COLUMBIA STATEMENT NO. 111-R

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	)	
vs.	)	Docket No. R-2015-2468056
Columbia Gas of Pennsylvania, Inc.	)	

REBUTTAL TESTIMONY OF
MARK BALMERT
ON BEHALF OF
COLUMBIA GAS OF PENNSYLVANIA, INC.

July 16, 2015

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Introduction

Q. Please state your name and business address.

A. Mark Balmert, my business address is 290 West Nationwide Boulevard, Columbus, Ohio 43215.

Q. By whom are you employed and in what capacity?

A. I am Director of Regulatory Strategy & Support for NiSource Corporate Services Company ("NCSC"). NCSC provides, among other services, accounting and regulatory-related services for the subsidiaries of NiSource Inc. ("NiSource"). I am testifying on behalf of Columbia Gas of Pennsylvania, Inc. ("Columbia" or the "Company"), which is one of the NiSource local distribution companies.

Q. Did you submit Direct Testimony in this proceeding?

A. Yes, I submitted Columbia Statement No. 11.

Q. What is the purpose of your Rebuttal Testimony?

A. My rebuttal testimony will address the class revenue requirements and rate design position taken by Bureau of Investigation and Enforcement ("I&E") Witness Jeremy B. Hubert, Pennsylvania Office of Consumer Advocate ("OCA") Witnesses Jerome D. Mierzwa and Roger D. Colton, The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania ("CAUSE-PA") Witness Mitchell Miller, Office of Small Business Advocate ("OSBA") Witness Robert D. Knecht, The Pennsylvania State University ("PSU") Witness James L. Crist, P.E. and Columbia Industrial Intervenors ("CII") Witness Frank Plank.

Q. Are you sponsoring any schedules in connection with your rebuttal

testimony?

A. Yes. My testimony includes the following schedules, which were prepared by me or under my direction and are accurate and complete to the best of my knowledge and belief:

Exhibit MPB-1R – Columbia's Rates vs. Peer Rates

Exhibit MPB-2R – Mr. Hubert's customer charge study with reinstated customer allocated expenses.

Q. How is your testimony organized?

A. My testimony is organized as follows:

Section I – Company Recommendations

Section II – Class Revenue Requirements

Section III – Residential Rate Design

Section IV – Non-Residential Rate Design

SECTION I – COMPANY RECOMMENDATIONS

Q. Please summarize Columbia's proposed rate design.

A. Columbia continues to support its proposed rate design. Please refer to Table 1 below, which outlines all of the proposed customer charges presented by Columbia and testimony submitted by each witness in this case. It is important to note, of all the interveners' direct testimony concerning customer charges, only Columbia's proposed customer charges for the residential and small general service rate classes were disputed.

TABLE 1

	CPA	I&E	OCA	OSBA
RS/RTS	$20.60	$16.93	$16.75	
SGS ≤ 6,440	$27.75	$23.36		$24.00[1]
SGS 6,440 – 64,440	$55.50	$48.00		$48.00
SDS/LGSS 64,400 – 110,000	$215.00			
SDS/LGSS 110,000 – 540,000	$685.00			
LDS/LGSS 540,000 – 1,074,000	$1,800.00			
LDS/LGSS 1,074,000 – 3,400,000	$2,800.00			
LDS/LGSS 3,400,000 – 7,500,000	$5,400.00			
LDS/LGSS > 7,500,000	$8,000.00			
MLDS Class I 274,000 – 540,000	$469.34			
MLDS Class I 540,000 – 1,074,000	$1,149.00			
MLDS Class I 1,074,000 – 3,400,000	$2,050.00			
MLDS Class I 3,400,000 – 7,500,000	$4,096.00			
MLDS Class I > 7,500,000	$7,322.00			
MLDS Class II 2,146,000 – 3,400,000	$2,050.00			
MLDS Class II 3,400,000 – 7,500,000	$4,096.00			
MLDS Class II > 7,500,000	$7,322.00			

Q. Please summarize the Company's position regarding revenue recovery through the customer charge in this case.

A. Columbia's rate design proposal in this case is designed to recover Columbia's total cost of service. In designing its proposed rates, Columbia pursued three objectives to establish the amount of revenue to be recovered through the customer charge. First, Columbia analyzed the percent of revenue recovery by the customer charge, as compared to base rate revenue recovery as a whole. Columbia's goal was to align the percentage of customer charge recovery to total

[1] If the Commission determines that there should not be a customer component of mains included in the customer charge, OSBA recommends no increase to the current $21.75 customer charge.

base rate recovery just below the average of the five previous rate cases for each of the rate classes. Second, Columbia compared the currently approved customer charge to the Minimum System Customer Charge Study (Exhibit 111, Schedule 1, Pages 14 through 18) in the case, with the goal of showing progress toward, at a minimum, a customer charge that would recover the cost of a minimum system. Third, any increase in the proposed customer charge must be gradual, so as to avoid rate shock.

SECTION II – CLASS REVENUE REQUIREMENTS

Q. Please summarize the proposed allocations of revenue requirement to the rate classes by the intervening witnesses.

A. On pages 40 - 42 of I&E Witness Hubert's direct testimony, Mr. Hubert stated "The optimum goal should be to proposed rates so that the revenue received from a particular class establish is equal to the corresponding costs of providing service to that class." Mr. Hubert used the Peak & Average method as a guide in allocating the final revenue increase among the various rate classes. Mr. Hubert also stated "The Commission should consider the movement in relative rates of return when establishing proposed rates." Mr. Hubert goes on to reallocate $3,500,000 of revenue requirement that the Company assigned to the RS/RDS rate class by assigning an additional $2,700,000 to the SGSS/SCD/SGDS rate class and an additional $800,000 to the SDS/LGSS rate class. Mr. Hubert did not change the Company's allocation of revenue requirement for the LDS/LGSS and the MLDS rate classes. However, in the event the Commission grants less

than the full increase in revenue requirement that the Company has asked for, Mr. Hubert recommends the first $1,500,000 decrease to be applied to the residential class, the next $6,500,000 decrease to be applied 80% to the residential class and 20% to the SGS/SCD/SGDS class and the next $32,258,200 decrease to be applied 77% to the residential class and 23% to the SGS/SCD/SGDS class and 1% to the SDS/LGS rate class. Mr. Hubert's "scale-back" method essentially assigns 100% of the Company's approved increase to the LDS/LGSS rate class. Under Mr. Hubert's scale-back method, the SDS/LGSS rate class will receive 100% of the Company's proposed increase to the rate class if the Commission grants within $8,000,000 of the Company's requested total company revenue requirement increase and no less than an 82% increase if the Company is granted no increase at all in revenue requirement.

On pages 31 – 34 of OCA Witness Mierzwa's direct testimony, Mr. Mierzwa listed what a sound revenue allocation should be, including 1) utilize the class cost-of-service study results as a guide, 2) provide stability and predictability of the rates themselves, with a minimum of unexpected changes seriously adverse to ratepayers or the utility (gradualism), 3) yield the total revenue requirement, 4) provide for simplicity, certainty, convenience of payment, understandability, public acceptability, and feasibility of application and 5) reflect fairness in the apportionment of the total cost of service among the various customer classes. Mr. Mierzwa assigned no increase to the MLDS class. Mr. Mierzwa then reallocated $5,157,000 of revenue requirement that the Company assigned to the

RS/RDS rate class by assigning an additional $2,644,000 to the SGSS/SCD/SGDS rate class, $1,838,000 to the SDS/LGSS rate class, and $674,000 to the LDS/LGSS rate class. Mr. Miller also offers no cost of service basis for his proposal.

On pages 22 of CAUSE-PA Witness Miller's direct testimony, Mr. Miller states "The Commission should reject Columbia's request for a residential rate increase" but then offered no opinion on which rate classes should bear the responsibility of the revenue requirement increase resulting from this case.

On pages 15 – 18 OSBA Witness Knecht's direct testimony, Mr. Knecht listed what are the primary economic and regulatory criteria for revenue allocation. Including 1) "Most utilities and regulators adopt a policy in a base rates proceeding of attempting to move revenues more in line with allocated costs by varying the magnitude of the rate increases for the individual classes", 2) the gradualism principle (or avoidance of "rate shock"), and 3) value of service principle. Mr. Knecht then used as a cost basis his modified version of the Company's ACOS reflecting 75% weighting of the Company's Peak & Average method and 25% weighting of the Company's Customer Demand method. Mr. Knecht then seems to accept the Company's Class Revenue Requirement at the $46.1 million requested increase (See page 21, Table IEc-3) but then recommends a scale-back method that applies reductions to the residential and small general service classes first.

On pages 7 – 9 of PSU Witness Crist's direct testimony, Mr. Crist states "Offering flex rates to retain customer load benefits all the classes of customers of the utility for those flex rate customers are making a positive contribution to revenues, in excess of the marginal costs to serve them. For this reason, the increase in revenue that the Company has allocated to the non-competitive customers of the LDS class should actually be allocated to all non-competitive customers of all classes." Mr. Crist then suggests an increase of $1,257,675 to non-competitive LDS customers and the remaining LDS/LGSS class increase that Columbia is proposing of $1,124,286 should be allocated to the non-competitive customers in the other classes, except the MLDS/MLSS class, using the same ratio of revenue allocation proposed by the Company.

On page 8 of CII Witness Plank's direct testimony, Mr. Plank recommends "Columbia's filing be modified to show the impact of any rate increase on the non-flex LDS customers. I would then recommend that any rate increase allocated to the LDS rate class be modified to reflect a lower rate increase than that proposed by Columbia to ensure that non-flex customers, such as Knouse, do not receive an increase that is significantly higher than the system average." Mr. Plank's position appears to be very similar to PSU's position with respect to the increase to LDS customers.

Q. Please summarize the rate class revenue requirement allocation by the Company and intervening parties at the full proposed rate increase level.

A. Please see table 2 below:

Table 2[2]

	CPA[3]	I&E[4]	OCA[5]	OSBA[6]	PSU[7]
RS/RDS	$35,839,105	$32,339,105	$30,653,000	$35,839,105	$36,707,762
SGSS/SCDS/SGDS	6,156,804	8,856,804	8,782,000	6,156,804	6,291,779
SDS/LGSS	1,784,594	2,584,594	3,601,000	1,784,594	1,835,479
LDS/LGSS	2,390,389	2,390,389	3,056,000	2,390,389	$1,257,675
MLDS	334	334	(1,000)	334	(649)
Total	$46,171,228	$46,171,228	$46,092,000	$46,171,228	$46,092,046

However, as I indicated previously, I&E and OSBA offer disproportionate scale-backs, with the result that RS and SGS customers receive substantial "first dollar" rate relief.

Q. Where are areas of agreement between the Company and the intervening witnesses as it pertains to the proposed allocations of revenue requirement to the rate classes?

A. The Company agrees with I&E Witness Hubert that the allocation of revenue requirement among the rate classes should have the optimum goal of establishing proposed rates so that the revenue received from a particular class is equal to the corresponding costs of providing service. The Company also agrees with OSBA

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[2] Note: OCA and PSU amounts are increases to base rates only. CPA, I&E, and OSBA increases include proposed changes to Other Gas Department Revenues, rider CC, rider USP, rider CAC, and rider GPC in addition to increases to base rates.
[3] Exhibit 103, Schedule 8, Page 1.
[4] Determined from I&E Witness Hubert's direct testimony Exhibit No. 3 Schedule 11.
[5] Determined from OCA Witness Mierzwa's direct testimony Table 6. Note Mr. Mierzwa's amounts are increases in base rates only.
[6] Determined from OSBA Witness Knecht direct testimony Table IEc-3.
[7] Determined from re-allocating $1,124,286 to the non-competitive customers in other rate classes, except MLDS/MLSS "using the same ratio of revenue allocation proposed by the Company" per page 8-9 of Mr. Crist's direct testimony.

Witness Knecht that most utilities and regulators adopt a policy in a base rates proceeding of attempting to move revenues more in line with allocated costs by varying the magnitude of the rate increases for the individual classes. The Company, I&E Witness Hubert, OCA Witness Mierzwa, and OSBA Witness Knecht seem to agree with these two premises.

The Company, I&E Witness Hubert, OCA Witness Mierzwa, and OSBA Witness Knecht seem to agree that an allocated cost of service study should be used as a basis to determine the proper allocation of revenue requirement over time. However, there is a difference in opinion concerning what method should be used in the determination of the allocation of mains and mains related costs among the rate classes.

The Company, I&E Witness Hubert, OCA Witness Mierzwa, and OSBA Witness Knecht seem to agree that proper allocation of revenue requirement should follow the principles of stability and predictability of the rates themselves, with a minimum of unexpected changes seriously adverse to ratepayers or the utility through gradualism. However, there is a difference in opinion of what can be considered gradual and how to measure it. Gradualism as it pertains to allocated revenue requirement comes into play when deciding how fast the inter-class subsidization caused by current rates can be eliminated.

Q. Where are areas of disagreement between the Company and the intervening witnesses as it pertains to the proposed allocations of

revenue requirement to the rate classes?

A. The fundamental disagreement the Company has with most of the interveners is the choice of which allocated cost of service study or studies should be used as a basis or guide to allocated revenue requirement. The Company relies on the Average study (Exhibit 111, Schedule 3), I&E Witness Hubert relies on the Company's Peak and Average study (Exhibit 111, Schedule 2), OCA Witness Mierzwa relies on the Company's Peak and Average study modified to eliminate the Company's separation of mains into separate categories and then provides a separate study based on the Proportionate Responsibility (PR) method and, OSBA Witness Knecht relies on weighting the Company's Customer Demand study (Exhibit 111, Schedule 1) at 25% and Peak & Average study (Exhibit 111, Schedule 2) at 75%. It is not clear if CAUSE-PA Witness Miller used any allocated cost of service study when recommending "The Commission should reject Columbia's request for a residential rate increase[8]". PSU Witness Crist and CII Witness Plank did not specify which allocated cost of service study or studies should be used as a basis or guide to allocated revenue requirement.

Although the selection of what allocated cost of service to use as a guide to revenue allocation is the primary difference in the allocation of revenue requirement between the Company and interveners' witnesses, gradualism and whether the LDS/LGSS rate class should get a lesser increase in revenue requirement to recognize the fact that no increase will be paid by LDS customers

[8] Direct Testimony of Michell Miller page 22, line 5.

that pay flexed rates

As for the issue of gradualism, Mr. Knecht states on page 19 of his direct testimony "I believe that Columbia's proposal is directionally reasonable, but can be improved upon by increasing the progress toward cost-based rates." This implies that the Company's proposed progression toward cost-based revenue allocation is too gradual. While CAUSE-PA witness Miller states on page 22 of his testimony "The Commission should reject Columbia's request for a residential rate increase." Because Mr. Miller made no mention of the returns shown for the residential class in any of the three allocated cost of service studies the Company provided, and because Mr. Miller provided no allocated cost of service himself, brings me to the conclusion that perhaps Mr. Miller does not believe a progression toward a cost-based revenue requirement for the residential rate class should be a consideration for the revenue requirement allocation in this case. Instead Mr. Miller states on page 8 of his testimony "The proposed (residential) rate increase would have a significant detrimental impact on the ability of low income households, particularly those not enrolled in CAP, to connect to, maintain, and afford Columbia's natural gas service." as a basis of revenue requirement allocation.

As for the LDS customers who are paying negotiated "flexed" rates, Mr. Knecht, Mr. Crist, and Mr. Plank expressed concern that these customers are not assigned any of the revenue requirement increase, and therefore, any increase in revenue

requirement to achieve a system average return for the LDS/LGSS rate class should be shared by other rate classes to the extent the LDS/LGSS rate class revenue requirement is reliant on the LDS flex customers who cannot absorb an rate increases.

Q. What is I&E witness Mr. Hubert's preferred allocated cost of service method and what is the basis of his preference?

A. Mr. Hubert states on page 32 of his direct testimony,

"Although mains serve customers, it is the throughput that determines the type of main investment. Because it is the load that determines the main investment, not the number of customers served, the Peak & Average allocation methodology is the most appropriate allocation methodology because it is based on this premise of load based investment. The existence of one customer, five customers, or ten customers does not determine the amount of mains investment. Mains investment is driven by the loads placed upon it, not by the number of customers served."

Q. What is OCA witness Mr. Mierzwa's preferred allocated cost of service method and what is the basis of his preference?

A. Mr. Mierzwa states on page 15 of his direct testimony, "Since distribution mains exist to deliver annual requirements, and are sized to provide for peak requirements, it is proper to allocate distribution mains costs on the basis of Peak & Average demands, consistent with established Commission precedent." Mr. Mierzwa also agrees with Mr. Hubert when he states on page 11 of his direct

testimony "The existence of one customer, five customers, or ten customers does not determine the amount of mains investment; rather, mains investment is a function of the loads to be served."

Q. Why does the Company rely on the Average allocated cost of service study as a basis or guide to the allocation of revenue requirement?

A. The average study as presented in Exhibit No. 111, Schedule 3 is an average of the customer-demand study and the peak and average study. Columbia believes that the customer-demand study and the peak and average study provide a reasonable range, and the average study with its equal weighting of the two provides the Company, the parties and the Commission with a set of returns that can be used as a benchmark or guide in revenue allocation. Please see Company Witness Elliott rebuttal testimony for detailed support of the Company's three allocated cost of service studies.

Q. Does the Company consider gradualism in the determination of allocation of revenue requirement?

A. Yes, the Company is not proposing in this case to allocate revenue requirement to the rate classes to establish parity among the returns of the classes. The Company has proposed to follow the principle of gradualism to allow customers to adapt to the new rate design and avoid rate shock.

Q. Does the Company consider the customer's ability to pay?

A. The customer's ability to pay is always a concern of the Company and as discussed in Ms. Krajovic's testimony, the Company offers a broad mix of

programs aimed at assisting its low income customers in emergency or crisis situations and with ongoing affordability of service. Assistance is provided through the best mix of program offerings for a particular customer within the overall framework of balancing the needs of all customers who take advantage of or provide funding for those programs. Columbia believes the combination of these programs and following the principle of gradualism in rate design responsibly addresses the customer's ability to pay.

Q. Should the ability to pay of non-CAP, lower income customers drive revenue allocation for the entire residential class?

A. No. The Company must be allowed a reasonable opportunity to recover its revenue requirement, and that includes recovery from the residential class. The Commission has established the CAP Program to provide special rates for eligible low income customers. If special rates were granted to a further group of low income customers, remaining customers will bear an even higher rate increase to make up the difference.

Q. Do you consider Mr. Mierzwa's proposed revenue distribution on page 33 of his direct testimony to the SDS/LGSS and LDS/LGSS rate classes unnecessarily aggressive?

A. Yes. Mr. Mierzwa is proposing a 73% increase over the total company average 14.8% increase in base rates for the SDS/LGSS rate class and a 31% increase over the total company average 14.8% increase in base rates for the LDS/LGSS rate class. Mr. Mierzwa lists what he considers "the principles of sound revenue

allocation" on page 32 of his direct testimony and lists gradualism as one of those principles. However, the increases Mr. Mierzwa recommends to assign to the SDS/LGSS and LDS/LGSS rate classes would amount to the very rate shock that the principle of gradualism is supposed to protect customers from experiencing. Mr. Mierzwa's proposed allocation of revenue requirement to the SDS/LGSS and LDS/LGSS rate classes violates the principle of gradualism and should be rejected by the Commission.

Q. What suggestions do the intervener parties offer in relation to the LDS rate class customers who are not on flex rates and therefore will pay the entire amount of the increase assigned to the class?

A. OSBA Witness Knecht says on page 19 and 20 of his direct testimony in his proposal for the revenue requirement allocation to the LDS rate class that "I considered the value of service criterion by recognizing that roughly half of the load in the Large General Service class is subject to negotiated "flex" rates, which are not assigned any of the rate increase. Mr. Knecht goes on to say "I accept the Company's proposed revenue allocation to that (LDS) class, which produces a rate increase of 19.7 percent for the non-flex rate customers in the class, or roughly 1.5 times the system average increase."

PSU Witness Crist says on pages 7 and 8 of his direct testimony, "Offering flex rates to retain load benefits all the classes of customers of the utility for those flex rate customers are making a positive contribution to revenues, in excess of the marginal costs to serve them. For this reason, the increase in revenue that the

Company has allocated to the non-competitive customers of the LDS class should actually be allocated to all non-competitive customers of all classes."

CII Witness Plank says on page 8, "I would recommend Columbia's filing be modified to show the impact of any rate increase on the non-flex LDS customers. I would then recommend that any rate increase allocated to the LDS rate class be modified to reflect a lower rate increase than that proposed by Columbia to ensure that non-flex customers, such as Knouse, do not receive an increase that is significantly higher than the system average."

Q. What is the Company's response to the intervener's recommendations pertaining to the Company's proposed revenue requirement increase to the LDS/LGSS rate class and the effect of LDS flex customers on that increase?

A. First, in response to Mr. Plank's recommendation above, table 3 below shows the Company's calculated percentage increase to the LDS/LGSS rate class base rate revenue along with the percentage increase to non-flex LDS/LGSS customers.

Table 3

Rate Class	Current Revenue	Amount Increase	Percent Increase
LDS	$15,453,189	$2,447,109	
LGSS	316,621	($65,308)	
Total LDS/LGSS	$15,769,810	$2,381,801	15.1%
Less: Flex LDS	3,679,929	0	0.0%
Non-Flex LDS/LGSS	$12,089,881	$2,381,801	19.7%

As Mr. Knecht notes, this is about 1.5x the system average percentage increase. I also observe that the class as a whole provides less than system average returns under 2 of Mr. Elliott's three ACOS studies. As with all rate classes, the LDS/LGSS rate class is made up of individual customers each of which has the same rate class criteria (large commercial or industrial) and as a result an expected similar cost of service. Many scenarios could be argued about the extent to which cost to serve may vary between larger or smaller, flexed or non-flexed customers. However, allocated cost of service studies define reasonable classes and allocate costs to each class because it is not practical, or in many cases possible, to identify individual customer costs. In this case, the increase to the class is within the amount suggested by the average cost of service study and principles of gradualism at a 19.7% increase to non-flex customers. I do not think it is necessary to reallocate a portion of the increase to other customer classes in this instance.

Q. In the event that the Company is not authorized by the Commission to recover the full revenue requirement increase that the Company is requesting, what are the proposed "scale-back" methods proposed by the intervener parties?

A. I&E Witness Mr. Hubert recommends 100% of the first $1,500,000 reduced revenue requirement to be applied to the RSS/RDS class. He recommends 80% of the next $6,500,000 reduced revenue requirement to be applied to the RSS/RDS class and 20% to the SGSS/SCD/SGDS class. Of the next $20,000,000 he recommends 77% to be applied to the RSS/RDS class and 23% to the SGSS/SCD/SGDS class. And finally the next $12,258,200 he recommends 77% to be applied to the RSS/RDS class and 22% to the SGSS/SCD/SGDS class, and 1% be applied to the SDS/LGSS class. The effect of this proposal is to apply the Company's full proposed increase to the LDS class no matter what the revenue increase, and 82% - 100% of the full proposed Company increase to the SDS/LGSS class for any rate increase over current rates.

OCA Witness Mr. Mierzwa recommends a proportionate scale-back of the increase for each rate class (from his proposed class revenue requirement).

CAUSE-PA Witness Mr. Miller simply recommends no increase to the residential class.

OSBA Witness Mr. Knecht recommends the first $6,000,000 reduced revenue requirement to be applied to the RSS/RDS class and to the SGSS/SCD/SGDS class evenly. Any reduction greater than $6,000,000 would be using a proportional scale-back approach among all rate classes.

Q. What is the Company's suggested scale-back method?

A. The Company recommends a proportionate scale-back of the increase for each

rate class from its original proposed rate class revenue requirements. The Company does not support disproportionate scale-backs, particularly as extreme and complicated as proposed by I&E.

SECTION III – RESIDENTIAL RATE DESIGN

Q. Please summarize the recommended customer charges for the residential class by the intervener parties.

A. Please see table 4 below.

Table 4

	CPA	I&E	OCA
RS/RDS	$20.60	$16.93	$16.75

Q. Do you have any comments on I&E Witness Hubert's proposed residential customer charge?

A. When asked which cost of service study he recommended that the Commission use as a guide in allocating the final revenue increase among the various customer classes Mr. Hubert responded on page 34 of his direct testimony "I recommend that the Commission rely on the cost of service study that is used on allocating mains based on the Peak & Average method." When asked what study is the basis of Mr. Hubert's proposed customer charge, Mr. Hubert responded on page 47 of his direct testimony "An update to this analysis calculated under the Peak & Average method has been provided by the Company in response to I&E-

RS-27-D (I&E Ex. No. 3, Sch. 14). Based on the Company's analysis, the Company claims that it incurs $17.93 per month in customer costs for each RSS/RDS customer . . .". Mr. Hubert then eliminated from I&E Ex. No. 3 Sch. 14 Accounts 904, 905, 908, 909, 910, and 921 resulting in a residential customer charge of $16.93 shown in Ex. No. 3, Schedule 15.

Accounts 905, 908, 909, 910 and 921 are all allocated in the Peak & Average based on a customer ratio. Mr. Hubert recognized these expenses to be customer-related for the determination of class revenue responsibility by using the Peak & Average study as a basis, however he choose to remove these customer based fixed costs from his determination of customer charge recovery in Ex. No. 3, Schedule 15.

Q. If Mr. Hubert had been consistent between the allocation of revenue requirement among the rate classes and the development of his proposed customer charges in regards to the treatment of accounts 905, 908, 909, 910 and 921 what would Mr. Hubert's customer charges on Ex. No. 3, Schedule 15 amount to?

A. Please see Exhibit MPB-2R. The residential customer charge would change from $16.93 to $17.41.

Q. On page 35 of Mr. Mierzwa's, direct testimony he criticizes the Company by asking for an average of 15% increase in the residential customer charge from the $11.50 the Company charged in 2010 to the $20.60 customer charge proposed in this case. Specifically, Mr.

Mierzwa states, "Clearly, CPA's desire to collect more and more of its revenue requirement from fixed monthly charges has not adhered to the concept of gradualism." What is the Company's response?

A. The $11.50 customer charge billed in 2010 was established by the Company's 2008 rate case (case no. R-2008-2011621) and placed in effect in October 2008. The test year date certain for rate base in this case is December 31, 2016, the test year date certain for rate base in the 2008 rate case was September 30, 2008, 8¼ years difference. When comparing the basis of the customer charges, over 8¼ years the Company's proposed annual increase in the customer charge is only 5.5%. However, in those same 8 ¼ years Columbia's investment in Services increased by $205,091,036 an average of 10.1% per year, Columbia invested in $23,761,067 automatic meter reading devices, an additional $4,012,949 in meters, and added $25,928,726 investment in meter installations and house regulators.

As for the Company's desire to collect more and more of its revenue requirement from fixed monthly charges, it is requesting an increase in fixed recovery as a percentage of total base rate recovery from the 2008 rate case rates of 37.755% to 37.964%[9] a change of only 0.189%. Mr. Mierzwa's proposal that the residential customer charge remain unchanged for a second consecutive case[10] would mean that fixed cost recovery as a percentage of total base rate recovery for the residential class would decline at Columbia's proposed increase from 47.1%

[9] Exhibit MPB-2, Page 1.
[10] No increase to residential customer charge was included in the settlement of Columbia's 2014 rate case.

under current rates to 43.0% using the current $16.75 customer charge and the entire revenue requirement increase recovered in the volumetric charge (see Exhibit MPB-1R).

Q. On page 35 of Mr. Mierzwa's direct testimony he goes on to say "the Commission approved a Weather Normalization Adjustment mechanism that eliminated virtually all risk associated with weather variability. Nevertheless, Columbia continues to propose exceptionally large increases in unavoidable fixed monthly customer charge paid by Residential customers." What is the Company's response?

A. Certainly when the Commission approved Columbia's WNA in case No. R-2012-2321748 both the Company and Columbia's Customers equally benefited in more reasonably stable and predictable bills of which are important objectives of a proper rate design. It ensures that the Company will not collect excess revenues due solely to colder than normal weather and a volumetric rate design and it has increased the Company's ability to have a reasonable opportunity to recover the approved revenue requirement determined by the Commission. However Columbia's WNA does not account for weather variations within the 5% dead-band, it does not account for weather variations in the months of May through November, it does not protect the Company from usage erosion from energy efficiency conservation measures, and most importantly, it does nothing to lessen the current intra-class subsidies that higher use residential customers are paying

for the cost of service of lower use customers. And as I will discuss later in my rebuttal testimony, the high use residential customers include 10 of the 12 categories of low income customers that Mr. Miller requested usage per customer for in data request CAUSE-PA 1-004 and summarized in table 7 below. It is important to both the Company and the residential customers for the Company to gradually increase its residential customer charge over time.

Q. On Page 36 of Mr. Mierzwa' testimony, he compares customer charges for other natural gas companies in Pennsylvania to Columbia's, and notes that Columbia's current customer charge is already the highest. Do you have any comments?

A. Yes. Differences in rate structures can distort the comparison when looking at just one component in isolation. Mr. Mierzwa correctly notes that Columbia's current customer charge is the highest among regulated natural gas companies in Pennsylvania. However, that fact alone does not indicate how customers are impacted at a non-weather sensitive ("base load") level, where all residential customers are generally consuming the same minimum amount per month.

Q. What are some differences that skew a comparison of the customer charges in isolation?

A. Columbia's residential base rates include a customer charge and a single volumetric rate for all gas consumed. UGI Utilities, UGI Penn Natural Gas, and National Fuel Gas Company have multiple declining block rates, resulting in these utilities recovering more fixed costs in a higher first rate block, which is

effectively a minimum monthly charge for base load.

Instead of only looking at the customer charge, a more reasonable comparison of the impact on customers would be to include a customer's base load usage along with the customer charge. This comparison would reflect the impact on customers when the usage is generally at a minimum level. This minimum base load level should thus be the same for all customers each month.

Q. Can you provide a simple example to illustrate the impact of this rate design difference?

A. Table 5 below illustrates how a comparison of only the customer charge can be misleading in terms of cost recovery and impact on the customer. The table below shows the cost of 1 Mcf of base load. Even though the customer charge is higher with Company B, a customer will pay more at 1 Mcf under Company A. The cost for a customer buying gas from Company A is $13.90 ($11.00 plus 1 Mcf at $2.90) compared to $13.75 ($12.00 plus 1 Mcf at $1.75) the cost for of a customer under Company B.

TABLE 5

	Company A	Company B
Customer Charge	$11.00	$12.00
Volumetic rate per Mcf:		
First block – first 5 Mcf	$2.90	$1.75
Second block – next 20 Mcf	$0.00	N/A
Third block – above 25 Mcf	$0.00	N/A
Cost of 1 Mcf or base load	$13.90	$13.75

Q. Have you prepared an analysis indicating what level of fixed cost recovery exists for CPA at a base load level and a non-base load level, using the rate structures of the other Pennsylvania gas utilities?

A. Yes. Rather than simply comparing the dollar amount of customer charges, it is instructive to look at the percentage of fixed cost recovery to present a fair comparison. This method is more accurate, due to the differences in rate structures and cost of service.

Exhibit MPB-1R compares Columbia's recovery of costs based on the nine companies mentioned by Mr. Mierzwa existing rate structures, as well as at Columbia's current rates, Columbia's proposed rates, Mr. Mierza's (OCA) proposed rates and Mr. Hubert's (I&E) proposed rates. In calculating the cost recovery, I used Columbia's residential volumes and customer count from the current case. For Columbia, average monthly base load usage for the residential class is estimated to be 1.5 Mcf. Lastly, I applied the customer bills and volume

levels through each rate schedule.[11]

Q. Is Columbia recommending the use of declining block rates or a usage allowance in customer charges?

A. Definitely not. Columbia had a usage allowance in its customer change recently, but it created substantial customer confusion and was quickly eliminated. Similarly, block rates can create confusion for CHOICE shopping customers and is not recommended.

Q. What conclusions can one draw from this analysis?

A. Even though Columbia's residential customer charge is the highest of those in the comparison, there are Pennsylvania utilities that have a higher level of fixed cost recovery when accounting for both the customer charge and base load usage. Columbia is requesting that it show gradual progress toward an increase in fixed recovery from 47.1% to 48.8% (see Exhibit MPB-1R). In doing so Columbia would remain in its current position behind Peoples Natural Gas and National Fuel Gas Company in percentage of fixed recovery. OCA's (Mierzwa) and I&E's (Hubert) recommendations would move Columbia to fourth from last in percentage of fixed recovery. See table 6 below.

[11] Note that the customer count, base load level, and total sales are the same in all cases.

TABLE 6

Company	Fixed Recovery	Variable Recovery
Philadelphia Gas Works	35.7%	64.3%
Peoples TWP	37.9%	62.1%
UGI Central Pennsylvania	39.3%	60.7%
OCA Recommended	43.0%	57.0%
I&E Recommended	43.3%	56.7%
UGI Gas Utilities	43.0%	57.0%
PEPCO Energy Company	43.8%	56.2%
Peoples – Equitable	44.5%	55.5%
UGI Penn Natural Gas	46.7%	53.3%
Columbia Gas – Current	47.1%	52.9%
Columbia Gas – Proposed	48.8%	51.2%
Peoples Natural Gas	49.1%	50.9%
National Fuel Gas Company	50.5%	49.5%

Q. A common argument against increasing fixed cost recovery through a higher customer charge is that a higher percentage of fixed cost recovery through the customer charge corresponds with a lower recovery of fixed costs through the volumetric charge and therefore reduces the incentive for customers to conserve. Do you have any observations on the impact to customer consumption as it pertains to NiSource's experience in increasing the recovery of fixed costs through higher customer charges?

A. Yes. Initially, I observed that Columbia is proposing to increase volumetric delivery rates in this case. Thus, the proposed rate design will charge more for greater residential usage.

Also, a large portion of a customer's bill is for recovery of gas costs. Gas costs are

recovered on a volumetric basis and therefore reductions in usage will produce savings from conservation.

COH implemented a straight fixed variable ("SFV") rate design for its Small General Service rate class in December 2009. In a SFV rate design 100% of base rate recovery is collected through the customer charge. Of COH's residential customers, 99.5% are served by the Small General Service rate. COH's average small general service, weather normalized, annual usage per customer in 2010 (last full year before SFV) was 86.6 Mcf/year. COH's average small general service, weather normalized, annual usage per customer for the 12 months ending April 2015 (most recent 12 months of usage) is 83.2 Mcf/year.

If the intervening witness's assertions did apply, one would expect that a move to 100% recovery of base revenue through the customer charge, would cause COH's average annual normalized Small General Service consumption to increase. Instead, just the opposite has occurred; COH annual usage per customer has declined approximately 3.9%.

Based on actual observations using actual weather normalized residential usage per customer, there is no indication that a small increase in the percentage of fixed costs recovery through the customer charge will cause an increased in customer consumption.

Q. CAUSE-PA Witness Miller states on page 5 of his written testimony "As I will explain in detail below, recovery of customer costs through a fixed

charge is unduly discriminatory and uniquely harmful to low income households". Do you agree?

A. No. Revenue requirement is based on cost plus a reasonable return. Revenue recovery should match, to the extent possible over time revenue requirement for each rate class. To do otherwise would be unduly discriminatory toward all rate payers including low income. Fixed cost should be recovered through fixed rates, matching revenue with cost. Within a rate class, when fixed distribution system costs are included in the fixed customer charge, both low usage and high usage customers pay the same amount for the same service. Even though the high usage customers utilize the system more often than low usage customers, it cost the Company essentially the same to connect a low usage customer as it does a high usage customer within a rate class. When customer rates are based on cost, they are fair and there is no subsidization occurring.

Q. Mr. Miller states in his direct testimony on page 20 "Further increasing fixed charges also fails to align with the fact that higher-use customers rely on having a distribution system large enough to accommodate their needs, and therefore should shoulder a higher percentage of the distribution system costs." Do larger residential customers require a larger distribution system and therefore should pay more than smaller residential customers?

A. No. As I stated in response to data request CAUSE-PA 2-003, the cost to provide gas distribution service for a residential customer is fixed at a certain amount

regardless of the amount of gas consumed by the customer. As discussed below, a residential customer's load factor, regardless of consumption, would not be great enough to require additional investment above a two inch main.

Not only are distribution costs fixed costs, they are virtually the same for all residential customers based on the minimum size of the main and service installed. Since the Company uses a common size of two inches as the smallest size of main, I have analyzed the ability of a two inch main to serve the Company's residential customers. By applying pipeline flow formulas, it is possible to determine the amount of gas that would flow through the pipe under design day conditions and to estimate the maximum demand that the pipe would serve. As demonstrated in the calculation below, a two inch main would serve all residential customers using less than about 1,165.4 Mcf per year. Table 7 below provides a detailed view of the calculation, including support of the individual components.

TABLE 7

Average Res. Usage/Hr. @ Design Condition[12]	0.06	Mcf/Hr.
Hours in Day	24	
Daily Residential Usage at Design Conditions	1.44	Mcf/Day
Weighted Average BTU Conversion (TME 11-14)	1.0647	
Daily Residential Usage at Design Conditions	1.53	Dth/Day
Test Year Residential Sales Usage (Exh. 103, page 8)	23,280,676.1	Dth
Test Year Residential Distribution Usage (Exh. 103, page 9)	10,647,000.0	Dth
Test Year Residential Total Usage	33,927,676.1	Dth
Test Year Residential Sales Bills (Exh. 103, page 8)	3,377,134	Bills
Test Year Residential Choice Bills (Exh. 103, page 9)	1,327,180	Bills
Test Year Residential Total Bills	4,704,314	Bills
Average Usage per Month	7.2	Dth/Bill
Months in a Year	12	
Average Usage per Customer per Year	86.4	Dth/Cust
Days in Year	365	
Average Daily Usage	0.237	Dth/Day
Load Factor:		
Average Daily Usage	0.237	Dth/Day
Design Condition Usage	1.533	Mcf/Day
Load Factor (Average Daily Usage / Design Condition)	15.5%	
Design Day Flow Capacity per Thousand Feet of Main[13]	202	Mcf/Day
Customers per Thousand Feet of Main[14]	÷ 9.8	Cust.
Design Day Usage per Customer	20.6	Mcf/Cust/Day
Days in Year	X 365	
Load Factor	X 15.5%	
Annual Usage per Customer	1,165.4	Mcf/Year

[12] Per Company Engineers.
[13] Per Company Engineers.
[14] 9.8 customers per 1,000 feet of mains = 386,310 customers / 39,361,782 feet of main x 1,000 feet.

Based on the Company's annual bill frequency for its residential customers, virtually all of its residential customers use less than the 1,165.4 Mcf/year shown in the calculation above. Thus, it is reasonable to conclude that it costs the same, on average, to serve all residential customers, regardless of consumption, since virtually all residential customers can be served off of a two inch main. Further, because it costs essentially the same, on average, to serve all residential customers, it is logical and reasonable to gradually, over time, include the recovery of these fixed costs through the customer charge, matching revenue with cost.

Q. CAUSE-PA Witness Miller states on page 8, lines 6 - 8 of his written testimony "Rate affordability is a critical part of utility regulation and rate design, as it is part and parcel to the imposition of just and reasonable rates." What comments do you have on this statement?

A. The Company should be permitted a reasonable opportunity to earn a fair return, or rates would be confiscatory. Utility regulation addresses affordability through budget payment programs and low income programs such as CAP, LIHEAP, and LIURP.

Q. CAUSE-PA Witness Miller refers on page 16 – 17 of his direct testimony to the National Association of State Utility Consumer Advocates (NASUCA) resolution passed in June 10, 2015 that opposes efforts to increase fixed customer charges for distribution services. Stating "In the resolution, NASUCA explains that "low-income customers (with incomes at or below 150% of the federal poverty level) on average use

less [energy] than the statewide residential average and less than their higher-income counterparts". Does the usage of low income customers that Columbia serve agree with NASUCA's findings?

A. No. In 10 of the 12 categories in response to data request CAUSE-PA 1-004 Columbia low income customers use more, not less than their "higher income counterparts" (non-confirmed low income customers) using the weather normalized mean annual usage for the twelve months ending May 30, 2015. See table 8 below.

Table 8

	Mean Annual Usage (Dth)
Customers who participate in CAP, Percentage of Income	144.1
Customers who participate in CAP, Average of Payments	126.7
Customers who participate in CAP, Percentage of Income 0%-50% of Income Tier	124.8
Customers who participate in CAP, Percentage of Income 51%-100% of Income Tier	119.1
Customers who participate in CAP, Percentage of Income 101%-150% of Income Tier	118.8
Customers who participate in CAP, Minimum Payment	117.4
Customers who participate in CAP, and receive LIHEAP	116.6
Customers who participate in CAP, but do not receive LIHEAP	115.9
Customers who participate in CAP, 50% of Budget	107.5
Customers who are confirmed low-income but are neither LIHEAP nor CAP	93.3
Customers who are not confirmed low income	**88.9**
Customers receiving LIHEAP but not participating in CAP	82.0
Customers who participate in CAP, Senior CAP	43.1

Q. What conclusions have Mr. Miller and some of the other interveners expressed on the impact to low income customers specifically because Columbia is proposing to increase the current customer charge from $16.75 to $20.60 in this case?

A. Simply stated, Mr. Miller and Mr. Colton conclude low income customers are customers that use less than the average residential customer and therefore will experience a greater increase in their gas bills than the average residential customer if the Company increases its customer charge.

Mr. Miller states on page 20 of his direct testimony "low income customers are more likely to live in relatively smaller, multifamily homes, and therefore demand less in terms of system capacity." And "Higher income families are more likely to live in larger homes, with more demand on the natural gas distribution system."

Mr. Colton on page 7 of his direct testimony states "Low-use customers in the CGPA service territory, however, tend also to be low-income customers. As a result, through its increased customer charge, the Company proposes to increase rates the most for those who can least afford to pay those rate increases."

Q. Is it true, as Mr. Miller summarizes, that increasing the customer charge from $16.75 to $20.60 "would place the highest financial burden on low income customers"?

A. The short answer is, on average, no. First the obvious must be pointed out, there are low income customers whose usage is greater than the average residential

customer and there are low income customers whose usage is less than the average residential customer. Although there are often low income customers who resides in small multifamily units with fewer square feet to accomplish effective consumption reduction as Mr. Miller points out, there are also low income customers who live in large old poorly insulated homes with old less efficient furnaces that use above the average residential customer consumption.

The simple fact is customers that consume more gas than the average will benefit with a higher customer charge and customers that consume less gas than the average will bear a higher financial burden from a higher customer charge regardless if the customer is low income or not. In 10 of the 12 categories in response to data request CAUSE-PA 1-004 low income customers will benefit with a higher customer charge. To illustrate, table 9 below compares the annual bill using the average annual usage of low income and non-low income customers shown in table 8 above applied to Columbia's proposed residential rates of $20.60 customer charge and $4.7354/Dth to a revenue neutral rate design where the customer charge remains at $16.75 per month and the entire residential revenue requirement increase in included in the volumetric rate of $5.2693/Dth. Table 9 shows the customer group benefits financially with the lower $16.75 customer charge if the amount in the last column is positive and is hurt financially by the lower $16.75 customer charge if the amount in the last column is negative.

On average, 10 of the 12 categories of Columbia's low income customers will benefit in the range of $3.62 to $30.74 per year with the higher $20.60 customer charge

while the average non-low income residential customer will be hurt by the $20.60 customer charge by about $1.26 per year as compared to using a $16.75 customer charge.

Table 9

	Using $20.60 Customer Charge	Using $16.75 Customer Charge	Benefit (Hurt) by the $16.75 Cust. Chg.
Customers who participate in CAP, Percentage of Income	$929.57	$960.31	($30.74)
Customers who participate in CAP, Average of Payments	$847.18	$868.62	($21.44)
Customers who participate in CAP, Percentage of Income 0%-50% of Income Tier	$838.18	$858.61	($20.43)
Customers who participate in CAP, Percentage of Income 51%-100% of Income Tier	$811.19	$828.57	($17.38)
Customers who participate in CAP, Percentage of Income 101%-150% of Income Tier	$809.77	$826.99	($17.22)
Customers who participate in CAP, Minimum Payment	$803.14	$819.62	($16.48)
Customers who participate in CAP, and receive LIHEAP	$799.35	$815.40	($16.05)
Customers who participate in CAP, but do not receive LIHEAP	$796.03	$811.71	($15.68)
Customers who participate in CAP, 50% of Budget	$756.26	$767.45	($11.19)
Customers who are confirmed low-income but are neither LIHEAP nor CAP	$689.01	$692.63	($3.62)
Customers who are not confirmed low income	**$668.18**	**$669.44**	**$1.26**
Customers receiving LIHEAP but not participating in CAP	$635.50	$633.08	$2.42
Customers who participate in CAP, Senior CAP	$451.30	$428.11	$23.19

SECTION IV – NON-RESIDENTIAL RATE DESIGN

Q. Do you have any comments on the Company's proposal to further split the current SGSS, SCD and SGDS rate class volumetric base rate charges into two separate charges based on annual usage?

A. Yes. The Company has proposed in this case that the volumetric base rate for those customers whose annual usage is less than 6,440 therms annually and those whose annual usage is between 6,440 therms and 64,400 therms annually should no longer be the same as currently is the case under current rate design. Mr. Knecht on page 2 of his direct testimony states "The Company's proposal to bifurcate the commodity charge for Small General Service customers is not unreasonable, based on the cost information available at this time. However, as this proposal essentially splits the Small General Service class into two classes, Columbia should analyze the two sub-classes separately in future cost allocation studies." Columbia is willing to investigate this further to determine whether it can fairly separate SGS into two separate classes for cost allocation purposes.

Q. Do you have any comments on I&E Witness Hubert's proposed SGSS/SCD/SGDS customer charges?

A. As stated above, Mr. Hubert used the Peak & Average cost of service study as a basis for his proposed customer charges. If Mr. Hubert had included Accounts 905, 908, 909, 910 and 921 which are all allocated in the Peak & Average based on a customer ratio the SGSS/SCD/SGDS customer charge would be $23.85 instead of his calculated $23.36 for customers who use less than 6,440 therms

annually.

As for Mr. Hubert's proposal to keep the existing customer charge for those customers using between 6,440 and 64,400 therms at the current rate of $48.00, Mr. Hubert is implying that Columbia made no additional investment in Services, Meters, House Regulators or any other customer based costs for those customers using between 6,440 and 64,400 therms that he himself agrees should be included in the customer charge. For this reason, and because keeping the existing $48.00 customer charge would just further reduce the percentage of fixed costs being recovered through the fixed recovery customer charge, Mr. Hubert's recommendation should be rejected.

Q. Do you have any comments on OSBA Witness Knecht's proposed SGSS/SCD/SGDS customer charges?

A. Mr. Knecht based his recommended customer charges for the SGSS/SCD/SGDS rate class off his weighted average cost of service study which weights 75% of the Company's Peak & Average study and 25% of its Customer Demand study. Mr. Knecht then included all costs that were allocated on a customer basis. Mr. Knecht states on page 23 of his direct testimony "I follow the basic principle that the rates should follow costs." Mr. Knecht did deviate from the Company when excluding Account 904 uncollectible accounts from his calculated customer charge.

The Company agrees with Mr. Knecht that rates should follow cost however the Company disagrees with Mr. Knecht as to which allocated cost of service study to

use as a basis of rate design. The Company also believes the Customer Charge study should be used as a determination of the minimum fixed cost that should be recovered through the customer charge, however gradually over time the Company believes all of the Company's fixed costs should eventually be recovered through the customer charge because only then will revenue recovery match cost causation and intra-class subsidies can be mitigated.

Q. Does this complete your rebuttal testimony?

A. Yes, it does.

Columbia Gas of Pennslyvania, Inc.
Residential Fixed vs Variable Cost Recovery - Columbia's Rates vs Peer's Rates
Test Year Base Load of 1.5 Mcf
For the 12 Months Ending December 31, 2016

Line No.	Description	Bills (1)	Volumes (2) Mcf	Rate (3) $/Mcf	Revenue (4) $	Percent Fixed of Variable (5) $/Mcf
1	**Columbia's Current Rates**					
2	Customer Charge	4,704,314		16.75	78,797,260	
3	Base Load Usage		6,072,373.1	4.2138	25,587,766	
4	Total Base Load				104,385,026	**47.1%**
5	Commodity Charge:					
6	All Gas Consumed (excl base load)		27,855,303.0	4.2138	117,376,676	**52.9%**
7	Subtotal		33,927,676.1		221,761,702	100.0%
8	**Peoples TWP**					
9	Customer Charge	4,704,314		15.75	74,092,946	
10	Base Load Usage		6,072,373.1	6.7880	41,219,269	
11	Total Base Load				115,312,215	**37.9%**
11	Commodity Charge:					
12	All Gas Consumed (excl base load)		27,855,303.0	6.7880	189,081,797	**62.1%**
13	Subtotal		33,927,676.1		304,394,012	100.0%
14	**UGI Central Pennsylvania**					
15	Customer Charge	4,704,314		14.60	68,682,984	
16	Base Load Usage		6,072,373.1	5.7520	34,928,290	
17	Total Base Load				103,611,274	**39.3%**
18	Commodity Charge:					
19	All Gas Consumed (excl base load)		27,855,303.0	5.7520	160,223,703	**60.7%**
20	Subtotal		33,927,676.1		263,834,977	100.0%

Columbia Gas of Pennslyvania, Inc.
Residential Fixed vs Variable Cost Recovery - Columbia's Rates vs Peer's Rates
Test Year Base Load of 1.5 Mcf
For the 12 Months Ending December 31, 2016

1	**Peoples Natural Gas**					
2	Customer Charge	4,704,314		13.95	65,625,180	
3	Base Load Usage		6,072,373.1	3.1497	19,126,154	
4	Total Base Load				84,751,334	**49.1%**
5	Commodity Charge:					
6	All Gas Consumed (excl base load)		27,855,303.0	3.1497	87,735,848	**50.9%**
7	Subtotal		33,927,676.1		172,487,182	100.0%
8	**Peoples- Equitable Division**					
9	Customer Charge	4,704,314		13.25	62,332,161	
10	Base Load Usage		6,072,373.1	3.8430	23,336,130	
11	Total Base Load				85,668,291	**44.5%**
12	Commodity Charge:					
13	All Gas Consumed (excl base load)		27,855,303.0	3.8430	107,047,929	**55.5%**
14	Subtotal		33,927,676.1		192,716,220	100.0%
15	**UGI Penn Natural Gas**					
16	Customer Charge	4,704,314		13.17	61,955,815	
17	Base Load Usage		6,072,373.1	3.5036	21,275,166	
18	Total Base Load				83,230,981	**46.7%**
19	Commodity Charge:					
20	First 8 MCF (excl base load)		14,710,008.0	3.5036	51,537,984	**53.3%**
21	Over 8 MCF		13,145,295.0	3.3036	43,426,797	
22	Subtotal		33,927,676.1		178,195,762	100.0%
23	**Philedelphia Gas Works**					
24	Customer Charge	4,704,314		12.00	56,451,768	
25	Base Load Usage		6,072,373.1	6.0067	36,474,923	
26	Total Base Load				92,926,691	**35.7%**
27	Commodity Charge:					
28	All Gas Consumed (excl base load)		27,855,303.0	6.0067	167,318,449	**64.3%**
29	Subtotal		33,927,676.1		260,245,140	100.0%

Columbia Gas of Virginia, Inc.
Residential Fixed vs Variable Cost Recovery - Columbia's Rates vs Peer's Rates
Test Year Base Load of 1.5 Mcf
For the 12 Months Ending December 31, 2016

Line No.	Description	Bills (1)	Volumes (2) Mcf	Rate (3) $/Mcf	Revenue (4) $	Percent Fixed of Variable (5) $/Mcf
1	**National Fuel Gas Company**					
2	Customer Charge	4,704,314		12.00	56,451,768	
3	Base Load Usage		6,072,373.1	3.4161	20,743,834	
4	Total Base Load				77,195,602	**50.5%**
3	Commodity Charge:					
4	First 5 Mcf (excl base load)		9,168,083.6	3.4161	31,319,090	**49.5%**
5	Over 5 Mcf		18,687,219.4	2.3803	44,481,188	
	Subtotal		33,927,676.1		152,995,880	100.0%
6	**PECO Energy Company**					
7	Customer Charge	4,704,314		11.75	55,275,690	
8	Base Load Usage		6,072,373.1	3.5384	21,486,485	
9	Total Base Load				76,762,175	**43.8%**
10	Commodity Charge:					
11	All Gas Consumed (excl base load)		27,855,303.0	3.5384	98,563,204	**56.2%**
12	Subtotal		33,927,676.1		175,325,379	100.0%
13	**UGI Gas Utilities**					
14	Customer Charge	4,704,314		8.55	40,221,885	
15	Base Load Usage		6,072,373.1	3.3082	20,088,625	
16	Total Base Load				60,310,510	**43.0%**
17	Commodity Charge:					
18	First 5 Mcf (excl base load)		9,168,083.6	3.3082	30,329,854	**57.0%**
19	Over 5 Mcf		18,687,219.4	2.6634	49,771,540	
20	Subtotal		33,927,676.1		140,411,904	100.0%

Columbia Gas of Virginia, Inc.
Residential Fixed vs Variable Cost Recovery - Columbia's Rates vs Peer's Rates
Test Year Base Load of 1.5 Mcf
For the 12 Months Ending December 31, 2016

1	**OCA Proposed Rates**					
2	Customer Charge	4,704,314		16.75	78,797,260	
3	Base Load Usage		6,072,373.1	5.2693	31,997,156	
4	Total Base Load				110,794,416	**43.0%**
5	Commodity Charge:					
6	All Gas Consumed (excl base load)		27,855,303.0	5.2693	146,777,948	**57.0%**
7	Subtotal		33,927,676.1		257,572,364	100.0%
8	**Columbia's Proposed Rates**					
9	Customer Charge	4,704,314		20.60	96,908,868	
10	Base Load Usage		6,072,373.1	4.7354	28,755,116	
11	Total Base Load				125,663,984	**48.8%**
12	Commodity Charge:					
13	All Gas Consumed (excl base load)		27,855,303.0	4.7354	131,906,002	**51.2%**
14	Subtotal		33,927,676.1		257,569,986	100.0%
15	**I&E Proposed Rates**					
16	Customer Charge	4,704,314		16.93	79,644,036	
17	Base Load Usage		6,072,373.1	5.2443	31,845,346	
18	Total Base Load				111,489,382	**43.3%**
19	Commodity Charge:					
20	All Gas Consumed (excl base load)		27,855,303.0	5.2443	146,081,566	**56.7%**
21	Subtotal		33,927,676.1		257,570,948	100.0%

COLUMBIA GAS OF PENNSYLVANIA, INC.
CUSTOMER BASED COSTS - SYSTEM CHARGE CALCULATION EXCLUDING MAINS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2016

ALLOCATED COST OF SERVICE
PEAK & AVERAGE

111, SCHEDULE 2
PAGE 17 OF 18
WITNESS: B. E. ELLIOTT

LINE NO.	ACCT NO. (A)	ACCOUNT TITLE (B)	ALLOC FACTOR (C)	TOTAL COMPANY (D)	RSS/RDS (E)	SGSS/SCD/SGDS (F)	N/A (G)	SDS/LGSS (H)	LDS/LGSS (I)	MLDS (J)
				$	$	$	$	$	$	$
1	874.00	MAINS & SERVICES [SERVICES ONLY][1]	15	3,844,869	3,535,626	301,361	-	5,998	1,884	-
2	876.00	M & R - INDUSTRIAL	17	274,004	-	67,254	-	91,526	115,224	-
3	878.00	METERS & HOUSE REGULATORS	27	2,538,487	1,952,274	559,508	-	20,156	6,194	355
4	879.00	CUSTOMER INSTALLATIONS	15	5,575,022	5,126,623	436,970	-	8,697	2,732	-
5	890.00	M & R - INDUSTRIAL	17	185,003	-	45,409	-	61,797	77,797	-
6	892.00	SERVICES [2]	15	1,613,871	1,484,067	126,495	-	2,518	791	-
7	893.00	METERS & HOUSE REGULATORS	27	244,982	188,408	53,996	-	1,945	598	34
8		TOTAL DISTRIBUTION		14,276,238	12,286,998	1,590,994	-	192,636	205,220	390
9	901.00	SUPERVISION	6	-	-	-	-	-	-	-
10	902.00	METER READING	6	836,787	762,740	72,901	-	921	201	25
11	903.00	CUSTOMER RECORDS AND COLLECTION EXPENSES	6	9,650,214	8,796,267	840,727	-	10,615	2,316	290
12	903.00	INTEREST ON CUSTOMER DEPOSITS	9	89,468	65,556	23,912	-	-	-	-
13	904.00	UNCOLLECTIBLES-DIS REVENUE	7	-	-	-	-	-	-	-
14	904.00	UNCOLLECTIBLES-GMB/GTS REVENUE	8	-	-	-	-	-	-	-
15	905.00	MISCELLANEOUS	6	36,677	33,432	3,195	-	40	9	1
16	921.00	OFFICE SUPPLIES & EXPENSES	6	-	-	-	-	-	-	-
17		TOTAL CUSTOMER ACCOUNTS		10,613,146	9,657,994	940,735	-	11,576	2,526	316
18	907.00	SUPERVISION	6	-	-	-	-	-	-	-
19	908.00	CUSTOMER ASSISTANCE	6	576,029	525,074	50,184	-	634	138	-
20	909.00	INFORMATIONAL & INSTRUCTIONAL EXPENSES	6	73,183	66,707	6,376	-	81	18	2
21	910.00	MISCELLANEOUS	6	1,102,347	1,004,800	96,036	-	1,213	265	33
22	910.00	LARGE CUSTOMER RELATIONS	21	-	-	-	-	-	-	-
23	921.00	OFFICE SUPPLIES & EXPENSES	6	-	-	-	-	-	-	-
24	931.00	RENTS - GENERAL	6	-	-	-	-	-	-	-
25	932.00	MAINTENANCE	6	-	-	-	-	-	-	-
26		TOTAL CUST SERVICE & INFORMATION		1,751,559	1,596,581	152,596	-	1,927	420	35
27	912.00	DEMONSTRATION	6	677,253	617,323	59,002	-	745	163	20
28	913.00	ADVERTISING	6	19,504	17,778	1,699	-	22	5	1
29		TOTAL SALES		696,757	635,101	60,701	-	766	167	21
30	920-931	CUSTOMER RELATED A&G		2,310,458	1,630,744	392,477	-	108,615	178,367	264
31		CUSTOMER-RELATED BENEFITS	24	1,536,890	1,084,752	261,071	-	72,249	118,648	169
32	TOTAL CUST-RELATED O&M [LINES 8, 19, 27, 30 & 31]			31,185,056	26,892,170	3,398,575	-	387,769	505,348	1,195
33	DEPRECIATION EXPENSE [PAGE 2, LINE 42]			22,060,729	18,120,443	2,886,465	-	425,713	614,496	13,611
34	INCOME TAXES			13,767,272	12,165,932	1,418,374	-	88,214	86,302	8,450
35	RETURN ON RATE BASE [PAGE 2, LINE 25]			27,981,368	24,726,716	2,882,783	-	179,292	175,404	17,174
36		TOTAL ANNUAL CUSTOMER-BASED COST		94,994,425	81,905,260	10,586,198	-	1,080,988	1,381,550	40,430
37		AVERAGE ANNUAL CUSTOMER BILLS [3]		5,155,145	4,704,314	443,882	0	5,625	1,204	120
38		**MONTHLY CUSTOMER BASED COST/BILL [LINE 36 / LINE 37]**		**$ 18.43**	**$ 17.41**	**$ 23.85**	**$ -**	**$ 192.18**	**$ 1,147.47**	**$ 336.91**

[1] MAINS AND SERVICES @ 26.522% OF TOTAL ACCOUNT 874.
[2] SERVICES @ 99.241% OF ACCOUNT 892.
[3] AVERAGE ANNUAL CUSTOMER BILLS INCLUDE FINAL BILLS.