence.



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