Regulatory Analysis Form

(Completed by Promulgating Agency)

(All Comments submitted on this regulation will appear on IRRC's website)

INDEPENDENT REGULATORY REVIEW COMMISSION

(1) Agency
PA public Utility Commission (PUC or Commission)

(2) Agency Number: L-2012-2294746

Identification Number: 57-289

IRRC Number: 2977

(3) PA Code Cite: 52 PA Code §59.111

(4) Short Title: Establishing A Uniform Definition and Metrics for Unaccounted-For-Gas

(5) Agency Contacts (List Telephone Number and Email Address):

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(6) Type of Rulemaking (check applicable box):

- ☒ Proposed Regulation
- ☐ Final Regulation
- ☐ Final Omitted Regulation

- ☐ Emergency Certification Regulation;
  - ☐ Certification by the Governor
  - ☐ Certification by the Attorney General

(7) Briefly explain the regulation in clear and nontechnical language. (100 words or less)

The proposed rulemaking aims to establish a uniform definition and methodology for the calculation and reporting of unaccounted-for-gas (UFG) by natural gas utilities within Pennsylvania. In addition, the proposed rulemaking proposes a maximum allowed recovery for UFG with year one allowing 5% of distribution losses; year two at 4.5%; year three at 4%; year four at 3.5%; and year five at 3%.

(8) State the statutory authority for the regulation. Include specific statutory citation.

Pursuant to Sections 501, 504, 523, 1301, 1501, and 1504, and Public Utility Code, 66 Pa. C.S. §§ 501, 504, 523, 1301, 1501, and 1504, and Sections 201 and 202 of the Act of July 31, 1968, P.L. 769 No. 240, 45 P.S. §§ 1201-1202, and the regulations promulgated thereunder at 1 Pa. Code §§ 7.1, 7.2, and 7.5; Section 204(b) of the Commonwealth Attorneys Act, 71 P.S. § 732.204(b); Section 745.5 of the Regulatory Review Act, 71 P.S. § 745.5; and Section 612 of the Administrative Code of 1929, 71 P.S. § 232, and the regulations promulgated thereunder at 4 Pa. Code §§ 7.231-7.234.

(9) Is the regulation mandated by any federal or state law or court order, or federal regulation? Are there any relevant state or federal court decisions? If yes, cite the specific law, case or regulation as well as, any deadlines for action.

The proposed regulation is not mandated by any federal or state law or court order, or federal regulation.

The following cases do have some relevance to the proposed regulations:
Barasch v. Pennsylvania Public utility Commission 530 A.2d 936, 939 (Pa. Cmwlth. Ct. 1987)
Pennsylvania Public Utility Commission v. Equitable Gas Company 68 Pa. PUC 68, 1988 Pa. PUC LEXIS 441 *18 (Pa. PUC 1988)
Pennsylvania Public Utility Commission v. Philadelphia Gas Works 2010 Pa. PUC Lexis 167 *24 (Pa. PUC 2010)

There are no deadlines in the above cases.

74 FR § 63906,[1] the Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006, Compliance was required by August 2012.

(10) State why the regulation is needed. Explain the compelling public interest that justifies the regulation. Describe who will benefit from the regulation. Quantify the benefits as completely as possible and approximate the number of people who will benefit.

Currently, the regulations governing utility operations lack a definition for UFG, and, as a result, the Commission gets information on UFG based upon individual companies' definition of that term. Due to the lack of consistency in this information, current reported levels of UFG are not comparable and hinder the Commission's ability to effectively monitor UFG levels and their corresponding financial burden to ratepayers. However, the proposed regulation would put a cap on the amount of UFG within a distribution system a utility could pass off to the ratepayer. In 2010, the Commission estimated that the total cost for UFG was between $25.5 million and $131.5 million and that cost was borne by approximately 2.9 million natural gas ratepayers within Pennsylvania. The proposed regulation would not eliminate the entire financial burden from ratepayers, just the levels above the metric that are deemed excessive. It should be noted that different utilities and customers thereof, have differing levels of UFG. It should also be noted that the Commission does not have accurate information on distribution specific UFG as utilities currently file combined UFG for distribution, transmission, storage, and production/gathering facilities. Nonetheless, the PUC estimates that if the proposed metrics were in place in 2010 and all UFG filed in the Annual Reports were attributed to distribution losses, the 5% metric would have saved approximately 868,000 ratepayers $6.7 million and the 3% metric would have saved approximately 1.19 million ratepayers $33.3 million annually.

[1] Final Rule Integrity Management Program for Gas Distribution Pipelines. Effective - February 2, 2010.

(11) Are there any provisions that are more stringent than federal standards? If yes, identify the specific provisions and the compelling Pennsylvania interest that demands stronger regulations.

The proposed definition for UFG was mirrored off of the US Department of Transportation's Pipeline and Hazardous Material Safety Administration's UFG definition and therefore is not more stringent than federal standards.

However, the federal standards do not indicate recoverable amounts of UFG as the proposed metric does. This is because the Federal Government does not have jurisdiction over intrastate commerce.

(12) How does this regulation compare with those of the other states? How will this affect Pennsylvania's ability to compete with other states?

The only other state that has created a regulation addressing the recovery of UFG is Texas. However, the proposed regulation should not impact Pennsylvania's ability to compete with other states. On the contrary, the proposed regulation should provide additional security that the UFG portion of rates will be capped for all ratepayers. In addition, the requirement to reduce UFG levels to acceptable levels could result in lower gas bills for customers which will ultimately make Pennsylvania business and industry more competitive.

(13) Will the regulation affect any other regulations of the promulgating agency or other state agencies? If yes, explain and provide specific citations.

No.

(14) Describe the communications with and solicitation of input from the public, any advisory council/group, small businesses and groups representing small businesses in the development and drafting of the regulation. List the specific persons and/or groups who were involved. ("Small business" is defined in Section 3 of the Regulatory Review Act, Act 76 of 2012.)

The team preparing the proposed regulations met with industry representatives on March 2, 2012. In attendance at this meeting were representatives from the Energy Association of Pennsylvania as well as a representative from every major natural gas distribution company within Pennsylvania (Columbia Gas of Pennsylvania, Inc., Equitable Gas Company, National Fuel Gas Distribution Company, PECO Gas, Peoples Natural Gas Company LLC, Peoples TWP LLC, Philadelphia Gas Works, UGI Central Penn Gas, UGI Penn Natural Gas, and UGI Utilities, Inc.).

(15) Identify the types and number of persons, businesses, small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012) and organizations which will be affected by the regulation. How are they affected?

All natural gas distribution companies (NGDCs) will need to comply with the regulation. As presented in the answer to Question 16 below, there are a total of 28 gas distribution utilities within Pennsylvania as of the 2nd quarter of 2012. These 28 NGDCs would need to adhere to the proposed definition and calculation for UFG. In addition, these NGDCs may need to employ additional resources, procedures, etc. to reduce their respective UFG below the proposed cap metric. If NGDCs have "excessive" levels of UFG, the NGDCs may be required to absorb the excessive costs for UFG above the proposed cap metric.

Conversely, all ratepayers, which include individuals, businesses, small business, and other organizations, would be protected from "excessive" UFG by the proposed cap metrics. Ratepayers would no longer be responsible for paying for UFG above the metric and therefore, could see a reduction in their gas cost rates.

(16) List the persons, groups or entities, including small businesses, that will be required to comply with the regulation. Approximate the number that will be required to comply.

Pennsylvania currently has 21 natural gas distribution companies in operation that file PGC or GCRs. They are as follows:

Andreassi Gas Company
Chartiers Natural Gas Company, Inc.
Columbia Gas of Pennsylvania, Inc.
Equitable Gas Company
Herman Oil & Gas Company, Inc.
Herman Riemer Gas Company
North East Heat & Light Company
National Fuel Gas Distribution Corporation
Orwell Natural Gas Company – Clarion River Gas and Walker Gas
PECO Gas (Exelon Corporation)
Peoples Natural Gas Company LLC
Peoples TWP LLC (Formally TW Phillips)
Philadelphia Gas Works
Pike County Light & Power Company
Pine-Roe Natural Gas Company, Inc.
Sigel Gas Company
UGI Central Penn Gas
UGI Penn Natural Gas
UGI Utilities, Inc.
Valley Energy
Wally Gas Company

In addition, as of 2nd Quarter 2012, Pennsylvania has 7 distribution companies that do not participate in GCR or PGC filings. Therefore, the metric portion of the proposed regulation does not apply, but the following companies would still need to comply with the consistent UFG definition:

Able Gas Company
Corsica Gas Company
C.E. Dunmire Gas Company
Kaib & Kaib Gas Company
Larkin Oil & Gas Company
Mountain Energy LTD
SAR Gas Company

(17) Identify the financial, economic and social impact of the regulation on individuals, small businesses, businesses and labor communities and other public and private organizations. Evaluate the benefits expected as a result of the regulation.

The proposed regulation would put a cap on the amount of UFG within a distribution system a utility could pass off to the ratepayer, which is comprised of individuals, small businesses, business and labor communities and other public/private organizations. In 2010, the Commission estimated that the total cost for UFG was between \$25.5 million and \$131.5 million and that cost was borne by approximately 2.9 million natural gas ratepayers within Pennsylvania. The proposed regulation would not eliminate the entire financial burden from ratepayers, just the levels above the metric that are deemed excessive. It should be noted that different utilities and customers thereof, have differing levels of UFG. It should also be noted that the Commission does not have accurate information on distribution specific UFG as utilities currently file combined UFG for distribution, transmission, storage, and production/gathering facilities. Nonetheless, the PUC estimates that if the proposed metrics were in place in 2010 and all UFG filed in the Annual Reports were attributed to distribution losses, the 5% metric would have saved approximately 868,000 ratepayers \$6.7 million and the 3% metric would have saved approximately 1.19 million ratepayers \$33.3 million.

In addition, all natural gas utilities and any other organization filing UFG to the Commission will be impacted by the proposed regulation. The first requirement for a consistent definition will be a minor impact on utility operations. There may be some nominal costs involved for the utility to ensure it is both calculating and reporting UFG pursuant to the proposed regulations. These costs will ultimately be borne by the ratepayer, but should not surpass normal operational activity for the utility. More specifically, the change should not lead to a rate increase for ratepayers.

On the other hand, compliance with the metric may have a financial impact on utility operations. The proposed regulation states that utilities with UFG levels above the metric will not be able to recover the costs of UFG above the metric. Therefore, the cost for excessive lost gas (i.e., the amount above the metric) will therefore be absorbed by the stockholders. In question 10 above, the PUC estimates the 5% metric would have saved ratepayers \$6.7 million and the 3% metric would have saved \$33.3 million in 2010. These savings for ratepayers would therefore be costs absorbed by stockholders[2].

[2] The Commission does not have reliable numbers on the number of stockholders for each utility.

All gas utilities currently have programs to identify and reduce UFG. These programs have always been included within the utility's rate base. The proposed regulation does have the potential to motivate utilities to increase or expand these already existing programs. Any increased activity or added programs could be included within a future rate case (and therefore a future rate increase) if deemed prudent by the Commission. However, the proposed regulation on UFG is not the primary driver for utilities to make changes. Instead, 74 FR § 63906,[3] the Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006, requires natural gas distribution companies to develop and implement a distribution integrity management program (DIMP). UFG would be considered a component of DIMP and, therefore, DIMP activities, particularly removal of aging and leaky pipe, would improve UFG levels (i.e., decrease reported UFG). The Federal DIMP requirement will force utilities to reduce UFG by taking specific actions; therefore, the proposed regulations to reduce UFG will follow and benefit from the Federal DIMP.

(18) Explain how the benefits of the regulation outweigh any cost and adverse effects.

As more fully presented in the answer to Question 17, the adverse costs to the gas utilities translates into a benefit or cost savings for their respective ratepayers. In addition, the proposed regulation aligns with 74 FR § 63906,[4] the Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006, which aims at reducing risk in gas distribution systems. NGDCs, their ratepayers, and all citizens of Pennsylvania benefit from reduced risks on gas distribution systems.

Furthermore, the proposed regulations provide the Commission, other agencies, and the natural gas industry with a consistent definition for UFG. This should enable all parties to track and analyze performance accordingly.

(19) Provide a specific estimate of the costs and/or savings to the **regulated community** associated with compliance, including any legal, accounting or consulting procedures which may be required. Explain how the dollar estimates were derived.

Compliance with a consistent definition for calculating and reporting UFG should be of a nominal cost for the regulated community. All distribution companies currently use a similar UFG definition within filings already required by the Commission. Therefore, the proposed regulation for UFG definition should not have any additional costs, save for those of a nominal nature. On the other hand, a consistent definition should save the Commission and utility time and effort in PGC or GCR filings; thereby improving efficiency by a nominal value.

[3] Final Rule Integrity Management Program for Gas Distribution Pipelines. Effective - February 2, 2010.
[4] Final Rule Integrity Management Program for Gas Distribution Pipelines. Effective - February 2, 2010.

Compliance with the metric has the potential to save ratepayers money when UFG levels are excessive. In question 10 above, the PUC estimates that if the proposed metrics were in place in 2010 and all UFG filed in the Annual Reports were attributed to distribution losses, the 5% metric would have saved approximately 868,000 ratepayers $6.7 million and the 3% metric would have saved approximately 1.19 million ratepayers $33.3 million. These costs savings were computed by taking the difference between reported UFG over 5% or 3% and the maximum allowable exclusion (i.e., 5% or 3%). This difference was then multiplied by total gas received to arrive at the total quantity of gas over the allowable exclusion. Then the total quantity of gas over the allowable exclusion would be multiplied by the Purchased Gas Cost rate for 2010. This would equate to the savings applied to the customer base of utilities over 5% or 3%.

For example, suppose a utility received 2000 Mcf (thousand cubic feet) of gas and reported an UFG level of 6% with a PGC rate of $5/Mcf. Since the maximum allowable exclusion is 5%, the utility's actual UFG level would be subtracted by the maximum allowable exclusion (or 5%). This would be a difference of 1% (6%-5%) and would then be multiplied by the total gas received to arrive at 20 Mcf (1% x 2000 Mcf). The 20 Mcf, which could not be recovered from ratepayers, would then be multiplied by the PGC rate to arrive at a savings for ratepayers of $100 (20 Mcf x $5/Mcf).

Conversely, compliance by regulated utilities would be a cost to that utility. In question 12 above, the proposed regulation states that utilities with UFG levels above the metric will not be able to recover the cost of UFG above that level. Therefore, the cost for excessive lost gas (i.e., the amount above the metric) will therefore be absorbed by the stockholders. In question 10 above, the PUC estimates the 5% metric would have saved ratepayers $6.7 million and the 3% metric would have saved $33.3 million in 2010. These savings for ratepayers would therefore be costs absorbed by stockholders [5].

It should be noted that there are no new costs to the regulated community. Instead, the proposed regulations would move the financial burden for excessive UFG from the ratepayer to the utility (i.e., stockholder).

(20) Provide a specific estimate of the costs and/or savings to the **local governments** associated with compliance, including any legal, accounting or consulting procedures which may be required. Explain how the dollar estimates were derived.

There are no anticipated costs or savings for local governments. It should be noted that one of the PUC's jurisdictional natural gas distribution companies is Philadelphia Gas Works (PGW). It is owned and operated by the City of Philadelphia and therefore, excessive losses would be borne by the city and its tax base instead of stockholders. Ratepayers of PGW would help to pay for excessive losses, since they are also tax payers of the City of Philadelphia (although it is possible that some of PGW's ratepayers may not be taxpayers of the City of Philadelphia). In general, however, the tax base should be larger than the rate base (i.e., not every tax payer of Philadelphia would be a ratepayer of PGW).

If the local government is a ratepayer of a gas utility, then the savings identified in question 17 for ratepayers would be shared by the local government with all other ratepayers of that utility.

[5] The Commission does not have reliable numbers on the number of stockholders for each utility.

(21) Provide a specific estimate of the costs and/or savings to the **state government** associated with the implementation of the regulation, including any legal, accounting, or consulting procedures which may be required. Explain how the dollar estimates were derived.

A consistent definition and metrics for UFG is expected to have a nominal savings for the Commission. It is anticipated that a standard definition and metric should increase the efficiency of the PGC and GCR proceedings as well as standard business activities related to UFG. This increase in efficiency will be minor in nature but allow the Commission to more effectively handle UFG and therefore cannot be quantified.

If the state government, or portions thereof, is a ratepayer of a gas utility, then the savings identified in question 17 for ratepayers would be shared by the state government with all other ratepayers of that utility.

(22) For each of the groups and entities identified in items (19)-(21) above, submit a statement of legal, accounting or consulting procedures and additional reporting, recordkeeping or other paperwork, including copies of forms or reports, which will be required for implementation of the regulation and an explanation of measures which have been taken to minimize these requirements.

The proposed regulation will not require any additional filing, reporting, or documentation for implementation. The Commission already requires the reporting of UFG within its Annual Report, Schedule 505 and in PGC and GCR filings. These requirements will be carried forward in the proposed regulation.

(23) In the table below, provide an estimate of the fiscal savings and costs associated with implementation and compliance for the regulated community, local government, and state government for the current year and five subsequent years.

It should be noted that calculated savings and costs for PGC and GCR rates are dependent on numerous variables and constraints including distribution company performance, natural gas markets, weather, etc. It should also be noted that the proposed regulation suggests that implementation of the metric should not occur until one year after the regulation would be effective. Therefore, compliance and any cost shifting (savings or costs) would not occur until FY+3. The Commission believes that this time delay will afford all utilities enough time to become compliant with the regulation and, therefore, not incur any additional costs. The improvement in the UFG levels, however, would be a savings to the ratepayers, regardless of utility performance. However, for purposes of presentation below, let's assume that the utilities could not reduce their UFG below the metric thereby incurring a cost as well. If the utility continues to be unable to make any changes, than the savings and costs will continue to grow in subsequent years maxing out in FY+8.

	Current FY Year	FY +1 Year	FY +2 Year	FY +3 Year	FY +4 Year	FY +5 Year
SAVINGS:	**$**	**$**	**$**	**$**	**$**	**$**
Regulated Community	0	0	0	$6.7 million	$11.8 million	$17.0 million
Local Government	0	0	0	0	0	0
State Government	0	0	0	0	0	0
Total Savings	0	0	0	$6.7 million	$11.8 million	$17.0 million
COSTS:						
Regulated Community	0	0	0	$6.7 million	$11.8 million	$17.0 million
Local Government	0	0	0	0	0	0
State Government	0	0	0	0	0	0
Total Costs	0	0	0	$6.7 million	$11.8 million	$17.0 million
REVENUE LOSSES:						
Regulated Community	0	0	0	0	0	0
Local Government	0	0	0	0	0	0
State Government	0	0	0	0	0	0
Total Revenue Losses	0	0	0	0	0	0

(23a) Provide the past three year expenditure history for programs affected by the regulation.

Program	FY -3	FY -2	FY -1	Current FY
None.				

(24) For any regulation that may have an adverse impact on small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012), provide an economic impact statement that includes the following:

(a) An identification and estimate of the number of small businesses subject to the regulation.
(b) The projected reporting, recordkeeping and other administrative costs required for compliance with the proposed regulation, including the type of professional skills necessary for preparation of the report or record.
(c) A statement of probable effect on impacted small businesses.
(d) A description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation.

Act 76 of 2012 (HB 1349) refers to 13 CFR 121 for the definition of small business. In section 121.201, the Small Business Administration characterizes natural gas distribution companies as small if they have less than 500 employees, including those employed by the company's affiliated businesses. Only UGI, Peoples, and PGW have more than 500 employees in their operating companies. Insofar as the PUC does not have jurisdiction over non-utility affiliates, it does not know the total number of employees for each NGDC and its affiliates. Therefore, for purposes of this response, it is assumed that all NGDCs are, in fact, small businesses under the Small Business Administration definition.

a.) There are 28 NGDCs operating within Pennsylvania as specifically identified in the answer to Question 16.
b.) There are no new reporting, recordkeeping or other administrative costs as presented within the answer to Question 22.
c.) As identified in the answer to Question 15, NGDCs may need to expand their UFG programs, procedures, etc. in order to reduce "excessive" UFG or ultimately pay for UFG above the proposed metric. However, this cost to the NGDC would also serve as a cost savings to their ratepayers (including non-utility small businesses) on commodity costs.
d.) The proposed regulation is a shifting of costs from the ratepayer to the NGDC for excessive amounts of UFG. Therefore, no new costs are established by the proposed regulations. The only other option to make the proposed regulation less intrusive to the NGDCs would be to raise the cap metric to higher percentages. However, a higher cap metric would put more financial burden on ratepayers of gas utilities and also reward poor performing utilities without the same benefit for good performing utilities.

(25) List any special provisions which have been developed to meet the particular needs of affected groups or persons including, but not limited to, minorities, the elderly, small businesses, and farmers.

In the proposed regulation two special provisions were developed to meet the needs of the affected regulatory community, particularly the utilities. These two provisions are summarized below:

1.) The implementation of the metric shall occur one year after the regulation takes effect.
    a. This provision will afford utilities additional time to comply with the financial impacts of the regulation.

2.) Amounts of UFG in excess of the standard may not be recovered within the current or a future PGC or GCR filing unless approved by the Commission.

   a. This provision allows the utility to provide justification for high UFG that is beyond its control. Ultimately, the Commission could approve higher levels than set in the metric if circumstances warranted such an exception.

(26) Include a description of any alternative regulatory provisions which have been considered and rejected and a statement that the least burdensome acceptable alternative has been selected.

The only alternate version of the regulation considered was to develop UFG metrics by each individual gas company. However, this method was deemed unfair as it could require each utility to reduce UFG by a set percentage. Utilities who already report low UFG would be required to reduce the level further at a substantial cost while those utilities with higher UFG would be making much less costly adjustments. Therefore, it was deemed that an individualized approach would place undue burdens on utilities and their ratepayers that had already obtaining acceptable levels of UFG.

(27) In conducting a regulatory flexibility analysis, explain whether regulatory methods were considered that will minimize any adverse impact on small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012), including:

a) The establishment of less stringent compliance or reporting requirements for small businesses;
b) The establishment of less stringent schedules or deadlines for compliance or reporting requirements for small businesses;
c) The consolidation or simplification of compliance or reporting requirements for small businesses;
d) The establishment of performing standards for small businesses to replace design or operational standards required in the regulation; and
e) The exemption of small businesses from all or any part of the requirements contained in the regulation.

Act 76 of 2012 (HB 1349) refers to 13 CFR 121 for the definition of small business. In section 121.201, the Small Business Administration characterizes natural gas distribution companies as small if they have less than 500 employees, including those employed by the company's affiliated businesses. Only UGI, Peoples, and PGW have more than 500 employees in their operating companies. Insofar as the PUC does not have jurisdiction over non-utility affiliates, it does not know the total number of employees for each NGDC and its affiliates. Therefore, for purposes of this response, it is assumed that all NGDCs are, in fact, small businesses under the Small Business Administration definition.

a.) Since the proposed regulation is a shift of costs for excessive UFG from the ratepayer to the NGDC (if, and only if, performance does not meet the expected level of the cap metric), a less stringent requirement on small business NGDCs would also be a more stringent requirement for small businesses ratepayers. Therefore, a loosing of standards has a much broader impact to Pennsylvania ratepayers than the proposed regulation does.

b.) As presented in the answer to Question 22, there are no new deadlines, reports, or other procedures not already in place, required and needed. Therefore, any flexibility or loosing of standards would have adverse impacts on Commission activity.

c.) Since most, if not all, NGDCs are small businesses, all businesses required to comply with the proposed regulations will be following the same rules. In addition, the reporting requirements are no different than already required and are consistent for all NGDCs.

d.) As presented in section (a) above, a loosing of the standards for NGDCs would ultimately mean more costs would be borne by the ratepayer (including non-utility small businesses).

e.) Since most, if not all, NGDCs are small businesses; an exemption to small businesses would invalidate the proposed regulations. The only consideration was to eliminate the cap metric from the proposed regulations. However, the cap metric gives the Commission the ability to effectively monitor, enforce, and review UFG levels and without the metric, the Commission loses the ability to ensure safe and reliable utility service at reasonable rates.

(28) If data is the basis for this regulation, please provide a description of the data, explain in detail how the data was obtained, and how it meets the acceptability standard for empirical, replicable and testable data that is supported by documentation, statistics, reports, studies or research. Please submit data or supporting materials with the regulatory package. If the material exceeds 50 pages, please provide it in a searchable electronic format or provide a list of citations and internet links that, where possible, can be accessed in a searchable format in lieu of the actual material. If other data was considered but not used, please explain why that data was determined not to be acceptable.

UFG is reported to the Commission and is publicly available in at least three regularly required filings; Schedule 505 (Gas Account-Natural Gas) of the PUC's Gas Annual Report, Purchased Gas Cost (PGC) and Gas Cost Recovery filings (GCR)[6], and U.S. Department of Transportation (DOT) Pipeline and Hazardous Material Safety Administration (PHMSA) Form 7100.1-1 (henceforth referred to as the DOT Report filed with the Commission's Gas Safety Division). The data provided within each one of these filings is provided to the Commission by the utility and also includes a schedule showing how the UFG numbers were derived. However, the difference in reporting UFG helps to illustrate that there is no consistency in how UFG is reported and filed with the Commission.

[6] PGC and GCR filings are separate mechanisms used by utilities to recover gas costs but approach UFG similarly. Any utility with gross intrastate annual operating revenues in excess of $40,000,000 would file a PGC while companies with lesser revenue would file a GCR.

Table 1

Unaccounted For Gas Levels for PGC Companies

	Columbia			Dominion[4-1]			Equitable		
Year	Annual Report	1307(f) Filing	USDOT Report	Annual Report	1307(f) Filing	USDOT Report	Annual Report	1307(f) Filing	USDOT Report
2005	1.11%	1.90%	1.88%	5.12%	3.48%	2.68%	10.23%	9.95%	5.10%
2006	0.06%	1.90%	1.88%	5.91%	4.32%	3.46%	11.91%	7.31%	7.60%
2007	-0.05%	1.30%	1.30%	9.01%	5.09%	3.94%	9.32%	6.95%	5.40%
2008	-0.66%	1.60%	1.30%	6.39%	4.90%	4.32%	10.01%	7.34%	7.60%
2009	-0.23%	1.90%	1.90%	4.55%	5.99%	3.20%	5.01%	7.00%	5.00%
2010	0.06%	2.00%	2.00%	6.13%	5.42%	2.85%	4.18%	5.18%	5.40%
	NFG			PECO			PGW		
2005	0.31%	2.50%	0.67%	2.84%	2.40%	2.40%	3.40%	3.90%	2.80%
2006	-1.52%	2.50%	0.42%	2.10%	2.90%	2.90%	1.89%	4.00%	2.00%
2007	0.02%	2.50%	0.42%	3.71%	3.60%	3.60%	7.56%	4.10%	2.80%
2008	-0.52%	0.36%	0.41%	4.49%	4.20%	3.58%	2.52%	3.90%	2.80%
2009	-0.42%	0.44%	0.31%	2.98%	4.30%	4.21%	2.91%	3.80%	2.20%
2010	1.90%	0.44%	0.00%	2.80%	4.40%	4.44%	5.90%	3.70%	2.20%
	TW Phillips			UGI Utilities			UGI - Penn Natural Gas		
2005	4.57%	4.57%	4.59%	-0.40%	-0.20%	0.20%	0.25%	0.45%	0.40%
2006	4.11%	4.11%	4.21%	0.42%	0.50%	0.20%	-1.03%	0.57%	0.40%
2007	4.25%	4.25%	4.16%	0.60%	0.70%	0.50%	-0.30%	0.55%	0.50%
2008	3.74%	4.34%	3.15%	0.38%	0.73%	0.70%	0.70%	0.59%	0.68%
2009	5.40%	5.10%	5.10%	0.47%	0.51%	0.50%	0.91%	1.11%	1.08%
2010	4.11%	3.80%	3.90%	0.23%	0.40%	0.16%	0.45%	0.50%	0.53%

4-1. Calculated Annual Report value, based on financial accounting entries that do not represent the actual calendar-month physical volumes received and delivered by the Company.

Note: UGI – Central Penn Gas is not included due to the 2008 acquisition from PPL Gas.

Source: Annual Reports, USDOT Annual Reports for year ended June 30 and 1307(f) data provided to the Commission from the utilities.

Table 2

Unaccounted For Gas Levels for GCR Companies

Company	2009			2010		
	Annual Report	GCR	USDOT Report	Annual Report	GCR	USDOT Report
North East Heat and Light	1.25%	1.25%	1.62%	0.53%	0.53%	1%
Pine-Roe Natural Gas	N/A	8.50%	N/A	N/A	6.60%	N/A
Pike County Power & Light	-0.11%	-1.00%	0.10%	0.05%	-0.50%	0.80%
Valley Energy	-0.88%	-0.88%	2.40%	-1.76%	-1.76%	1.75%

Source: Annual Reports, USDOT Annual Reports for year ended June 30 and GCR data provided to the Commission from the utilities.

The PUC's Bureaus of Investigation and Enforcement and Audits compiled a Joint Report entitled, *UNACCOUNTED-FOR-GAS In the Commonwealth of Pennsylvania* dated February 2012 (Joint Report). This Joint Report was released to the public as an attachment to the proposed rulemaking order. In addition to Tables 1 and 2 above, the Joint Report pulled additional information from publically available resources and those sources are cited as such within the Joint Report.

(29) Include a schedule for review of the regulation including:

A. The date by which the agency must receive public comments:	30 & 45 days after pub. in the Pa.B.
B. The date or dates on which public meetings or hearings will be held:	N/A
C. The expected date of promulgation of the proposed regulation as a final-form regulation:	$1^{st}/2^{nd}$ quarter 2013
D. The expected effective date of the final-form regulation:	$3^{rd}/4^{th}$ quarter 2013
E. The date by which compliance with the final-form regulation will be required:	1 yr after publication as final
F. The date by which required permits, licenses or other approvals must be obtained:	N/A

(30) Describe the plan developed for evaluating the continuing effectiveness of the regulations after its implementation.

The regulation will be reviewed on an as-needed basis.

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BY Amy M. Elliott (DEPUTY ATTORNEY GENERAL)	Pennsylvania Public Utility Commission (AGENCY)	BY Bohdan R. Pankiw Bohdan R. Pankiw Chief Counsel
JUL 18 2012 DATE OF APPROVAL	DOCUMENT/FISCAL NOTE NO. L-2012-2294746/57-289 DATE OF ADOPTION June 7, 2012 BY Rosemary Chiavetta Rosemary Chiavetta TITLE Secy (SECRETARY)	6-7-2012 DATE OF APPROVAL
☐ Check if applicable Copy not approved. Objections attached		☐ Check if applicable. No Attorney General approval or objection within 30 days after submission.

L-2012-2294746/57-289
Proposed Rulemaking
Establishing a Uniform Definition and
Metrics for Unaccounted-For-Gas
52 Pa Code, Chapter 59

The Pennsylvania Public Utility Commission on June 7, 2012, adopted a proposed rulemaking order which establishes a uniform definition of UFG and metrics for UFG. The contact persons are Assistant Counsel Lawrence F. Barth, Law Bureau, 717 772-8579 and Nathan Paul, Bureau of Audits, 717 214-8249.

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EXECUTIVE SUMMARY

L-2012-2294746/57-289

Proposed Rulemaking
Establishing a Uniform Definition and Metrics
For Unaccounted-For-Gas

52 Pa. Code §§ 59.111.1 – 111.14

The Public Utility Commission's (PUC) Bureau of Investigation and Enforcement and Bureau of Audits generated a joint report entitled *UNACCOUNTED-FOR-GAS (UFG) in the Commonwealth of Pennsylvania* dated February 2012. The report identified the following general findings: natural gas distribution companies (NGDC) often report UFG based upon their own definition, which varies from company to company resulting in inconsistent reporting; the lack of a standard definition of UFG may tempt NGDCs to trivialize the importance of minimizing the volume of UFG; the PUC should consider establishing a clear definition of UFG to eliminate any inconsistencies that may currently exist; and the PUC should consider establishing specific metrics to establish and transition to an acceptable level of UFG. As a result of the report, a cross disciplinary team was established to explore proposed regulations and was formed by members of the following Bureaus: Law Bureau, Office of Special Assistants, Audits, and Technical Utility Services. The team also met with industry representatives comprised of the Energy Association of Pennsylvania and several company representatives, to further refine the proposed regulation.

On June 7, 2012, the PUC issued a proposed regulation based on the joint report and input from industry representatives. The proposed regulation, which is directed at NGDCs, is drafted to create a consistent definition for UFG and a cap metric for maximum allowable recovery of UFG. Specifically, the proposed rulemaking aims to establish a uniform definition and methodology for the calculation and reporting of UFG within Pennsylvania. In addition, the proposed rulemaking proposes a maximum allowed recovery for UFG with year one allowing 5% of distribution losses; year two at 4.5%; year three at 4%; year four at 3.5%; and year five at 3%.

The contact persons for this proposed rulemaking are Nathan Paul, 717-214-8249 (technical), and Lawrence Barth, (717) 787-5000 (legal).

PENNSYLVANIA
PUBLIC UTILITY COMMISSION
Harrisburg, PA 17105-3265

Public Meeting held June 7, 2012

Commissioners Present:

Robert F. Powelson, Chairman
John F. Coleman, Jr., Vice Chairman
Wayne E. Gardner
James H. Cawley
Pamela A. Witmer

Establishing A Uniform
Definition and Metrics
For Unaccounted-For-Gas

Docket No. L-2012-2294746

PROPOSED RULEMAKING ORDER

BY THE COMMISSION:

Customers of natural gas distribution companies (NGDCs) in Pennsylvania pay for the costs of unaccounted for gas (UFG) through various proceedings that allow for the collection of those costs. In general, UFG is the difference between the amount of gas delivered to the NGDC and that used or sold by the NGDC's customers. The accurate calculation of the cost this gas is of great concern to the Pennsylvania Public Utility Commission (PUC or Commission). Currently, the PUC's regulations lack a definition for UFG, and, as a result, the Commission gets information on UFG based upon individual companies' definition of that term. Due to the lack of consistency in this information, current reported levels of UFG are not comparable and hinder the Commission's ability to effectively monitor UFG levels and their corresponding financial burden to ratepayers.

Accordingly, the Commission has determined that it is important that all UFG be treated in a uniform manner. This uniformity requires a standard definition that has been lacking and a standard set of metrics that will serve as a bright line for the recovery and non-recovery of these costs. With these changes, annual reports will now mandate accurate and uniform UFG reporting.

To that end, we propose to adopt the Staff's recommendation and establish a uniform definition of UFG and metrics for UFG. Therefore, in accordance with Section 501 of the Public Utility Code, 66 Pa. C.S. § 501(b), the Commission is formally commencing its rulemaking process to establish regulations regarding UFG reporting requirements, standards and maximum limits at 52 Pa. Code § 59.111 pursuant to the proposed language attached as Annex A.

Statement of Scope and Purpose

The regulations, attached as Annex A, are being proposed to create a consistent definition for UFG within Pennsylvania and will apply to any filing made by NGDCs to the Commission. In addition, a UFG metric is being established to set the maximum level of financial recovery of UFG for NGDCs. The addition of a UFG definition and metric for cost recovery purposes should not be construed to supersede the Commission's ability and obligation to ensure safety, in particular the powers enumerated in the Public Utility Code at Sections 331, 501, 1501 and 1504 (66 Pa. C.S. §§ 331, 501, 1501, and 1504) or the Commission's partnership with the federal government and enforcement powers governed by 49 U.S.C. § 601 and 49 C.F.R. §§ 190-193 and 199.

The Commission views the adoption of this definition to be a potential addition to its safety efforts in conjunction with those tools. It intends to use these new standardized reports as the basis for future action in the safety area. Additionally, the Commission may also require NGDCs to file plans or perform additional remediation in conjunction with a rate proceeding or similar settlement if the NGDC's level of UFG is worsening, even if the NGDC's level of UFG is below the metric established in Annex A.

Background

NGDCs are required to report their level of UFG in at least three separate filings with the Commission.[1] Generally, within Pennsylvania, UFG is the difference between the amount of gas delivered to the NGDC and that which is sold to/used by the NGDC's customers. However, the definition varies widely between companies and there is little case law within Pennsylvania defining UFG. The level and cost of UFG can be excluded or adjusted within formal rate proceedings if the Commission deems the level filed by the utility to be "excessive." The inconsistency in definition and lack of focus on UFG has hindered the Commission's ability to effectively monitor and compare UFG levels and its corresponding financial burden on ratepayers.

In February 2012, the Commission's Bureau of Investigation and Enforcement (BI&E) and the Bureau of Audits (Audits) internally released a report to the Commission entitled *UNACCOUNTED-FOR-GAS In the Commonwealth of Pennsylvania* (Report). A copy of this Report is attached to this Order.

In the Report, Staff found that NGDCs often report UFG based upon their own definition, which varies from company to company, resulting in inconsistent reporting. *See* Report, p. 6. Also, the lack of a standard definition of UFG may tempt NGDCs to trivialize the importance of minimizing the volume of UFG. *Id.* at 7. In addition, the Report identifies and attempts to summarize the financial impact on Pennsylvania ratepayers related to UFG. *Id.* at 12. The Report recommends that the Commission consider establishing a clear definition of UFG to eliminate any reporting inconsistencies

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[1] Schedule 505 (Gas Account-Natural Gas) of the Gas Annual Report is required by 66 Pa. C.S. § 504, GCR and PGC filings are required by 66 Pa. C.S. § 1307(e) and (f), Department of Transportation (USDOT) Pipeline and Hazardous Material Safety Administration (PHMSA) Form 7100.1-1 is provided to states according to 49 U.S.C. § 60105. These requirements are discussed below.

that may currently exist. *Id.* at 12. It also suggests that the Commission consider establishing specific metrics to identify and transition to an acceptable level of UFG, as well as consider creating a cap for NGDC cost recovery. *Id.* at 13.

Discussion

As explained above, the term "unaccounted for gas" is used in one form or another throughout the Commission and by NGDCs in a variety of rate proceedings, filings, reviews, and documents. In fact, UFG is reported to the Commission in at least three regularly required filings:

- Schedule 505 of the Gas Annual Report;
- 66 Pa. C.S. § 1307(f) filings through which Purchased Gas Cost (PGC) filings and Gas Cost Rate filings (GCR) are made; and
- U.S. Department of Transportation (USDOT) Pipeline and Hazardous Material Safety Administration (PHMSA) Form 7100.1-1 (USDOT Report).

Gas utilities submit Schedule 505 to the Commission as part of their Annual Report,[2] encompassing data from January 1 to December 31. A review of Schedule 505 indicates that there are three main components and various subcomponents to gas accounting, which include gas received, gas delivered, and UFG. Schedule 505 specifically states, "The purpose of this schedule is to account for the quantity of natural gas received and delivered by the respondent adjusted for any differences in pressure bases used in measuring a thousand cubic feet (MCF) of natural gas received and delivered." Given this statement, UFG can be simply defined as the difference between total gas received and the sum of total gas delivered and company use within a gas system for a calendar year. In addition, NGDCs are allowed to adjust for temperature or pressure variations on measured results. To make an effective analysis of UFG, the Annual Reports will now include accurate reporting of UFG as defined by the proposed

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[2] *See* http://www.puc.state.pa.us/general/onlineforms.aspx to obtain a copy of Schedule 505.

regulation. Further the Commission will develop a template for the reporting of UFG as part of that Annual Report to maintain consistency.

Although GCR and PGC filings are separate and distinct mechanisms, they both approach UFG similarly. UFG is defined for PGC and GCR filings in 66 Pa. C.S. § 1307(h):

> As used in this section, the terms "natural gas costs" and "gas costs" include the direct costs paid by a natural gas distribution company for the purchase and the delivery of natural gas to its system in order to supply its customers. Such costs may include costs paid under agreements to purchase natural gas from sellers; costs paid for transporting natural gas to its system; costs paid for natural gas storage service from others, including the costs of injecting and withdrawing natural gas from storage; all charges, fees, taxes and rates paid in connection with such purchases, pipeline gathering, storage and transportation; and costs paid for employing futures, options and other risk management tools. "Natural gas" and "gas" include natural gas, liquefied natural gas, synthetic natural gas and any natural gas substitutes.

Under this provision, UFG is generally considered a cost of service and is included as a component of the cost of gas established in § 1307 Gas Cost proceedings.

UFG is reported to the Commission pursuant to 52 Pa. Code § 59.81-84 by Form-IRP[3]-Gas 1A Annual Gas Demand Requirements. Since our regulations do not provide a definition for UFG, the § 1307(f) NGDCs provide this data in their annual PGC filings based upon each company's unique definition of UFG. *See* Report, p. 6. For GCR companies, UFG is computed by Audits from company data presented in their annual GCR filings. The GCR companies file supporting data from either September to August

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[3] 52 Pa. Code § 59.81 discusses the requirements associated with a NGDCs Integrated Resource Planning Report or IRP. § 59.82 discusses the Annual Conservation Report; § 59.83 discusses Evaluating Methodologies; and § 59.84 discusses Formats.

or November to October. *Id.* at 2. In contrast, PGC companies file pursuant to a schedule filed in the Pennsylvania Bulletin.[4] Based on each company's filing, Audits, BI&E, or interveners can propose adjustments to the gas cost rates if the level of UFG is considered "excessive." *Id.*

USDOT Reports are required by regulation at 49 C.F.R. § 191 and duplicate reports are provided to state agencies under 49 U.S.C. § 60105. The Commission's Gas Safety Division and Audits use this data to assess company performance. *See* Report, p. 3. In the Gas Distribution System Instructions for Completing Form PHMSA[5] F7100.1-1 Part G– Percent of Unaccounted for Gas, USDOT provides the following definition and calculation for UFG:

> "Unaccounted for gas" is gas lost; that is, gas that the distribution system operator cannot account for as usage or through appropriate adjustments. Adjustments are appropriately made for factors as variations in temperature, pressure, meter-reading cycles, or heat content; calculable losses from construction, purging, line breaks, etc., where specific data are available to allow reasonable calculation or estimate; or other similar factors.
>
> State the amount of unaccounted for gas as a percent of total input for the 12 months ending June 30 of the reporting year.
>
> [(Purchased gas + produced gas) minus (customer use + company use + appropriate adjustments)] divided by (purchased gas + produced gas) equals percent unaccounted for.
>
> Do not report "gained" gas. If a net gain of gas is indicated by the calculations, report "0%" here. (Decimal or fractional percentages may be entered.)[6]

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[4]*See* Pa.B. 4603, Saturday, August 20, 2011, for the 2012 schedule of § 1307(f) NGDC filing dates.
[5] U.S. DOT Pipeline and Hazardous Materials Safety Administration (PHMSA).
[6] *See* http://www.phmsa.dot.gov/pipeline/library/forms.

As stated above, the directions define the time period as being the "12 months ending June 30 of the reporting year." In addition, the USDOT Report only applies to distribution systems. PHMSA has a separate UFG report for transmission, production/gathering, and/or storage losses.

The lack of an actual UFG definition provides an inconsistent and often incomparable metric. All three reports can include different types of facilities (*i.e.*, distribution, transmission, storage, and production/gathering). Schedule 505 is unclear whether UFG should include production/gathering, storage, and interstate transmission losses. *See* Report, pp. 6-7. A review of the 2010 Annual Report of the ten 1307(f) companies reveals that different companies report and/or track different types of UFG. *Id.* at 7.

The inconsistency among definitions has also introduced errors within reported UFG levels. *See* Report, pp. 8-9. As presented in Table 1 and the discussion on GCR companies below, various NGDCs have reported negative UFG. Since a closed system cannot spontaneously generate gas, the negative UFG suggests a flaw in the measurement, calculation or definition of UFG. *Id.* at 9. There may be conditions leading to UFG (as presented in the GCR Company's comments within GCR Filings discussed below), which are often argued by utilities through timing of bills, and meter inaccuracies, for example. However, a consistent definition for UFG would eliminate the potential for these errors leading to a net negative UFG level.

Many of the GCR companies file little or no UFG. In fact, eight out of twelve GCR companies[7] file zero or negative UFG in their GCR filings.[8] These low UFG numbers are not an indication of the distribution system operations, but rather are due to

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[7] Andreassi, Chartiers. Herman Oil & Gas., Herman Riemer, Orwell, Sergeant, Sigel, and Wally all report zero or negative UFG in their GCR Filings.

[8] Analysis taken from data provided to the Commission in the 2009, 2010, and 2011 GCR filing by GCR companies.

metering. Specifically, these eight companies are not metering their source (gas produced) and, therefore, their losses are absorbed by their production affiliates. Although ratepayers may currently benefit from this relationship, the Commission has no relevant UFG information about these GCR distribution systems. We wish to make it clear that, as part of this proceeding, we will not require these GCR companies to install meters necessary to fully track UFG at this time. Nonetheless, this is an option that will require additional study and could be implemented sometime in the future. A consistent definition of UFG may not correct the practice of allowing production affiliates to absorb these losses, but it should help highlight the importance of tracking UFG due to the Commission's refined and consistent approach to UFG.

Table 1

Unaccounted For Gas Levels for PGC Companies

	Columbia			Dominion[4-1]			Equitable		
Year	Annual Report	1307(f) Filing	USDOT Report	Annual Report	1307(f) Filing	USDOT Report	Annual Report	1307(f) Filing	USDOT Report
2005	1.11%	1.90%	1.88%	5.12%	3.48%	2.68%	10.23%	9.95%	5.10%
2006	0.06%	1.90%	1.88%	5.91%	4.32%	3.46%	11.91%	7.31%	7.60%
2007	-0.05%	1.30%	1.30%	9.01%	5.09%	3.94%	9.32%	6.95%	5.40%
2008	-0.66%	1.60%	1.30%	6.39%	4.90%	4.32%	10.01%	7.34%	7.60%
2009	-0.23%	1.90%	1.90%	4.55%	5.99%	3.20%	5.01%	7.00%	5.00%
2010	0.06%	2.00%	2.00%	6.13%	5.42%	2.85%	4.18%	5.18%	5.40%
	NFG			PECO			PGW		
2005	0.31%	2.50%	0.67%	2.84%	2.40%	2.40%	3.40%	3.90%	2.80%
2006	-1.52%	2.50%	0.42%	2.10%	2.90%	2.90%	1.89%	4.00%	2.00%
2007	0.02%	2.50%	0.42%	3.71%	3.60%	3.60%	7.56%	4.10%	2.80%
2008	-0.52%	0.36%	0.41%	4.49%	4.20%	3.58%	2.52%	3.90%	2.80%
2009	-0.42%	0.44%	0.31%	2.98%	4.30%	4.21%	2.91%	3.80%	2.20%
2010	1.90%	0.44%	0.00%	2.80%	4.40%	4.44%	5.90%	3.70%	2.20%
	TW Phillips			UGI Utilities			UGI - Penn Natural Gas		
2005	4.57%	4.57%	4.59%	-0.40%	-0.20%	0.20%	0.25%	0.45%	0.40%
2006	4.11%	4.11%	4.21%	0.42%	0.50%	0.20%	-1.03%	0.57%	0.40%
2007	4.25%	4.25%	4.16%	0.60%	0.70%	0.50%	-0.30%	0.55%	0.50%
2008	3.74%	4.34%	3.15%	0.38%	0.73%	0.70%	0.70%	0.59%	0.68%
2009	5.40%	5.10%	5.10%	0.47%	0.51%	0.50%	0.91%	1.11%	1.08%
2010	4.11%	3.80%	3.90%	0.23%	0.40%	0.16%	0.45%	0.50%	0.53%

4-1. Calculated Annual Report value, based on financial accounting entries that do not represent the actual calendar-month physical volumes received and delivered by the Company.

Note: UGI – Central Penn Gas is not included due to the 2008 acquisition from PPL Gas.

Source: Annual Reports, USDOT Annual Reports for year ended June 30 and 1307(f) data provided to the Commission from the utilities.

Table 2

Unaccounted For Gas Levels for GCR Companies

Company	2009			2010		
	Annual Report	GCR	USDOT Report	Annual Report	GCR	USDOT Report
North East Heat and Light	1.25%	1.25%	1.62%	0.53%	0.53%	1%
Pine-Roe Natural Gas	N/A	8.50%	N/A	N/A	6.60%	N/A
Pike County Power & Light	-0.11%	-1.00%	0.10%	0.05%	-0.50%	0.80%
Valley Energy	-0.88%	-0.88%	2.40%	-1.76%	-1.76%	1.75%

Source: Annual Reports, USDOT Annual Reports for year ended June 30 and GCR data provided to the Commission from the utilities.

The Commission has established benchmarks for certain utility services in order to aid in determining prudent, reliable and/or safe utility service. The Commission has already established Electric Reliability Standards at 52 Pa. Code § 57.191, Telephone Quality Service Standards at 52 Pa. Code § 63.51, and a standard for excessive amounts of unaccounted-for-water at 52 Pa. Code § 65.20(4). A consistent definition of UFG would provide the Commission with the framework to review and compare UFG within Pennsylvania. Additionally, a UFG metric for 1307 cost recovery based upon a consistent definition has the potential to provide a meaningful and beneficial mechanism to track and quantify the impact of UFG upon Pennsylvania ratepayers. *See* Report, p. 10.

The total financial impact of UFG is estimated to be $25.5 million to $131.5 million per year. *See* Report, p. 10. However, the exact impact of UFG within Pennsylvania and on its ratepayers is currently unknown due to the lack of a consistent definition. *Id.* at 9. Ultimately, the metric and disallowance for any "excess" loss above the proposed standard would shift the financial burden of any "excess lost gas" from the ratepayer to the utility. Therefore, the continued focus and potential financial impact of UFG could drive a reduction or retain UFG levels below the metric within Pennsylvania.

Id. at 11-12. Ultimately, the Commission will have the ability to effectively monitor, enforce, and review UFG levels. *Id.* at 10-12.

The proposed rulemaking is in general support of various other regulations and orders before the Commission and the USDOT's PHMSA. Pursuant to 74 FR § 63906,[9] the Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006, NGDCs must develop and implement a distribution integrity management program (DIMP). Within each company's DIMP, the NGDC must identify and reduce risks which would include high levels of UFG resulting from breaks or leaks. Therefore, a metric for UFG should position the Commission's efforts with PHMSA's direction to minimize risks within distribution systems. *See* Report, p. 11. In addition, Commission orders at Docket No. M-2011-2271982 (entered on November 10, 2011, December 1, 2011 and December 22, 2011) aim to improve the safety of the NGDCs through enhanced frost patrols and replacement of high risk pipelines (*i.e.*, bare steel and cast iron). The proposed definition and metric for UFG aligns with the Commission's efforts to improve safety in natural gas pipelines. As NGDCs enhance their frost patrols and replace high risk pipe with more contemporary materials, their respective levels of UFG should decrease.

Proposed Rulemaking

Section 59.111(a).

The terms used within the UFG calculation are fully defined in this section. More specifically, UFG is defined as the calculation for all lost gas and is derived from the difference in gas received and the accumulation of gas delivered and adjustments. All gas considered received, delivered or adjustments made shall be based upon metered data or sound engineering practices.

[9] Final Rule Integrity Management Program for Gas Distribution Pipelines. Effective - February 2, 2010.

Section 59.111(b).

The proposed UFG calculation is based on the USDOT Report calculation and is generally aligned with current NGDC definitions of UFG. Since the Commission has jurisdiction over public utility gathering, transmission (pursuant to 52 Pa Code §59.31(a)), distribution and storage, losses from all aspects of operating an NGDC should be recorded and reported within a company's filings. This is highlighted within proposed Sections 59.111(b)(3) and 59.111(b)(5). Losses for each system should be calculated to the extent possible with actual gas volumes or if unattainable, through supported, transparent and consistent estimation calculations.

Section 59.111(c).

A declining distribution metric was proposed to align the UFG metric with PHMSA's DIMP, the Commission's December 2011 Order at Docket No. M-2011-2271982 and other efforts within the gas industry. A starting point of 5% UFG was established based upon reported utility performance within the PGC, GCR, Annual Report and USDOT Report filings. All but two PGC companies (out of 9 presented)[10] and one GCR company (out of 12)[11] reported UFG levels below 5% in 2010 on their PGC or GCR filings. Therefore, the starting point for the metric is set at the worst performing levels within Pennsylvania. The end point of 3% was also established based upon current levels of UFG filed with the Commission. Only four PGC companies and none of the GCR companies reported UFG levels above the 3% final threshold in their respective 2010 Annual Reports (or three PGC companies and no GCR Companies filed above 3% in the 2010 USDOT Report). It should also be noted that the UFG data provided in the Annual Reports includes losses from non-distribution related facilities.

[10] One of the PGC companies was excluded due to a recent acquisition; however, this Company's UFG was below 5% and has since improved.

[11] Although the Commission does not have any information on the actual level of UFG at most GCR companies, it should be noted that the metric will not have any financial impact on these companies. Because the Companies already absorb (through a production affiliate) the costs of any lost gas, this metric would not change this financial burden, instead it only changes the maximum amount GCR companies could recover if or when they include UFG levels in their GCR filing.

Therefore, the UFG levels provided in the Annual Report would likely be higher than the company's level of distribution UFG. Ultimately, a majority of NGDCs are already performing below the final proposed level of 3% and improvements are being made that should help drive UFG downward. Therefore, the final distribution metric of 3% appears to be an obtainable level for NGDCs that is fiscally responsible for Pennsylvania and ratepayers. Notably, Companies with UFG levels below the metrics are expected to maintain or improve their UFG levels and, if increasing, must provide a specific rationale in an appropriate filing and/or proceeding to explain why their UFG is increasing and why it is in the public interest to pass the additional UFG cost to ratepayers.

Due to the fact that an inconsistent definition of UFG can raise doubt on the factual levels of UFG within Pennsylvania, we propose that the distribution metric should be implemented one year after the proposed definition is adopted. This time delay should afford all NGDCs the ability to test any changes to their reported UFG based upon the proposed definition through the regulatory review process and implementation, effectively affording approximately three years until the 5% takes effect. Since the NGDCs 1307(f) filing dates are inconsistent between the companies, the metric shall be based upon a consistent calendar year basis as stated by § 59.111(c)(2). This information is already required to be filed to the Commission through the Annual Report.

CONCLUSION

The proposed regulations issued for comment by this Order represent the first step in establishing a consistent definition and metric for UFG for all jurisdictional NGDCs. This step is necessary to enhance the Commission's ability to monitor and compare UFG levels and their corresponding financial burden to Pennsylvania ratepayers. The Commission, therefore, formally commences its rulemaking process to amend its existing regulations by establishing 52 Pa. Code § 59.111 consistent with Annex A to this Order.

Accordingly, pursuant to Sections 501, 504, 523, 1301, 1501, and 1504, and Public Utility Code, 66 Pa. C.S. §§ 501, 504, 523, 1301, 1501, and 1504, and Sections 201 and 202 of the Act of July 31, 1968, P.L. 769 No. 240, 45 P.S. §§ 1201-1202, and the regulations promulgated thereunder at 1 Pa. Code §§ 7.1, 7.2, and 7.5; Section 204(b) of the Commonwealth Attorneys Act, 71 P.S. § 732.204(b); Section 745.5 of the Regulatory Review Act, 71 P.S. § 745.5; and Section 612 of the Administrative Code of 1929, 71 P.S. § 232, and the regulations promulgated thereunder at 4 Pa. Code §§ 7.231-7.234, we are considering adopting the proposed regulations as set forth in Annex A, attached hereto; **THEREFORE,**

IT IS ORDERED:

1. That a proposed rulemaking be opened to consider the regulations set forth in Annex A.

2. That the Secretary shall submit this proposed rulemaking Order and Annex A to the Office of Attorney General for review as to form and legality and to the Governor's Budget Office for review of fiscal impact.

3. That the Secretary shall submit this proposed rulemaking Order and Annex A for review and comments to the Independent Regulatory Review Commission and the Legislative Standing Committees.

4. That the Secretary shall certify this proposed rulemaking Order and Annex A and deposit them with the Legislative Reference Bureau to be published in the *Pennsylvania Bulletin*.

5. That an original and 15 copies of any written comments referencing the Docket Number L-2012-2294746 be submitted within 30 days and reply comments

within 45 days of publication in the *Pennsylvania Bulletin* to the Pennsylvania Public Utility Commission, Attn: Secretary, P.O. Box 3265, Harrisburg, PA 17105-3265 and comments and reply comments shall be electronically mailed, in Word format, to Nathan Paul at npaul@pa.gov. Attachments may not exceed three megabytes.

6. That a copy of this proposed rulemaking Order and Annex A shall be served on the Bureau of Audits, the Bureau of Investigation and Enforcement, the Office of Consumer Advocate, the Office of Small Business Advocate, and all jurisdictional Natural Gas Distribution Companies.

7. That the contact person for legal matters for this proposed rulemaking is Lawrence F. Barth, Assistant Counsel, Law Bureau (717) 787-5000. The contact person for technical matters for this proposed rulemaking is Nathan Paul, Bureau of Audits (717) 214-8249. Alternate formats of this document are available to persons with disabilities and may be obtained by contacting Sherri DelBiondo, Regulatory Coordinator, Law Bureau (717) 772-4597.

BY THE COMMISSION,

Rosemary Chiavetta
Secretary

(SEAL)

ORDER ADOPTED: June 7, 2012

ORDER ENTERED: June 7, 2012

ANNEX A
TITLE 52. PUBLIC UTILITIES
PART I. PUBLIC UTILITY COMMISSION
Subpart C. FIXED SERVICE UTILITIES
CHAPTER 59

§ 59.111. Unaccounted-for-gas.

(a) *Definitions.* The following words and terms, when used in this section, have the following meanings, unless the text clearly indicates otherwise:

Adjustments- All gas used by a NGDC or city natural gas distribution operation for safe and reliable service, such as company use, calculable losses from construction, purging, other temperature and pressure adjustments, and adjustments for heat content of natural gas. Adjustments shall be supported by metered data, sound engineering practices, or other quantifiable results that clearly support the utility's need for the adjustment and shall be consistent from filing to filing.

Gas delivered- Any gas provided by the distribution, transmission, storage or production/gathering facilities of a NGDC or city natural gas distribution operation, regardless of use, adjusted for any temperature or pressure variations. This category includes quantities of gas consumed by an end user, exchange gas supplied to another utility, gas delivered to transportation customers, or any other gas delivered to a user other than the utility. When bill timing issues arise, an effort shall be made to reasonably estimate consumption.

Gas received - Any gas that is supplied to the distribution, transmission, storage, or production/gathering facilities of a NGDC or city natural gas distribution operation, regardless of use, adjusted for any temperature or pressure variations. This category includes gas for sales, storage, transportation quantities, exchange gas received, or any other quantity of gas that otherwise enters the utility's facilities.

UFG--Unaccounted-for-gas - The calculation for all gas lost by the system, including gas lost due to breaks, leaks, theft of service, unmetered consumption, meter inaccuracies, or any other point of lost, unidentifiable, or non-revenue producing gas.

(b) *Calculation.*

(1) UFG**x** = Gas Received**x** – Gas Delivered**x**– Adjustments**x**

(2) %UFG_x = (UFG_x) / (Gas Received) * 100

(3) X denotes the system type (distribution, transmission, storage, or production/gathering). Whenever possible, UFG shall be computed and reported by system type.

(4) Gas received, gas delivered and adjustments shall represent actual gas quantities. Estimates may be provided but shall be clearly identified and have supporting justification, assumptions and calculations.

(5) Adjustments shall be individually identified by category (that is, company use, calculable losses from construction, purging, other temperature and pressure adjustments, and adjustments for heat content of natural gas).

(6) The definition of UFG in section (a) and the calculation pursuant to section (b) shall apply to all UFG filed with the Commission.

(c) *Metrics for distribution system losses.*

(1) Each NGDC and city natural gas distribution operation shall, at a minimum, reduce distribution system loss performance in accordance with the metrics in the table below, commencing with its first subsequent PGC or GCR filing 1 year after the effective date of this regulation. The metric starts with 5% in the first year and decreases by 0.5% every year in the subsequent years until it reaches 3% as shown in the table below:

Year	Percent UFG
1	5.00%
2	4.50%
3	4.00%
4	3.50%
5	3.00%

(2) The distribution metrics shall be applied on an annual basis for the year ending December 31.

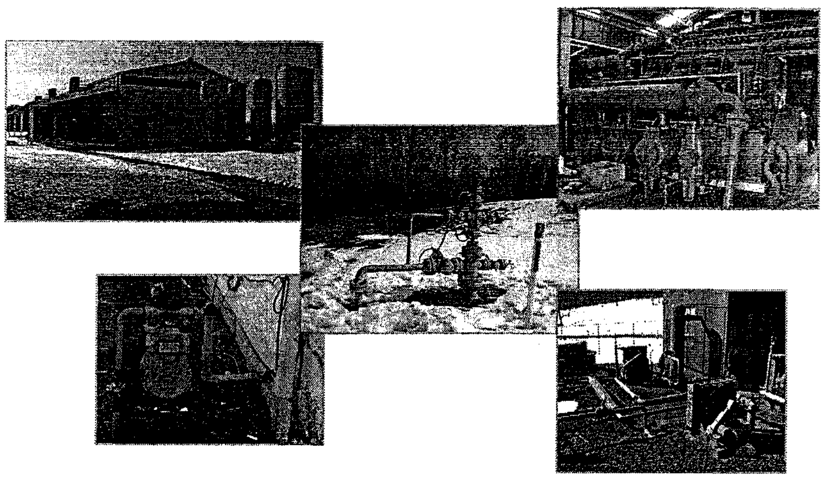
(3) Amounts of UFG in excess of the standard may not be recovered within the current or a future PGC or GCR filing unless approved by the Commission.

Attachment

UNACCOUNTED-FOR-GAS

In the

Commonwealth of Pennsylvania



Joint Report by the Bureau of Investigation and Enforcement
and the Bureau of Audits

February 2012

PENNSYLVANIA
PUC
PUBLIC UTILITY COMMISSION

Executive Summary

The Pennsylvania Public Utility Commission (Commission or PUC) balances the needs of consumers and utilities to ensure safe and reliable utility service at reasonable rates; protect the public interest; educate consumers to make independent and informed utility choices; further economic development; and foster new technologies and competitive markets in an environmentally sound manner. Therefore, the Commission is tasked with regulating natural gas distribution companies (NGDCs) within Pennsylvania through a myriad of analysis, reviews, rate proceedings, audits, investigations, orders, policy statements, regulations, etc.

The Commission requires NGDCs to report their level of unaccounted-for-gas (UFG) in at least three separate filings. In general, UFG is the difference between the amount of gas delivered to the NGDC and that sold/used by the NGDC's customers but the definition can vary widely between companies. There is little case law defining UFG; however, Commission Decisions have provided some guidance on this issue. The cost of UFG can be excluded or adjusted within formal rate proceedings if the Commission deems the level filed by the utility to be "excessive". Therefore, the PUC's Gas Safety Division within the Bureau of Investigation and Enforcement (BI&E) and the Bureau of Audits (Audits) identified a need to perform an evaluation of UFG's impact upon ratepayers within Pennsylvania. The evaluation identified the following general findings:

1.) NGDCs often report UFG based upon their own definition, which varies from company to company resulting in inconsistent reporting.

2.) The lack of a standard definition of UFG may tempt NGDCs to trivialize the importance of minimizing the volume of UFG.

3.) The Commission should consider establishing a clear definition of UFG to eliminate any inconsistencies that may currently exist.

4.) The Commission should consider establishing specific metrics to establish and transition to an acceptable level of UFG.

Creating a definition for UFG will provide the Commission with a consistent, fair, clear, and concise method to assess UFG within rate case proceedings, 1307(e) and (f) filings, annual reports, or other investigations. Utilities will then be required to report UFG and calculations based upon the proposed definition instead of the various conditions presented throughout the report. In addition, a Commission mandated maximum allowable percentage, or cap metric, for UFG will provide clear means for enforcement and allotment to all NGDCs. A cap metric will help to emphasize the importance of asset management, damage prevention, theft protection, leakage control, and other UFG related issues. The cap metric for distribution facilities should be enforced one year after an UFG definition is finalized and should gradually become more stringent. In addition, cap metrics for production and gathering facilities (under Commission jurisdiction) should be reviewed after more data is collected.

Background

The term "unaccounted-for-gas" is used in one form or another throughout the Commission and the gas industry in a variety of rate proceedings, filings, reviews, and documents. In fact, UFG is reported to the Commission in at least three regularly required filings; Schedule 505 (Gas Account-Natural Gas) of the Gas Annual Report, 66 Pa. C.S. § 1307(f) Filings (otherwise known as Purchased Gas Cost [PGC] filings)[12], and Department of Transportation (DOT) Pipeline and Hazardous Material Safety Administration (PHMSA) Form 7100.1-1 (henceforth referred to as the DOT Report filed with the Commission's Gas Safety Division).

Gas utilities submit Schedule 505 to the Commission as part of their annual report encompassing data from January 1 to December 31. A review of Schedule 505 indicates that there are three main components and various subcomponents to gas accounting, which include gas received, gas delivered, and unaccounted-for-gas. Schedule 505 (attached as Appendix A) specifically states, "The purpose of this schedule is to account for the quantity of natural gas received and delivered by the respondent adjusted for any differences in pressure bases used in measuring a thousand cubic feet (MCF) of natural gas received and delivered." Given this statement, UFG can be simply defined as the difference between total gas received and total delivered and company use within a gas system for a calendar year. In addition, NGDCs are allowed to adjust for temperature or pressure variations on measured results.

Although Gas Cost Rate (GCR) and PGC filings are separate and distinct mechanisms, they both approach UFG similarly. UFG is not defined in 66 Pa. C.S. § 1307 or 52 Pa Code §§ 53 or 59. However, 66 Pa. C.S. § 1307(h) defines natural gas costs as, "the direct costs paid by a natural gas distribution company for the purchase and the delivery of natural gas to its system in order to supply its customers." Under this provision, UFG is generally considered a cost of service and is included as a component of the cost of gas established in 1307 Gas Cost proceedings. UFG is reported to the Commission pursuant to 52 Pa. Code § 59.81-84 by Form-IRP-Gas 1A Annual Gas Demand Requirements. Since our regulations do not provide a definition for UFG, the 1307(f) NGDCs provide this data in their annual PGC filings based upon each company's unique definition of UFG and for our non-1307(f) or GCR NGDCs UFG is computed by the Bureau of Audits from company data presented in annual GCR filings. The GCR companies file supporting data from either September to August or November to October.[13] In contrast, PGC companies file pursuant to a schedule filed in the Pennsylvania Bulletin.[14] Based on each company's filing, the Bureau of Audits (Audits), Bureau of Investigation and Enforcement (BI&E), or interveners can propose adjustments to the gas cost rates if level of UFG is considered "excessive".

[12] Gas Cost Rate (GCR) companies are not required to quantify UFG. Instead, the Bureau of Audits calculates the level of UFG by using gas supply and consumption requirements data provided by the GCR Companies.

[13] Pike County Light & Power and Valley Energy, Inc. file their GCRs on a September 1 to August 31 timescale while all other GCR companies adhere to the November 1 to October 31 period.

[14] *See* Pa.B. 4603, Saturday, August 20, 2011, for the 2012 schedule of § 1307(f) NGDC filing dates.

DOT Reports are required by 49 C.F.R. § 191 and duplicates are provided to state agencies under 49 U.S.C. § 60105. In turn, the Commission's Gas Safety Division and Bureau of Audits use this data to assess company performance. In the Gas Distribution System Instructions for Completing Form PHMSA F7100.1-1 Part G– Percent of Unaccounted for Gas, DOT provides the following definition and calculation:

> "Unaccounted for gas" is gas lost; that is, gas that the distribution system operator cannot account for as usage or through appropriate adjustments. Adjustments are appropriately made for factors as variations in temperature, pressure, meter-reading cycles, or heat content; calculable losses from construction, purging, line breaks, etc., where specific data are available to allow reasonable calculation or estimate; or other similar factors.
>
> State the amount of unaccounted for gas as a percent of total input for the 12 months ending June 30 of the reporting year.
>
> [(Purchased gas + produced gas) minus (customer use + company use + appropriate adjustments)] divided by (purchased gas + produced gas) equals percent unaccounted for.
>
> Do not report "gained" gas. If a net gain of gas is indicated by the calculations, report "0%" here. (Decimal or fractional percentages may be entered.).

Moreover, the directions define the time period as being the "12 months ending June 30 of the reporting year." Another important note about the DOT Report is that it is for distribution systems only. PHMSA has a separate UFG report for transmission, production/gathering, and/or storage losses. An overview of the UFG calculation, time period, and the portions of the system reported upon are presented in Exhibit 1 for the PUC Annual Report, 1307(f) Filings and DOT Report.

Exhibit 1
Overview of UFG Calculations in Commission Required Reports

Report	PUC Annual Report	1307 Gas Cost Filing	DOT Report
Definition (Volume of UFG)	(Delivered to System) minus (Sales[1-1] from System) minus (Company Use)	Various/depends on the company (see Exhibit 2)	(Delivered to System) minus (Sales[1-1] from System) minus (Company Use) minus (Adjustments)
Time period	12 months ending 12/31	various/depends on filing	12 months ending 6/30
System Characteristics	Distribution and Storage although form has line items for Interstate Production/Gathering[1-2] and Transmission	Distribution, Production/Gathering[1-2], Storage and Transmission Systems.	Distribution System Only

1-1 Sales include transportation.
1-2 Production/Gathering, on a whole, is deregulated but is still included in this case as a subset of distribution.
Source: PUC Annual Report, PHMSA Form 7100.1-1, and 1307(f) Filings

Case History

In rate proceedings, the Commission relies on each company's definition for UFG, as there is little case law defining UFG. However, Commission decisions have given some guidance to this issue. In *Barasch v. Pennsylvania Public Utility Commission* 530 A.2d 936, 939 (Pa. Cmwlth. Ct. 1987)[15], the UFG was said to be the volumetric difference between the gas available for sale, *i.e.*, that which is introduced into the distribution system, versus the gas actually recorded by the utility as having been sold to ultimate consumers. The later decision of Pennsylvania Public Utility Commission v. Equitable Gas Company, provides a better understanding of the Commission's stance on UFG. 68 Pa. PUC 68,1988 Pa. PUC LEXIS 441 *18 (Pa. PUC 1988).

> Our definition of UFG was originally set forth in our Investigation of Gas Cost Rate No. 5, M-7805005, (Order entered March 16, 1984, p. 10) and was reaffirmed in the last Equitable 1307(f) proceeding (R-870589, P. 29 entered August 31, 1987), as follows:
>
> Lost and unaccounted-for gas in the accounting sense is that volumetric difference between the gas available for sale, i.e., that which is introduced into the distribution system, versus the gas actually recorded by the utility as having been sold to ultimate consumers. This missing gas is not specifically

[15] *Barasch* was remanded to the Commission for a restatement of the definition of UFG, however, there is no record of the PUC having taken any subsequent action.

> identified as such in the GCR formula but its existence nevertheless influences the final billing rate. This is because the cost recovery dollars are divided by MCF Sales, a smaller number than the MCF available for sales. Consequently, the final billing rate per MCF is higher than it would otherwise be if there were no lost or unaccounted-for gas.
>
> Describing UFG in the above terms however, does not provide a means of measuring what volume may be considered reasonable for rate setting purposes. With this in mind, we encouraged the parties in future proceedings to avoid litigating the manner in which UFG is calculated, and instead examine the factors which create those volumes. Specifically we stated:
>
> By achieving an understanding of the factors that contribute to the level of UFG, we can better determine the appropriate level of UFG expenses to be included in rates. (R-870589, p. 34 entered August 31, 1987)

Additionally, the *Equitable Gas* decision discusses factors that BI&E (formally known as the Office of Trial Staff [OTS]) addressed regarding UFG but the Commission specifically notes that BI&E provided no guidance on how to use the factors. *Id.*

More recently, in Pennsylvania Public Utility Commission v. Philadelphia Gas Works 2010 Pa PUC LEXIS 167 *24 (Pa. PUC 2010), the Commission found that "Lost and Unaccounted for Gas ("LUFG") refers to gas that is purchased or transported by a Natural Gas Distribution Company ("NGDC"), but is not recorded at the customer's meter." Furthermore, it was noted that the BI&E determined that Philadelphia Gas Works' (PGW) method of determining UFG was acceptable. PGW determines LUFG as the difference between the total firm send out accounted for and the total firm sales accounted for, net of direct interruptible volumes and company use. Id. at *22-3.

Discussion

Exhibit 1 helps to illustrate the various differences between UFG in the three Commission required reports. However, there are numerous UFG definitions utilized for §1307(f) Filings since the calculation is based upon industry or company specific definitions. The Commission's Gas Safety Division requested data (Data Request LF-5-08) from the ten largest gas utilities (PECO, PGW, Equitable, Dominion, Columbia, TW Phillips, NFG, UGI Utilities, UGI-Central Penn and UGI-PNG) in Pennsylvania on September 12, 2008. All the companies except for NFG and UGI-Central Penn responded to the data request. As part of the data request package, the eight responding gas utilities provided their definition of UFG for the 1307(f) Filings. Exhibit 2 is a summary of the utilities' responses.

Exhibit 2
PA Utility Distribution Definitions of UFG

Company	Definition	Time Period
Columbia	(System Supply) minus (Third Party Transportation) minus (Pipeline Balance Adjustments) minus (System Deliveries)	12 months ending August 31
Dominion	(System Supply)[2-2] minus (System Requirements)[2-3]	Summer to summer
Equitable	(Pipeline Supply) plus (Gathering Supply) minus (Throughput) minus (Pipeline Deliveries) minus (Company Fuel)	12 months ending October 31
PECO	(Total Sendout) minus (Company Use)[2-1] minus (Billed Retail Sales)	12 months ending June 30
PGW	(Total Sendout) minus (Accounted for Gas)	12 months ending August 31
TW Phillips	(Total Receipts)[2-4] minus (Total Deliveries)[2-5]	12 months ending December 31
UGI Utilities	(Total Sendout) minus (Retail Sales) minus (Transportation Volumes) minus (Company Use)	12 months ending June 30
UGI-Penn Natural	(Total Sendout) minus (Retail Sales) minus (Transportation Volumes) minus (Company Use)	12 months ending June 30

2-1. Company use is the gas consumed by PECO's city gate station pre-heater facilities and PECO's LNG facility.
2-2. Dominion defines System Supply as the sum of metered local gas/city gate deliveries, metered interstate gas/city gate deliveries, exchange gas received, and on-system storage withdrawals.
2-3. Dominion defines System Requirements as the sum of metered customer usage, unbilled usage, gas used and lost in company operations, exchange gas delivered, off-system deliveries, and on-system storage injections.
2-4. TW Phillips defines Total Receipts as the sum of gas purchased, gas transported, and gas withdrawn from storage.
2-5. TW Phillips defines Total Deliveries as the sum of sales, transportation, storage injections, gas used in company operations, and adjustments for pressure and temperature and retainage.
Note: UGI – Central Penn Gas was not included due to the 2008 acquisition from PPL Gas Utilities Corporation.

Both Exhibit 1 and 2 help to illustrate the inconsistencies in UFG computations across Pennsylvania utilities and the Commission. Some of these differences, particularly the timing of the calculation, are due to the required filing date of the company's 1307(f) data. However, the ambiguity of an actual UFG definition provides an inconsistent and often incomparable metric. For example, all three reports can include different types of facilities (i.e., distribution, transmission, storage, and production/gathering). More specifically, the DOT Report filed with the Commission only includes UFG from the distribution system. Therefore, a company with substantial amounts of storage, intrastate transmission, and/or production/gathering[16] could have large amounts of UFG that are unreported in the DOT Report but could be included in 1307 Gas Cost Filings or the Annual Report. Moreover, the Annual Report is intended for gas distribution companies to file annual data, however, Schedule 505 is unclear whether UFG should include production/gathering, storage, and interstate transmission losses. A review of the 2010 Annual Report of the ten 1307(f) companies reveals that different companies report and/or track different types of UFG. Exhibit 3 provides an overview of reported losses in the Annual Reports and whether or not the utility has production/gathering, transmission and storage facilities.

Exhibit 3
Overview of Reported Losses in the 2010 Annual Report

Company	Production/Gathering	Storage	Transmission	Distribution	Other
Columbia	No	Yes	Yes	Yes	—
Dominion	No	Yes	No	Yes	—
Equitable	No	No	No	Yes	—
NFG	No	No	No	No	Yes
PECO	—	No	No	Yes	—
PGW	—	No	Yes	Yes	—
TW Phillips	No	Yes	No	No	Yes
UGI Utilities	—	No	No	Yes	—
UGI-Central Penn	No	No	No	Yes	—
UGI-Penn Natural	—	No	No	No	Yes

Note: A blank indicates that the company does not have that type of facility.

Seven of the ten companies surveyed reported a value for distribution system losses. The other three companies did not provide specific numbers for distribution losses for 2010. However, every company in Exhibit 3 did not separate UFG based upon the facility that caused the loss in 2010. Only three companies (Columbia, Dominion, and PGW) report losses to more than one facility type. Therefore, most

[16] Production/Gathering lines serving customers are considered distribution facilities according to 52 Pa Code §59.1.

companies file an overall UFG number, regardless of the facility losing the gas, indicating that UFG levels are most likely only considered in order to balance the gas flow. Ultimately, differences within the calculation of UFG will lead to different reported UFG percentages to the Commission. It should be noted that, over the years, a few distribution utilities have claimed negative UFG levels. A negative UFG level is interpreted as a gain of gas within the system. This issue will be discussed later in this study. Exhibit 4 provides the actual reported UFG levels from the Annual Report, 1307(f) Filing and DOT Reports for 1307(f) companies.

Exhibit 4
Reported UFG Levels by Company and Report
2005-2010

	Columbia			**Dominion[4-1]**			**Equitable**		
Year	Annual Report	1307(f) Filing	DOT Report	Annual Report	1307(f) Filing	DOT Report	Annual Report	1307(f) Filing	DOT Report
2005	1.11%	1.90%	1.88%	5.12%	3.48%	2.68%	10.23%	9.95%	5.10%
2006	0.06%	1.90%	1.88%	5.91%	4.32%	3.46%	11.91%	7.31%	7.60%
2007	-0.05%	1.30%	1.30%	9.01%	5.09%	3.94%	9.32%	6.95%	5.40%
2008	-0.66%	1.60%	1.30%	6.39%	4.90%	4.32%	10.01%	7.34%	7.60%
2009	-0.23%	1.90%	1.90%	4.55%	5.99%	3.20%	5.01%	7.00%	5.00%
2010	0.06%	2.00%	2.00%	6.13%	5.42%	2.85%	4.18%	5.18%	5.40%
	NFG			**PECO**			**PGW**		
2005	0.31%	2.50%	0.67%	2.84%	2.40%	2.40%	3.40%	3.90%	2.80%
2006	-1.52%	2.50%	0.42%	2.10%	2.90%	2.90%	1.89%	4.00%	2.00%
2007	0.02%	2.50%	0.42%	3.71%	3.60%	3.60%	7.56%	4.10%	2.80%
2008	-0.52%	0.36%	0.41%	4.49%	4.20%	3.58%	2.52%	3.90%	2.80%
2009	-0.42%	0.44%	0.31%	2.98%	4.30%	4.21%	2.91%	3.80%	2.20%
2010	1.90%	0.44%	0.00%	2.80%	4.40%	4.44%	5.90%	3.70%	2.20%
	TW Phillips			**UGI Utilities**			**UGI - Penn Natural Gas**		
2005	4.57%	4.57%	4.59%	-0.40%	-0.20%	0.20%	0.25%	0.45%	0.40%
2006	4.11%	4.11%	4.21%	0.42%	0.50%	0.20%	-1.03%	0.57%	0.40%
2007	4.25%	4.25%	4.16%	0.60%	0.70%	0.50%	-0.30%	0.55%	0.50%
2008	3.74%	4.34%	3.15%	0.38%	0.73%	0.70%	0.70%	0.59%	0.68%
2009	5.40%	5.10%	5.10%	0.47%	0.51%	0.50%	0.91%	1.11%	1.08%
2010	4.11%	3.80%	3.90%	0.23%	0.40%	0.16%	0.45%	0.50%	0.53%

4-1. Calculated Annual Report value, based on financial accounting entries that do not represent the actual calendar-month physical volumes received and delivered by the Company.
Note: UGI – Central Penn Gas is not included due to the 2008 acquisition from PPL Gas.
Source: Annual Reports, DOT Annual Reports and 1307(f) data provided to the Commission from the utilities.

Impact of Inconsistent UFG Definitions

In 2010, only three gas utilities (TW Phillips, UGI Utilities, and UGI – Penn Natural) reported within a one percentage point variation between the Annual Report, 1307(f) Filing and the DOT Report. Although, a one percentage point variation could be conceived as minimal, Staff notes that the nine companies in Exhibit 4 represent a total supply of 712.52 billion cubic feet (Bcf) of natural gas in 2010. Therefore, a one percentage point fluctuation across all these companies represents 7.13 Bcf or $31.9 million[17] of reporting/accounting errors, fictional, or otherwise inconsistent UFG reported to the Commission in 2010. These same companies represent a reported total of 17.53 Bcf (2.46% of gas delivered to the companies) of UFG in 2010[18]. However, the standard deviation between the Annual Report and the 1307(f) Filings is approximately 1.84% implying that the reported UFG for the nine companies in Exhibit 4 is 2.46% ± 1.66%. Unfortunately, the large deviation illustrates that the Commission is not receiving accurate, meaningful, or consistent calculations of UFG levels.

In addition, four companies (Columbia, NFG, UGI Utilities, and UGI – Penn Natural) have reported negative UFG in Annual Reports or 1307(f) Filings[19]. A negative UFG percentage indicates a flaw in the measurement, calculation or definition of UFG. Even without exclusions, UFG is the difference between volume of gas brought into the system and the volume of gas delivered from the system for end use customers. If deliveries are higher than actual supply, the system will have a negative UFG. Calculation error, inaccuracies or timing differences are the most probable explanation. Staff notes that any possible "error" leading to negative UFG is a correctable condition which could, and should be addressed before reporting UFG. Although utilities argue that negative UFG can arise from timing of bills, meter inaccuracies, or other timing issues, a consistent definition for UFG will eliminate the potential for net negative UFG. This is demonstrated by the DOT Reports which have a clear definition for UFG and no reported negative UFG levels in the last six years.

Overall, the exact impact of UFG on the ratepayers of Pennsylvania is unknown. As mentioned previously, the Bureau of Audits, BI&E, the OALJ or interveners could seek to alter the results of a company's 1307(f) Filing if they deem the requested level of UFG to be "excessive." However, the Commission has no guidelines to determine excessive levels of UFG and, in fact, relies on the companies' definitions for UFG. Instead, interested parties must rely upon the guidance from a limited number of historical decisions by the Commission. Therefore, only egregious amounts of UFG have been denied. UFG, reported in the 1307(f) Filings, is usually passed on to the ratepayer as a cost of business. Staff does note that the Commission has checks and balances in place with the investigatory type work of the Bureau of Audits and the Gas Safety Division. Except for PGC Audits, neither Bureau uses 1307(f) Filings as the primary source for reviewing UFG levels. Instead UFG data is acquired from the Annual Report, DOT Report, or from the Company during management audits or Gas Safety

[17] Numbers are based upon average national wellhead prices ($4.48 per Mcf) in 2010. Data cited from United States Energy Information Administration Office of Oil and Gas Natural Gas Annual 2010. Washington: GPO, December 2011.

[18] Data taken from the 2010 Annual Reports of Columbia, Equitable, NFG, PECO, PGW, Dominion, TW Phillips, UGI – Penn Natural, and UGI Utilities.

[19] A negative UFG percentage in 1307(f) filings is actually a credit to the ratepayer, although this would symbolize that the ratepayer is actually providing gas to the utility.

reviews/investigations. As a result, the system of checks and balances is negated by the inconsistent definitions of UFG across the Industry and the Commission. Staff believes this inconsistency effectively hinders the Commission's ability to monitor UFG levels and its corresponding financial burden to Pennsylvania ratepayers.

As the Commission is tasked with ensuring safe and reliable utility service at reasonable rates in Pennsylvania, the UFG issue needs to be addressed. However, the lack of focus in both a consistent definition and actual UFG performance has led to the variations explained above in Exhibits 1 through 4. In a non-regulated environment, wasted or lost product (in this case natural gas) must be minimized in order to maintain profit margins. However, the lack of a consistent definition and focus on UFG has yielded a disparity for ratepayers. Staff conservatively estimates that the total cost of lost natural gas for the companies listed in Exhibit 4 is between $25.5 million and $131.5 million per year[20]. The cost of the lost and UFG gas is ultimately borne by the ratepayer. Although, no distribution system will be able to eliminate all UFG, it should be minimized. In addition, any natural gas that actually escapes from the system can be a substantial liability to the utility in the form of gas explosions, property damage, and/or loss of life.

The Commission has established benchmarks for certain utility services in Pennsylvania in order to aid in determining "reliable" and "safe" utility service. The Commission established Electric Reliability Standards at 52 PA Code § 57.191, Telephone Quality Service Standards at 52 PA Code §63.51, and excessive amounts of unaccounted-for-water at 52 PA Code §65.20(4). Standards and metrics have been established for other fixed utilities in Pennsylvania; however, natural gas is not governed by similar Commission oversight. UFG based on a consistent definition has the potential to provide the Commission with a meaningful natural gas metric.

Benefits of a Consistent UFG Definition and Metric

A consistent definition for UFG has the potential to alleviate the inconsistencies demonstrated throughout Exhibits 1 through 4. A lack of definition for UFG trivializes the importance of minimizing lost gas. Requiring all gas utilities to use the same definition in each filing has the potential to eliminate data discrepancies in Commission required reports and highlight the importance of sound asset management. UFG is the product of a few widely accepted conditions. Perhaps the most notable is gas that is lost through leaks and breaks in the piping, but it also includes meter/measurement inaccuracies, company use, theft of service, unbilled consumption, timing issues in the billing system, etc. Using a consistent definition and creating a metric for UFG, will push utility companies to actively manage each component of UFG. The Commission already governs a number of these components and requires utilities to correct conditions when they occur such as meter inaccuracies (see 52 Pa. Code §§ 59.21 and

[20] Based on 2010 Annual Report numbers, average National wellhead prices (US EIA Natural Gas Annual 2010), and an UFG in the range of 2.46% ± 1.66%.

59.22) and immediate service termination of customers stealing service (see 52 Pa. Code § 56.81).

There will always be timing differences (as are required by the various filings) which could generate small differences[21] in reported numbers. However, these differences will be the result of system changes and not due to definition changes. Take for example, Columbia's 2008 reported numbers in Exhibit 4. Because there is no consistency in definition, the three reported numbers provide no insight into UFG levels at Columbia. However, if the UFG results for these three periods were all governed by the same definition, Staff would be able to qualitatively evaluate Columbia's system. Since Columbia files its 1307(f) Filing with data from September 07 to August 08 and the DOT Report is generated from July 07 to June 08, Staff could determine if UFG has increased from June to August from the previous year. Staff could also surmise that UFG dramatically dropped from August to December. These results would seem to indicate that the utility instituted a program that is making an impact. The supporting data could then be used in rate proceedings for cost recovery of the program (the Commission would have data that is either consistent or inconsistent with the request) or to direct future policy statements from the Commission.

A consistent definition will also allow the Commission to effectively monitor UFG across Pennsylvania. Particularly, the Commission could create a metric for UFG which could be used to compare utility performance. Staff acknowledges that each utility operates differently. Therefore even with a consistent definition, there will be justification among utilities for different UFG levels (i.e., system pressures, composition, volume of transportation, etc.). Although differences do exist, an UFG metric will help guide natural gas utilities into sound business practices. Such a metric could be used to create a cap on UFG (on a percentage basis) that is recoverable in 1307 gas cost filings. This cap would help define "excessive" when these filings are reviewed. In addition, an UFG cap metric will help to emphasize the importance of asset management, damage prevention, theft protection, leakage control, and other UFG related programs.

Although UFG can be caused by a variety of reasons, high percentages of UFG can represent a safety concern. Typically, lost gas will vent to the atmosphere without reaching its explosive limits. However, during winter months in Pennsylvania when the ground freezes, lost gas may migrate underground and collect in levels considered explosive. As a result, high UFG is a potential liability to the utility and could contribute to an explosion. Furthermore, pursuant to 74 FR §63906, the Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006, the Pipeline and Hazardous Materials Safety Administration requires NGDCs to develop and implement a distribution integrity management program (DIMP). Within each company's DIMP, the NGDC must identify and reduce risks. A large component of DIMP is reducing leaks/breaks and therefore, reducing UFG. Creating a consistent definition and metric for UFG should align the Commission with PHMSA's DIMP program and also limit the risks associated with UFG.

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[21] Large variations are possible but would be the result of substantial changes. Any such variation should warrant a brief explanation by the utility.

By highlighting the importance of UFG, the Commission can lead Pennsylvania in a fiscal and conscientious effort to reduce green house gas emissions. Ultimately a cap on UFG with a gradual reduction could provide the focus needed for change. Methane (the prime component of natural gas) is approximately 21 times more powerful than carbon dioxide as a greenhouse gas. In fact, Pennsylvania accounted for approximately 13%[22] (second highest of all states) of all unaccounted-for-gas lost by NGDCs in the United States in 2010[23]. The Pennsylvania Department of Environmental Protection (DEP) estimates that emissions from natural gas and oil pipelines represent about 5% of industrial sector greenhouse emissions.[24] In the Final Climate Change Action Plan for Pennsylvania, the DEP states that, "...reported "lost and unaccounted for" (L&U) values for natural gas are not accurately covering gas companies' individual contributions to fugitive or vented emissions for reasons such as .... and the lack of standardized calculation and reporting procedures for L&U."[25] The DEP concludes that UFG should have a standardized calculation and the industry should strive to reduce UFG levels by 15%.

Recommendation for UFG Definition

Staff proposes that the Commission adopt a uniform definition for UFG. In fact, the Commission has already created a loose definition for UFG. Particularly, Schedule 505 of the Annual Report provides the backbone for calculating UFG. The difference between gas received and gas delivered adjusted for any temperature and pressure variations is UFG (as established in 52 Pa Code § 59.15). In addition, the DOT Report provides a definition for distribution system losses that fits the loose framework of the Annual Report but provides a more explicit definition of UFG. The Commission also has jurisdiction over production/gathering, transmission, and distribution storage[26]. Certainly, losses from all aspects of operating an NGDC should be included within a company's 1307(f) Filing. In addition, natural gas utilities with storage, transmission, and production/gathering facilities will have losses associated with such facilities that cannot be compared fairly with distribution only facilities. Therefore, Staff proposes that gas losses be quantified and reported by facility classifications (i.e., distribution, storage, transmission, gathering) separately. Schedule 505 already has the framework in place for reporting in this fashion. Losses for each system should be calculated to the extent possible with actual gas volumes or if unattainable, through supported estimation. The proposed calculation is shown below:

$$Gas\ Received_x - Gas\ Delivered_x - Adjustments_x = Unaccounted\ for\ Gas_x$$

Where **x** denotes the system (i.e., distribution, transmission, storage, or production/gathering).

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[22] Data taken from the Energy Information Administration's Natural Gas Annual 2010 published in December 2011.

[23] Staff notes that PA also ranks ninth in total consumption of natural gas.

[24] Department of Environmental Protection Pennsylvania *Final Climate Change Action Plan.* Harrisburg December 18, 2009.

[25] See page 7-7 of DEP's Final Climate Change Action Plan.

[26] Pursuant to 52 Pa. Code § 59.31 (a).

Gas Received: includes any gas that is transported by the distribution, transmission, storage, or production/gathering facilities regardless of use adjusted for any temperature or pressure variations. This category would include gas for sales, hedging, storage, actual bulk transportation volumes, exchange gas received, or any other volume of gas that enters the utilities facilities.

Gas Delivered: includes gas that leaves the distribution, transmission, storage or production/gathering facilities regardless of use adjusted for any temperature or pressure variations. This category includes volume of gas consumed by end user, exchange gas supplied to another utility, actual gas delivered to bulk customers, or any other gas delivered to a user other than the utility. Where bill timing issues arise, an effort should be made to reasonably estimate consumption.

Adjustments: includes all gas used for safe and reliable service such as Company use, calculable losses from construction, purging, other temperature and pressure adjustments, heat content of natural gas[27], or any other identifiable and quantifiable amount of gas used for safe and reliable service.

Unaccounted for Gas: is a measure of all gas lost in the system and includes gas lost in breaks, leaks, theft of service, unmetered consumption, meter inaccuracies, or any other point of lost, unidentifiable, or non-revenue producing gas.

Recommendation for UFG Metric

Once a consistent definition is established for UFG, Staff proposes that the Commission set UFG target levels or metrics for distribution system losses. In addition, a separate metric should be established for the accumulation of transmission, storage, and production/gathering UFG. Since the DOT Reports provide a consistent definition for UFG, Staff proposes to create the distribution metric based upon the results provided in Exhibit 4. However, because the values reported in the Annual Report and 1307(f) Filings are not the product of a single definition, Staff proposes that the Commission wait to enforce the metrics until one year after the UFG definition is approved to ensure the below metric is reasonable. In addition, Staff proposes that the metric begin lenient and then become more stringent with implementation after rulemaking as presented in Exhibit 5.

[27] Only applicable if affecting volume of natural gas.

Exhibit 5
Distribution System UFG Metric

Year	Percent UFG
1	5.00%
2	4.50%
3	4.00%
4	3.50%
5	3.00%

The Commission does not currently have any data relating to natural gas losses in the transmission, storage, and production/gathering systems. Therefore, Staff proposes that these metrics be established after three years of reported data with a target to implement in 2016.

Appendix A

505. GAS ACCOUNT-NATURAL GAS

1 The purpose of this schedule is to account for the quantity of natural gas received and delivered by the respondent adjusted for any differences in pressure bases used in measuring MCF of natural gas received and delivered.

2 If the respondent operates two or more systems which are not interconnected, separate schedules should be submitted. Insert pages should be used for this purpose.

No.	Item (a)	MCF as Reported (b)
1	**GAS RECEIVED**	
2	Natural Gas Produced	
3	L.P.G. Gas Produced and Mixed with Natural Gas	
4	Manufactured Gas Produced and Mixed with Natural Gas	
5	Purchased Gas	
6	Gas of Others Received for Transportation	
7	Receipts of Respondent's Gas Transported or Compressed by Others	
8	Exchange Gas Received	
9	Gas Received from Underground Storage	
10	Other Receipts	
11		
12		
13		
14	**Total Receipts:**	0
15	**GAS DELIVERED**	
16	Natural Gas Sales:	
17	Local Distribution by Respondent	
18	Main Line Industrial Sales	
19	Sales for Resale	
20	Interdepartmental Sales	
21		
21		
22	**Total Sales**	0
23	Deliveries of Gas Transported or Compressed for Others	
24	Deliveries of Respondent's Gas for Trans. Or Compressed by Others	
25	Exchange Gas Delivered	
26	Natural Gas used by Respondent	
27	Natural Gas Delivered to Storage	
28	Natural Gas for Franchise Requirements	
29	Other Deliveries: Specify	
30	**Total Deliveries**	0
31	**UNACCOUNTED FOR**	
32	Production/Gathering System Losses	
33	Storage Losses	
34	Transmission System Losses	
35	Distribution System Losses	
36	Other Losses	
37		
38	**Total Unaccounted For**	0
38	**Total Deliveries and Unaccounted For**	0

COMMONWEALTH OF PENNSYLVANIA
PUBLIC UTILITY COMMISSION
400 NORTH STREET
HARRISBURG, PA 17120

October 4, 2012

ROBERT F. POWELSON
CHAIRMAN

The Honorable Silvan B. Lutkewitte, III
Chairman
Independent Regulatory Review Commission
14th Floor, Harristown II
333 Market Street
Harrisburg, PA 17101

Re: L-2012-2294746/57-289: Establishing a Uniform Definition and Metrics for Unaccounted-For-Gas; 52 Pa. Code, Chapter 59

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Dear Chairman Lutkewitte:

Enclosed please find one copy of the proposed rulemaking and the Regulatory Analysis Form prepared in compliance with Executive Order 1996-1, "Regulatory Review and Promulgation." Pursuant to Section 5(a) of the Regulatory Review Act of June 30, 1989 (P.L. 73, No. 19) (71 P.S. §§745.1-745.15), the Commission is submitting today a copy of the proposed rulemaking and Regulatory Analysis Form to the Chairman of the House Committee on Consumer Affairs and to the Chairman of the Senate Committee on Consumer Protection and Professional Licensure.

The purpose of this proposal is to establish a uniform definition of UFG and metrics for UFG. The contact persons are Assistant Counsel Lawrence F. Barth, Law Bureau, 717 772-8579 and Nathan Paul, Bureau of Audits, 717 214-8249.

The proposal has been deposited for publication with the Legislative Reference Bureau.

Sincerely,

Rob Powel

Robert F. Powelson
Chairman

Enclosures
pc: The Honorable Robert M. Tomlinson
The Honorable Lisa Boscola
The Honorable Robert Godshall
The Honorable Joseph Preston, Jr.
Commissioner Witmer
Legislative Affairs Director Perry
Chief Counsel Pankiw
Assistant Counsel Barth
Mr. Paul
Regulatory Coordinator DelBiondo

TRANSMITTAL SHEET FOR REGULATIONS SUBJECT
TO THE REGULATORY REVIEW ACT

ID Number: L-2012-2294746/57-289

Subject: Proposed Rulemaking Re Establishing Uniform Definition and Metrics for Unaccounted-for-Gas

Pennsylvania Public Utility Commission

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TYPE OF REGULATION

X Proposed Regulation

___ Final Regulation with Notice of Proposed Rulemaking Omitted.

___ Final Regulation

___ 120-day Emergency Certification of the Attorney General

___ 120-day Emergency Certification of the Governor

FILING OF REPORT

Date	Signature	Designation
10/4/12	Jan McHenry	HOUSE COMMITTEE (Godshall)
		Consumer Affairs
10/4/12	Stan Cleaver	SENATE COMMITTEE (Tomlinson)
		Consumer Protection and Professional Licensure
10/4/12	K Cooper	Independent Regulatory Review Commission
		Attorney General
10/4/12	Samantha Harsen	Legislative Reference Bureau