OCA Statement No. 5

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
v.	:	Docket No. R-2020-3018835
Columbia Gas Of Pennsylvania	:	

Direct Testimony of
Roger D. Colton

On Behalf of:
Office of Consumer Advocate
Statement No. 5

July 28, 2020

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Q. PLEASE STATE YOUR NAME AND ADDRESS.

A. My name is Roger Colton. My address is 34 Warwick Road, Belmont, MA 02478.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?

A. I am a principal in the firm of Fisher Sheehan & Colton, Public Finance and General Economics of Belmont, Massachusetts. In that capacity, I provide technical assistance to a variety of federal and state agencies, consumer organizations and public utilities on rate and customer service issues involving water/sewer, natural gas and electric utilities.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of the Office of Consumer Advocate.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND.

A. I work primarily on low-income utility issues. This involves regulatory work on rate and customer service issues, as well as research into low-income usage, payment patterns, and affordability programs. At present, I am working on various projects in the states of New York, Maryland, Pennsylvania, Michigan, Georgia, Illinois, Iowa and Washington. My clients include state agencies (e.g., Pennsylvania Office of Consumer Advocate, Maryland Office of People's Counsel, Illinois Office of Attorney General), federal agencies (e.g., the U.S. Department of Health and Human Services), community-based organizations (e.g., National Immigration Law Center, Natural Resources Defense Council, Advocacy Centre Tenants Ontario), and private utilities (e.g., Unitil Corporation d/b/a Fitchburg Gas and Electric Company, Entergy Services, Xcel Energy d/b/a Public

Service of Colorado). In addition to state-specific and utility-specific work, I engage in national work throughout the United States. For example, in 2011, I worked with the U.S. Department of Health and Human Services (the federal LIHEAP office) to advance the review and utilization of the Home Energy Insecurity Scale as an outcomes measurement tool for the federal Low-Income Home Energy Assistance Program ("LIHEAP"). In 2007, I was part of a team that performed a multi-sponsor public/private national study of low-income energy assistance programs. This year, I completed a study of water affordability in twelve U.S. cities for the London-based newspaper, The Guardian. A brief description of my professional background is provided in Appendix A.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. After receiving my undergraduate degree in 1975 (Iowa State University), I obtained further training in both law and economics. I received my law degree in 1981 (University of Florida). I received my Master's Degree (regulatory economics) from the MacGregor School in 1993.

Q. HAVE YOU EVER PUBLISHED ON PUBLIC UTILITY REGULATORY ISSUES?

A. Yes. I have published three books and more than 80 articles in scholarly and trade journals, primarily on low-income utility and housing issues. I have published an equal number of technical reports for various clients on energy, water, telecommunications and other associated low-income utility issues. A list of my publications is included in Appendix A.

Q. HAVE YOU EVER TESTIFIED BEFORE THIS OR OTHER UTILITY COMMISSIONS?

A. Yes. I have testified before the Pennsylvania Public Utility Commission ("PUC" or "Commission") on numerous occasions regarding utility issues affecting low-income customers and customer service. I have also testified in regulatory proceedings in more than 35 states and various Canadian provinces on a wide range of utility issues. A list of the proceedings in which I have testified is listed in Appendix A.

Q. PLEASE EXPLAIN THE PURPOSE OF YOUR DIRECT TESTIMONY.

A. The purpose of my Direct Testimony is as follows.

- First, I examine the effectiveness of the collections which Columbia Gas of Pennsylvania (CGPA or Company) direct toward CGPA Customer Assistance Program (CAP) participants. This examination is necessary whether or not CGPA is granted a rate increase in this proceeding.

- Second, given CGPA's agreement to implement the recommendation in the June 2020 PUC Management Audit to develop a new or revised Outreach Strategy and Communications Plan to promote enrollment in CAP, I assess differing outreach recommendations that should be included in that new/revised Plan. This examination is needed whether or not CGPA is granted a rate increase in this proceeding.

- Third, I examine the allocation of CGPA's universal service costs between and amongst customer classes. This examination is needed whether or not CGPA is granted a rate increase in this proceeding.

- Fourth, I examine the reasonableness of CGPA's proposal to increase its residential customer charge. This examination is necessary only if CGPA's request for increased rates is granted.

- Finally, I examine the Company's request for an adder to its return on equity for exemplary management from a customer service and collections perspective. .

Summary of Recommendations

Q. PLEASE PROVIDE A SUMMARY OF THE RECOMMENDATIONS YOU MAKE IN YOUR DIRECT TESTIMONY.

A. Based on the data and analysis presented throughout my Direct Testimony, I recommend as follows:

- That CGPA should submit to its universal service advisory committee within six months of a final order in this proceeding the question of how customer payments on CAP bills can be pursued through a reasonable collections process.

- That as CGPA proceeds with the development of its new/revised "Outreach Strategy and Communication Plan" being prepared in response to the PUC Audit's management recommendations, an explicit identification of how it implements each of the principles set forth below:

    - Rather than relying primarily on call center contacts as described above, use the community as a means of identifying and engaging the hard-to-reach population.

    - Rather than relying primarily on staff contacts as the means of identifying low-income customers, focus on relationship-building.

    - Rather than relying primarily on customers initiating contacts (whether to apply for assistance, or to be in contact with a "self-declaration"), go to the community (reaching them "where they live, work, shop, play and pray") rather than making the community come to you.

    - Rather than relying primarily on CGPA communications (as well as government officials) as described above, rely on grassroots boots-on-the-ground "trusted messengers" from within the community.

- That as CGPA proceeds with the development of its new/revised "Outreach Strategy and Communications Plan" being prepared in response to the PUC

Audit's management recommendations, CGPA incorporate the following specific outreach mechanisms:

- Whenever a Confirmed Low-Income customer is offered a payment arrangement through which to retire an arrearage, that Confirmed Low-Income customer should be offered the option of enrolling into CAP (with access to arrearage forgiveness). While I do not necessarily recommend the automatic enrollment of such Confirmed Low-Income customers into CAP, customers should be provided with the opportunity to make an informed choice between a payment arrangement and CAP.

- Prior to the involuntary disconnection of service due to nonpayment to Confirmed Low-Income customers, such Confirmed Low-Income customers should be provided the option of enrolling into CAP (with access to arrearage forgiveness). While I do not necessarily recommend the automatic enrollment of Confirmed Low-Income customers into CAP prior to a service disconnection, customers should be provided with the opportunity to make an informed choice between having service disconnected and entering into CAP with access to arrearage forgiveness.

- Once service to a Confirmed Low-Income customer has been disconnected for nonpayment, the customer with disconnected service should be provided the option of reconnecting service by enrollment in CAP, with access to arrearage forgiveness for any arrears incurred preceding the disconnection. While I do not necessarily recommend the automatic enrollment of Confirmed Low-Income customers into CAP as a means of restoring (or reconnecting) service, Confirmed Low-Income customers should be provided with the opportunity to make an informed choice between having service remaining disconnected or enrolling in CAP with a restoration of service and access to arrearage forgiveness.

- When a Confirmed Low-Income customer is contacted by CGPA as part of the annual Cold Weather Survey, and found to be either: (a) using a potentially unsafe heating source; or (b) going without service (as each of those terms is defined by the PUC), that Confirmed Low-Income customer should be provide with the opportunity to enroll in CAP. While I do not necessarily recommend that such Confirmed

Low-Income customers be automatically enrolled in CAP, Confirmed Low-Income customers should be provided with the opportunity to make an informed choice between continuing to go without service, continuing to use an unsafe heating source, or enrolling in CAP with a restoration of service and access to arrearage forgiveness.

- That universal service charges should be allocated between customer classes on a competitively neutral basis. The allocation of universal costs among customer classes should be based on the percentage of revenue provided by each customer class at base rates.

- That the proposed customer charge presented by OCA witness Jerome Mierzwa should be adopted.

- That the recommendation of OCA witness Kevin O'Donnell regarding the requested additional equity return for "exemplary management" should be adopted.

Part 1. CAP Collections.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I review the Company's performance relative to the PUC's directive in its September 2019 Final Order in Docket M-2019-3012599.[1] In that Final Order the PUC stated that utilities should initiate collection activity for CAP accounts when a customer has no more than two (2) in-program payments in arrears. Customers should not be removed or defaulted from CAP as a precursor to termination for non-payment. In response to that order, CGPA stated that its Universal Service and Energy Conservation Plan (USECP) "is consistent with" with this provision of the CAP Policy Statement." (Columbia Gas, Letter Response, Columbia Gas USECP, Docket N-2018-2645401, at 2, February 20, 2020).

[1] http://www.puc.pa.gov/about_puc/consolidated_case_view.aspx?Docket=M-2019-3012599 (November 5, 2019) (last accessed May 16, 2020).

Q. DO YOU HAVE REASON TO DOUBT THIS ASSURANCE?

A. Yes. The data for CGPA in this proceeding provides reason for concern when contrasted with CGPA's statement that its collection activity is "consistent with" the PUC's Final Order directive. The data for CGPA is set forth in the Schedule RDC-1. The data shows that while CGPA tendered on average of between 22,000 and 23,000 CAP bills each month for the years 2018 through 2019, it received between roughly 12,000 and 13,000 full payments (setting aside whether those payments were both full and on-time). Schedule RDC-1 shows that:

- In 2017, CGPA issued an average of 22,005 CAP bills per month and received an average of 11,694 full CAP payments (46.4%).
- In 2018, CGPA issued an average of 23,420 CAP bills per month and received an average of 11,817 full CAP payments (50.5%).
- In 2019, CGPA issued an average of 22,899 CAP bills per month and received an average of 13,043 full CAP payments (57.0%).

In dollar terms, in 2017, CGPA received CAP payments equal to only 71.8% of the CAP bills it issued (payments of $9,050,991 against bills of $12,598,585); in 2018, CGPA received CAP payments equal to only 73.4% of its CAP bills ($10,262,398 in CAP payments against $13,972,031 of CAP bills); and in 2019, CGPA received CAP payments equal to 77.0% of CAP bills ($11,006,661 in CAP payments against $14,229,197 in CAP bills). Each year, in other words, CGPA fell between roughly 25% and 30% further behind in fully collecting its CAP bills.

Q. WHAT DOES THE COLUMBIA GAS UNIVERSAL SERVICE PLAN SAY ABOUT CAP NONPAYMENT?

A. The most recent CGPA Universal Service and Energy Conservation Plan (USECP) states as follows:

> Columbia will issue a termination notice no sooner than 10 days after a customer fails to pay two missed CAP budget payments by the due date. If a CAP customer does not make up all missed CAP payments within 10 days of the date of the termination notice, Columbia will attempt to terminate service for nonpayment of the CAP budget bill. Columbia, in its sole discretion, may delay termination in the event of extenuating circumstances.

Columbia Gas USECP, 2019-2021, at 27).

Q. HOW DOES THIS DATA RELATE TO WHETHER CGPA IS IN COMPLIANCE WITH THE PUC'S CAP POLICY STATEMENT REGARDING CAP COLLECTIONS?

A. Despite the collection shortfalls documented in Schedule RDC-1, and the collection policy articulated in its USECP, CGPA's collection policy toward the Company's CAP participants is not adequate. The data is set forth in the Table immediately below. The Table restates the number of CAP bills along with the number and percentage of full CAP payments from Schedule RDC-1. It then shows the monthly number of CAP disconnections for nonpayment (with the impact of Pennsylvania's winter shutoff restrictions readily evident). Over the course of the 15-month period–2020 data is omitted to eliminate the effect of COVID-19 economic displacement—while CGPA received full payments against just over all of the CAP bills it issued (12,72 payments against 22,802 bills), it disconnected service to 5.03% CAP accounts (n=1,146).

Table 1. CAP Bills, CAP Full Payments, CAP Nonpayment Disconnections (Oct. 2018 – Dec. 2019)					
	CAP Bills	CAP Full Pyts	Pct Full Pyts	CAP Disconnects	Cumulative CAP Disconnect Pct
Oct-18	24,495	12,830	52%	68	
Nov-18	22,203	12,120	55%	41	
Dec-18	20,567	9,377	46%	0	
Jan-19	24,787	9,832	40%	0	
Feb-19	21,328	9,946	47%	0	
Mar-19	23,305	11,313	49%	0	
Apr-19	23,562	12,754	54%	102	
May-19	25,575	14,013	55%	145	
Jun-19	21,688	13,392	62%	168	
Jul-19	24,891	15,525	62%	224	
Aug-19	23,341	16,102	69%	160	
Sep-19	21,761	15,405	71%	115	
Oct-19	23,446	16,482	70%	88	
Nov-19	20,730	12,069	58%	35	
Dec-19	20,349	9,678	48%	0	
Average	22,802	12,723	56%	1,146	5.03%
	OCA-IV-1	OCA-IV-1		OCA-IV-33	

Q. DOES CGPA DIRECT THE SAME LEVEL OF COLLECTIONS EFFORT TO CAP PARTICIPANTS THAT IT DIRECTS TOWARD RESIDENTIAL AND CONFIRMED LOW-INCOME RESIDENTIAL CUSTOMERS?

A. It does not appear to do so. The PUC's Bureau of Consumer Services (BCS) reports the disconnection rate both for residential customers and for confirmed low-income customers in its Annual Report on Universal Service Programs and Collections Performance.[2] The data for 2018 is presented in the Table below.

[2] The annual BCS Report on Universal Service Programs and Collections Performance can be accessed at: http://www.puc.state.pa.us/filing_resources/universal_service_reports.aspx (last accessed on March 30, 2020).

Table 2. Percent Dollars in Arrears and Disconnection Rate Residential vs. Confirmed Low-Income (2018)		
	Residential	Confirmed Low-Income
Percent dollars in arrears[3]	3.1%	8.3%
Disconnection rate[4]	2.7%	9.3%

As can be seen, while CGPA disconnected 2.7% of its residential customers in 2018, it did so while 3.1% of its residential dollars were in arrears. While CGPA disconnected 9.3% of its confirmed low-income customers in 2018, it did so while 8.3% of its confirmed low-income customers were in arrears. While the comparison to CAP is not perfect, the data above shows that CGPA disconnected 5.03% of its CAP customers while receiving payment of only 73.4% of the dollars it billed (i.e., it had *not* received payment of 26.6% of the CAP dollars it received).

Q. IS YOUR RECOMMENDATION THAT THE COMPANY DISCONNECT SERVICE TO MORE CAP CUSTOMERS?

A. Absolutely not. Nor is that response what the PUC's CAP Policy Statement articulated. It is reasonable, however, for CGPA to improve the collections directed toward its CAP participants. Participation in CAP should not insulate customers from being placed in the collection cycle when a customer fails to make payment over a period of time. Accordingly, CGPA should demonstrate that it is, indeed, in compliance with the PUC's directive that the Company should initiate collection activity for CAP accounts when a customer has no more than two (2) in-program payments in arrears

[3] BCS Annual Report on Collection Performance, at 36 - 37. (The 2019 BCS Report has not yet been published.)
[4] Id., at 14 – 15.

Q. WHY IS CAP COLLECTION OF CONCERN IN THIS BASE RATE CASE?

A. The nonpayment of CAP bills is of concern because, as with any other unpaid bill, the nonpayment of a CAP bill imposes costs on other ratepayers. Those costs include working capital requirements, credit and collection expenses, and bad debt expense. The level of unpaid CAP bills for CGPA CAP customers is of particular concern because CGPA has previously stated that its practices "are in accordance with" the PUC directive that the Company "should initiate collection activity for CAP accounts when a customer has no more than two (2) in-program payments in arrears."

Q. WHAT DO YOU THUS RECOMMEND?

A. Substantial attention is devoted to ensuring that CGPA enroll all customers who are eligible for CAP and who could benefit from CAP's provision of an affordable bill. However, attention needs to be devoted, also, to ensuring that CGPA customers who participate in CAP are paying the affordable bills that are being delivered to them. I recommend that CGPA submit to its universal service advisory committee within six months of a final order in this proceeding the question of how customer payments on CAP bills can be pursued through a reasonable collections process. The resolution of this question is not only for the benefit of CAP participants (in helping them to retain service), but also for the benefit of CAP non-participants by reducing the costs of unpaid bills. As I discuss elsewhere in this testimony, CGPA should target structural poverty and seek to enroll customers who are facing long-term poverty status.

Part 2. Low-Income Assistance Outreach.

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. In this section of my testimony, I examine whether CGPA might reasonably respond to the payment difficulties that exist within its confirmed low-income population through the pursuit of improved outreach for bill assistance programs. I conclude that the Company can improve its low-income outreach.

Q. WHAT IS THE IMMEDIATE BASIS FOR THIS SECTION OF YOUR TESTIMONY?

A. The Pennsylvania PUC's "Management and Operations Audit" of CGPA, released in June 2020 (hereafter "Management Audit"), addressed the relationship between low-income payment difficulties and participation rates in the Company's universal service programs, most specifically in CAP. The Management Audit specifically included, as one of its major recommendations the recommendation that CGPA "implement various strategies to reduce arrearage levels such as increasing CAP enrollment. . ." (Management Audit, at 5, 8, 59). In its "Implementation Plan" in response to the Management Audit, CGPA accepted the Audit's recommendation and indicated that the steps to respond to that recommendation were "in progress." (CGPA, "2020 Implementation Plan in Response to the 2019 Focused Management and Operations Audit, Docket No. D-2019-3011582, at 17). CGPA indicates that the steps that were "in progress" included "implementation action steps" to "Develop and document an Outreach Strategy and Communication plan to increase enrollment in Universal Programs, including CAP, with input from the Universal Service Advisory Committee." (Id.)

In accepting the PUC Management Audit recommendation, CGPA stated:

> The Company anticipates an increase in the number of customers who are payment troubled, even though businesses are opening and people are returning to work. The Company's focus during this time is to work with customers to minimize arrearage balances through outreach. The Company will focus on the implementation plan defined below subsequent to the passing of the COVID-19 Pandemic.

My testimony in this section is in furtherance of CGPA developing an adequate "Outreach Strategy and Communication Plan" to increase enrollment in CAP pursuant to the PUC Management Audit's recommendation and the CPGA response thereto.

Q. HAVE YOU HAD OCCASION TO REVIEW THE EXTENT TO WHICH CGPA'S CONFIRMED LOW-INCOME POPULATION IS IN DEBT?

A. Yes. The Table below shows the data. An ongoing substantial number of Confirmed Low-Income customers are in debt to CGPA each year. The percent of accounts in debt ranges from 15.9% (2018) to 18.0% in 2016. These percentages represent from 10,749 Confirmed Low-Income customers in debt (2018) to 12,294 such customers in debt in 2016. While it is clear that the number of Confirmed Low-Income customers in debt is declining, that decline may be as much due to the fact that CGPA is simply confirming the low-income status of fewer and fewer of its customers. While CGPA had 68,178 Confirmed Low-Income customers in 2016, it had only 67,590 in 2018.

Those customers in debt were further in debt in 2018 than they were in 2016. The average total debt for Confirmed Low-Income customers in 2018 ($602.49) was nearly

14% higher than the average total debt of such customers in 2016 ($529.75) ($602.49 / $529.75 = 1.137). Both the average debt of customers on arrangement ($688.86) and the average debt of customers not on arrangement ($406.98) were substantially higher in 2018 than it was in 2016.

Table 3. Arrearages for CGPA Confirmed Low-Income (CLI)
(2016 – 2018) (BCS Annual Report on Universal Service Programs and Collections Statistics)

	Pct CLI Accts in Debt	# CLI in Debt on Arrangement	Avg $s CLI in Debt on Arrangement	# CLI in Debt No Arrangement	Avg $s CLI in Debt No Arrangement	Total # CLI in Debt	Avg $s Total CLI in Debt
2016	18.0%	8,772	$608.88	3,522	$332.67	12,294	$529.75
2017	16.3%	7,609	$634.56	3,450	$362.52	11,059	$549.70
2018	15.9%	7,456	$688.86	3,293	$406.98	10,749	$602.49

I will address the success of the "arrangements" which CGPA enters into with its Confirmed Low-Income customer base below.

Q. WHAT PAYMENT DIFFICULTIES DO YOU FIND IN CGPA'S LOW-INCOME POPULATION?

A. The PUC's Bureau of Consumer Services publishes annual statistics on universal service programs and collections performance. One element of those statistics involves an examination of the collections performance within the Confirmed Low-Income population. I have examined these statistics for the years 2016 through 2018 (the most recent year for which statistics have been published as of the date of this testimony). BCS reports that Columbia Gas had confirmed the low-income status of between 67,590 (2018) and 68,178 (2016) within the past three years. Of those Confirmed Low-Income customers, between 20,405 (2016) and 23,600 (2018) customers had been enrolled in CAP.

The data in the Table below reveals several facts about the CGPA Confirmed Low-Income population. First, the number of "payment-troubled" customers for CGPA is very high. "A payment troubled customer is a customer who has failed to maintain one or more payment arrangements in a 1-year period."[5] Thus, even though CGPA reports having 7,456 Confirmed Low-Income customers in debt on payment arrangements in 2018, it further reports that 7,816 Confirmed Low-Income customers "failed to maintain one or more arrangements" in a 1-year period (i.e., they were "payment-troubled" in 2018). Even while CGPA reports that 7,609 Confirmed Low-Income customers in debt were on a payment arrangement in 2017, it further reports that 8,080 Confirmed Low-Income customers were "payment-troubled" in that year (i.e., "failed to maintain one or more arrangements").

Second, CGPA's data shows that even while the number of Confirmed Low-Income customers has decreased from 2016 to 2018 (from 68,178 to 67,590), the number of Confirmed Low-Income customers who had their service involuntarily disconnected for nonpayment increased (from 6,090 to 6,314). Given the declining number of Confirmed Low-Income customers, and the increasing number of Confirmed Low-Income disconnections, the *rate* of nonpayment disconnections of Confirmed Low-Income customers increased from 2016 (8.8%) to 2018 (9.3%). We know that these service disconnections to Confirmed Low-Income customers do not involve CAP customers. As I reported above, CGPA disconnected service to a total of only 1,146 CAP customers from October 2018 through December 2019. (OCA-IV-33; see also, Table 1, supra).

Finally, while the rate of Confirmed Low-Income customers who have service reconnected, once they have had service disconnected, has inched up from 2016 to 2018 (from 45.7% to 48.6%), the

[5] BCS 2018 Annual Report on Universal Service Programs and Collections Performance, at 8 (citing, 52 Pa. Code § 54.72 or § 62.2).

percentage of reconnections of Confirmed Low-Income customers remains firmly below 50%. More than half of all Confirmed Low-Income customers who have service disconnected, in other words, do not regain access to their service through a reconnection.

Table 4. Collection Statistics for CGPA Confirmed Low-Income (CLI)
(2016 – 2018) (BCS Annual Report on Universal Service Programs and Collections Statistics)

	# Conf'd LI	# CAP	CLI Pyt Troubled	% CLI of All Pyt Troubled	CLI Nonpymnt Disconnect	CLI Disconnection Rate	CLI Reconnection Pct
2016	68,178	20,405	9,087	65.2%	6,090	8.8%	45.7%
2017	67,969	22,255	8,080	62.4%	6,425	9.5%	48.6%
2018	67,590	23,600	7,816	58.0%	6,314	9.3%	49.6%

Q. HAVE YOU EXAMINED ANY OTHER PUC-REPORTED DATA?

A. Yes. I have examined the most recent Cold Weather Survey report published by the Pennsylvania PUC.[6] The 2019 Cold Weather Survey reports that CGPA's reinstatement of heating service subsequent to a service disconnection was as follows:

Table 5. 2018 and 2019 Cold Weather Survey Results (CGPA)

	Total HHs Using Unsafe Heating Sources	Total HHs without Service After Completion of Survey /a/	Total HHs without a Central Heating Source Due to Termination of Utility Service /b/
2018	233	580	813
2019	283	528	811

/a/ Excludes households using potentially unsafe heating sources, other central heating sources, vacant.
/b/ Includes households using potentially unsafe heating sources and excludes other central heating sources and vacant residences.

As can be seen in the Table above, for the past two years, more than 800 CGPA customers were without a central heating source entering the cold weather season due to a

[6] The UPC's annual Cold Weather Surveys can be accessed at http://www.puc.state.pa.us/filing_resources/gas_and_electric_cold_weather_survey_results.aspx (last accessed on March 30, 2020).

termination of utility service. In addition, the same PUC report (2019) indicated that the average number of households without a central heating source due to termination of utility service for the years 2014 through 2017 was 1,012.

Q. HAVE YOU HAD OCCASION TO REVIEW CGPA'S CAP PARTICIPATION BY POVERTY LEVEL?

A. Yes. The Table below shows the data. In 2018, while 22.4% of all CAP participants had income between 0% and 50% of Poverty, 44.5% of CAP participants had income between 51% and 100% of Poverty. In addition 33.1% of all 2018 CGPA CAP participants had income between 101% and 150% of Poverty.

Table 6. CGPA CAP Participation by Poverty Level
(2016 – 2018) (BCS Annual Report on Universal Service Programs and Collections Statistics)

	CAP Participation (#s)			CAP Participation (%)		
	0 – 50%	51 – 100%	101 – 150%	0 – 50%	51 – 100%	101 – 150%
2016	4,537	9,922	7,050	21.1%	46.1%	31.8%
2017	5,068	10,409	7,444	22.1%	45.4%	32.5%
2018	5,426	10,772	8,012	22.4%	44.5%	33.1%

This data shows that CGPA has an under-representation of customers in the lowest and highest income brackets, while having a substantial over-representation of customers in the middle income bracket. According to the 2018 Census, for the zip codes which CGPA identified as comprising its service territory (OCA-IV-2), the disaggregation of population by Poverty Level within the CGPA service territory was:

- 27.5% of the population with income less than 150% of Poverty had income less than 50% of Poverty;

- 32.5% of the population with income less than 150% of Poverty had income between 50% and 100% of Poverty; and
- 40.0% of the population with income less than 150% of Poverty had income between 100% and 150% of Poverty.

The under-representation of the lowest income range (i.e., below 50% of Poverty) is of particular concern. Because of their low-income, these customers are most likely to have natural gas bills that represent a high percentage of income (i.e., what is known as a "bill burden" or bill as a percentage of income). They are, accordingly, more likely to have the payment troubles that I have identified above. These high burdens are the problem addressed by enrollment in CAP. The customers in this lowest income range, however, are not enrolling in the Company's CAP in a percentage which reflects their percentage in the total population.

Q. WHY IS THE COLLECTIONS AND PARTICIPATION DATA THAT YOU DISCUSS ABOVE OF IMPORTANCE IN A BASE RATE CASE?

A. The payment difficulties I have discussed above each have an impact on the expenses which CGPA incurs and passes on to its customers through rates. Addressing these payment difficulties by enrolling income-eligible customers in CAP, and through other universal service programs (e.g., LIURP, hardship fund) not only addresses the customer-perspective problems associated with an inability-to-pay, but addresses the utility-perspective financial consequences associated with inability-to-pay as well.

The question is not how to design and implement the universal service programs, which are questions presented in proceedings involving the review of USECP plans. The question for this proceeding is for those customers who are low-income, who will be harmed by the rate decisions advanced by CGPA in this proceeding, who do *not* participate in CGPA's universal service programs, but who would benefit from such participation.

Q. HOW DOES CGPA IDENTIFY ITS LOW-INCOME CUSTOMERS?

A. When asked for a "detailed description" of "The means by which a 'low-income customer is identified," CGPA responded by saying: "Customers that verify income through LIHEAP, CAP or Hardship Funds and those who self-declare their income at or below 150% of FPL are identified as 'Low Income'." (OCA-IV-41). Two significant observations flow from this response. First, CGPA identifies "low-income" customers when they seek assistance (e.g., LIHEAP, CAP, Hardship Funds). Second, CGPA identifies "low-income" customers when they otherwise contact the Company ("self-declare their income").

Q. WHAT IS THE CONSEQUENCE OF THIS LIMITED MECHANISM FOR IDENTIFYING LOW-INCOME CUSTOMERS?

A. It is because of this limited means of identifying low-income customers that: (1) CGPA confirms the low-income status of such a small percentage of its estimated low-income population; (2) CGPA enrolls such a small percentage of its estimated low-income population in CAP; and (3) CGPA experiences the payment difficulties that I have identified in this section of my testimony.

Q. DO YOU HAVE REASON TO BELIEVE THAT THE COMPANY'S UNIVERSAL SERVICE OUTREACH COULD BE IMPROVED?

A. Yes. Over the past 40 years in which I have engaged in work throughout the United States and Canada on helping to design low-income assistance programs (both ratepayer-funded and taxpayer-funded), I have learned that certain outreach strategies are consistently found to be important and effective. Some of the more successful strategies that have been identified, and the rationale behind the strategies, are as follows:

- Use the community as a means of identifying and engaging[7] the hard-to-reach population.
- Collaborate when possible.
- Focus on relationship-building.
- Go to the community rather than making the community come to you.

In addition, one commonly accepted proposition is that using other community members as a mechanism to identify and engage hard-to-reach populations is one of the most effective mechanisms to use in serving hard-to-reach populations.

Q. PLEASE EXPLAIN THE IMPORTANT FINDINGS YOU HAVE IDENTIFIED.

A. Dr. Linda Wharton Boyd, of the D.C. Health Benefit Exchange Authority, urges institutions reaching out to hard-to-reach population that their "outreach mantra" for best

[7] "Engaging" has two important elements: (1) enrolling the household in the service provision; and (2) maintaining the household in the service engagement.

practices for informing, educating, and enrolling hard-to-reach populations in health insurance coverage was "reach them where they live, work, shop, play and pray."[8] She said this approach involved "a wide-ranging grassroots approach with an army of boots-on-the-ground." The initiative entailed "a more well-defined hyper-local approach targeting consumers more at the neighborhood level." One part of their campaign was called "each one: link one," through which they promoted "because you care, be the link: reach family, reach a friend, reach a neighbor or colleague."

Q. IS THE PERSON WHO MAKES THE CONTACT IMPORTANT IN OUTREACH?

A. Yes. One evaluation of outreach efforts seeking to enroll customers in affordable health insurance, for example, found that "trusted messengers at the national and local levels were more important than ever." Building a "sustainable outreach and enrollment community" involved "bolstering the capacity of partnership organizations and recruiting a broad network of volunteers." According to the evaluation, "Enroll America….partnered with enrollment coalitions in 11 target states through the Get Covered America campaign to recruit and/or train more than 2,400 volunteers –from groups such as churches, clinics, food banks, nursing homes and law schools" to serve as counselors in their communities." The evaluation found that "partner collaboration has a

[8] Nancy J. Hicks (Ed.) (2017). Health Industry Communication: New Media, New Methods, New Message, at Chapter 22, Linda Wharton Boyd, Insuring the Uninsured: Reaching Consumers in the D.C. Marketplace (describing a "robust, proactive, multifaceted, grassroots, community-based education campaign to reach DC residents and small business owners and their employees where they live, work, shop, pray and play"). Available at: https://books.google.com/books?id=vO3BDAAAQBAJ&pg=PA406&lpg=PA406&dq=reach+them+where+they+live,+work,+shop,+play+and+pray&source=bl&ots=-o0xMBMb5p&sig=ACfU3U3DbBpUHwKQ9iXVp6xZ1ZSxWAnL_Q&hl=en&sa=X&ved=2ahUKEwj42YeVpb7pAhWdoHIEHTynBnYQ6AEwAHoECAcQAQ#v=onepage&q=reach%20them%20where%20they%20live%2C%20work%2C%20shop%2C%20play%20and%20pray&f=false (last accessed May 18, 2020).

multiplier effect. Teaming up with established, trusted institutions made it possible for Enroll America, and other organizations focused on enrollment, to meet a greater number of consumers with a higher level of credibility. Among the organizations that Enroll America surveyed this year, more than two-thirds identified collaboration as one of the most effective strategies in their toolbox. . ."[9]

One study funded by Blue Shield of California, and performed by the Institute of Medicine (IoM), undertook a comprehensive review of evaluations from organizations from all across the nation that focused on "enrollment of hard-to-reach populations." The IoM report stated that "the marker of success was not only total enrollment numbers but whether outreach and enrollment were better than expected for the populations of interest."[10] One purpose was to create "a conceptual model" that incorporated the successful strategies and approaches. The lessons reported by IoM included the following:

- "Community partnerships were also an important resource for enrollment efforts to reach hard-to-reach populations. Partnerships with longstanding and trusted community organizations provided access to hard-to-reach communities and served as trusted sources of information and trusted spaces for enrollment to occur."

- "It is important to know where the community gets its health information and who its trusted messengers are for that information. . .It is also important to understand that different groups have different needs."

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[9] Enroll America, State of Enrollment: Helping America Get Covered and Stay Covered, 2014 – 2015, What We Learned, at 22. Available at: https://nationaldisabilitynavigator.org/wp-content/uploads/resources-links/EA_SOENationalReport_2014-15_021915.pdf (last accessed on May 1, 2020).

[10] Parker, et al. Successfully Engaging Hard-to-Reach Populations in Health Insurance: A Focus on Outreach, Sign Up and Retention, and Use. Institute of Medicine, Roundtable on Health Literacy, Collaborative on Health Literacy and Access, Health Care Coverage, and Care, Washington D.C. Available at: https://www.pdffiller.com/jsfiller-desk10/?projectId=458692280#01776d34e2ab8069152a9026289f8b08 (last accessed May 18, 2020).

Q. PLEASE EXPLAIN THE NECESSITY OF RELYING ON "TRUSTED SOURCES" IN OUTREACH TO IDENTIFY LOW-INCOME CUSTOMERS AND ENROLL LOW-INCOME CUSTOMERS IN UNIVERSAL SERVICE PROGRAMS.

A. The need to rely on "trusted sources" cannot be overstated. The IoM evaluation stated:

> The need to create trust among consumers is the foundation upon which successful strategies rest. First and foremost, it is essential to identify community partners who are trusted resources in the population at which enrollment efforts are aimed. All of the interviewees said that the most important and successful method in reaching their intended audiences was approaching consumers through a trusted source; such an approach could occur either through their own organization, if it was a community-based trusted source, or through a partnership with groups and individuals who were trusted in the community. Although every community has different trusted sources, each community organization and coalition interviewed highlighted that identifying and working with trusted sources is key to a successful outreach and enrollment process.
>
> Trusted sources varied by community and culture and included advocacy groups, social services and community support groups, faith-based groups, and federally qualified health centers. Although different, these trusted community partners had all been active in the communities prior to the enrollment process and were either already aware of or uniquely position to identify population-specific challenges and sensitive issues in the targeted populations.
>
> . . . Across all successful approaches, the key for building trust was identifying the populations to be reached, assessing who would be a trusted community partner, and using those partners to reach out and educate the populations in trusted locations.

One important step, the IoM found, is to "identify who the trusted advisors are in the various communities of interest—that is, who do people in these communities turn to for advice about what is correct information and what to do with it." These "trusted advisors" are necessary because "in addition to profound financial challenges, many also do not trust the system to advocate for them or to help them successfully navigate complex content and tasks. . ."

In short, one of the continuing themes (amongst others) of the IoM study was that "processes must be intentionally designed to build trust with targeted populations and provide actionable steps for consumers. . .[B]eing trusted by the targeted community is foundational to all implementation efforts. Deliberately considering and practically planning on how best to foster trust must be considered throughout all activities."[11]

Finally, a 2014 Robert Wood Johnson (RWJ) Foundation study built on a related RWJ study from 2013.[12] In that evaluation, RWJ built on the experience from CHIP to guide the experience for ACA:

> Arguably one of the most significant innovations to emerge from CHIP was the creation of 'application assistance' models to support outreach and

[11] See also California Pan-Ethnic Health Network (2014). Improving enrollment of communities of color in health coverage: Recommendations from first responders to covered California and Medi-Cal. California Pan-Ethnic Health Network: Oakland (CA), available at https://shea.senate.ca.gov/sites/shea.senate.ca.gov/files/CPEHN_ImprovingEnrollmentforCommunitiesofColor_2014.pdf (last accessed May 12, 2020); Jahnke et al. (2014). Marketplace consumer assistance programs and promising practices for enrolling racially and ethnically diverse communities. San Francisco Foundation: San Francisco (CA), available at https://www.texashealthinstitute.org/uploads/1/3/5/3/13535548/tsff_thi_report_on_marketplace_outreach__diverse_populations_may_2014.pdf (last accessed May 12, 2020); Parker, et al. (2013). Amplifying the voice of the underserved in the implementation of the Affordable Care Act. Institute of Medicine: Washington D.C. available at https://nam.edu/perspectives-2013-amplifying-the-voice-of-the-underserved-in-the-implementation-of-the-affordable-care-act/ (last accessed May 12, 2020).

[12] Hill, et al. (October 2013). ACA Implementation—Monitoring and Tracking, Reaching and Enrolling the Uninsured: Early Efforts to Implement the Affordable Care Act, Urban Institute for the Robert Wood Johnson Foundation: Washington D.C. Available at: https://studylib.net/doc/14751533/reaching-and-enrolling-the-uninsured--early-efforts-to-im... (last accessed May 1, 2020).

> enrollment. By equipping staff of community-based organizations and providers with shortened, joint Medicaid/CHIP application forms, training them in how to administer these applications, and anointing them as official program representative certified to help families with enrollment, application assistance put 'teeth' into outreach.
>
> . . .
>
> CHIP and Medicaid outreach and application assistance efforts also taught policy makers the importance of enlisting the support and help of trusted community members and organizations—closely tied to ethnic and other communities of interest—in 'reaching the hard to reach.' Community partners can include a broad range of entities, including community-based nonprofit agencies, family resource centers, faith-based organizations, WIC programs and food banks, schools, Head Start and preschool programs.

Q. CAN THESE LESSONS BE GENERALIZED FOR PURPOSES OF ADDRESSING THE LOW-INCOME PROBLEMS ASSOCIATED WITH THIS PROPOSED CGPA RATE HIKE AS DISCUSSED THROUGHOUT THIS TESTIMONY?

A. Yes. The ability to generalize these lessons is also learned from state and private efforts to identify and enroll children in the federal Children's Health Insurance Program (CHIP, sometimes known as SCHIP, State Children's Health Insurance Program). One review of CHIP initiatives by the National Academy for State Health Policy, for example, stated that "regardless of the field or program in which outreach is used, a goal of developing an outreach strategy, or an outreach campaign consisting of several strategies, is to generate awareness, educate the public and, in this case, enroll people in health insurance coverage."[13] The National Academy reported, as with examples cited above, that

[13] National Academy for State Health Policy (August 2012). Lessons Learned from Children's Coverage Programs: Outreach, Marketing, and Enrollment, available at https://nashp.org/wp-content/uploads/sites/default/files/outreach.lessons.children.pdf (last accessed on May 12, 2020); see also, Wachino (2009). Maximizing Kids' Enrollment in Medicaid and SCHIP: What Works in Reaching, Enrolling and Maintaining Eligible Children, National Academy for State Health Policy: Washington D.C.), available at

important outreach elements identified from their survey of CHIP programs included, for example, the use of community-based organizations as partners.

> According to a 2008 NASHP survey of CHIP programs, the percentage of programs using CBOs to conduct outreach activities surpassed the percentage using state agency staff compared to a similar survey from 2005. In addition, a 2011 evaluation noted that states reported partnerships with CBOs as the most effective partnerships due to the 'prominence and trust' these organizations have within their communities.

The Academy's report noted that "CBOs are viewed as trusted members of a community and have well-established relationships and means of communications that could prove beneficial to the state."[14]

Q. WHAT DO YOU RECOMMEND?

A. Columbia Gas says that its development of a new (or revised) "Outreach Strategy and Communication Plan" in response to the June 2020 Management Audit is "in process." Accordingly, as it proceeds with that effort, I recommend that CGPA should include, as part of the "Outreach Strategy and Communication Plan" being prepared in response to the PUC Audits management recommendations, as accepted by CGPA, an explicit identification of how it implements each of the principles set forth below:

- Rather than relying primarily on call center contacts as described above, use the community as a means of identifying and engaging the hard-to-reach population.

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https://ccf.georgetown.edu/wp-content/uploads/2012/03/maximizing-kids-enrollment.pdf (last accessed May 12, 2020).

[14] See also, Chung, at al. (2010). Trusted Hands: The Role of Community Based Organizations in Enrolling Children in Public Health Insurance Programs, The Colorado Trust: Denver (CO), available at https://folio.iupui.edu/bitstream/handle/10244/771/TrustedHands_021010_FINAL.pdf?sequence=1 (last accessed may 12, 2020); California Coverage and Health Initiatives (2011). A Trusted Voice: Leveraging the Local Experience of Community Based Organizations in Implementing the Affordable Care Act, California Coverage and Health Initiatives: Sacramento (CA), available at https://board.coveredca.com/meetings/2012/03%20Mar-22%20Meeting%20Materials/PDFs/CCHI%20Background%20Materials%20-%20Leveraging%20Local%20Experience%20of%20CBOs.pdf (last accessed May 12, 2020).

- Rather than relying primarily on staff contacts as the means of identifying low-income customers, focus on relationship-building.

- Rather than relying primarily on customers initiating contacts (whether to apply for assistance, or to be in contact with a "self-declaration"), go to the community (reaching them "where they live, work, shop, play and pray") rather than making the community come to you.

- Rather than relying primarily on CGPA communications (as well as government officials) as described above, rely on grassroots "trusted messengers" from within the community.

Q. DO YOU HAVE ANY FURTHER RECOMMENDATIONS?

A. Yes. I recommend that CAP outreach be explicitly incorporated into CGPA's collections performance in the following ways:

1. Whenever a Confirmed Low-Income customer is offered a payment arrangement through which to retire an arrearage, that Confirmed Low-Income customer should be offered the option of enrolling into CAP (with access to arrearage forgiveness). While I do not necessarily recommend the automatic enrollment of such Confirmed Low-Income customers into CAP, customers should be provided with the opportunity to make an informed choice between a payment arrangement and CAP.

2. Prior to the involuntary disconnection of service due to nonpayment to Confirmed Low-Income customers, such Confirmed Low-Income customers should be provided the option of enrolling into CAP (with access to arrearage forgiveness). While I do not necessarily recommend the automatic enrollment of Confirmed Low-Income customers into CAP prior to a service disconnection, customers should be provided with the opportunity to make an informed choice between having service disconnected and entering into CAP with access to arrearage forgiveness.

3. Once service to a Confirmed Low-Income customer has been disconnected for nonpayment, the customer with disconnected service should be provided the option of reconnecting service by enrollment in CAP, with access to arrearage forgiveness for any arrears incurred preceding the disconnection. While I do not necessarily recommend the automatic enrollment of Confirmed Low-

Income customers into CAP as a means of restoring (or reconnecting) service, Confirmed Low-Income customers should be provided with the opportunity to make an informed choice between having service remaining disconnected or enrolling in CAP with a restoration of service and access to arrearage forgiveness.

4. When a Confirmed Low-Income customer is contacted by CGPA as part of the annual Cold Weather Survey, and found to be either: (a) using a potentially unsafe heating source; or (b) going without service (as each of those terms is defined by the PUC), that Confirmed Low-Income customer should be provide with the opportunity to enroll in CAP. While I do not necessarily recommend that such Confirmed Low-Income customers be automatically enrolled in CAP, Confirmed Low-Income customers should be provided with the opportunity to make an informed choice between continuing to go without service, continuing to use an unsafe heating source, or enrolling in CAP with a restoration of service and access to arrearage forgiveness.

In each instance with my recommendation above, CGPA should make the contact, and offer the option of CAP enrollment, through a process which incorporates my further recommendations above (e.g., use of a community-based "trusted messenger" to make contact with the customer; making proactive outreach to the customer ("where they live, work, shop, play and pray") rather than requiring the customer to make initial contact with CGPA).

Part 3. Allocation of Universal Service Costs.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I recommend that the CGPA universal service costs be allocated among all customer classes. Arguments that non-residential customers do not contribute to the need for universal service programs, nor do they benefit from such programs, are demonstrably in error.

Q. WHY SHOULD THE COMMISSION CONSIDER THE ALLOCATION OF UNIVERSAL SERVICE COSTS IN THIS PROCEEDING?

A. In its September 19, 2019 Final Policy Statement and Order in the PUC's generic investigation into energy affordability in Pennsylvania (Docket M-2019-3012599),[15] the Commission explicitly acknowledged that, historically, it allocated universal service costs exclusively to residential customers, but then stated that "our review of Pennsylvania's current universal service model in the *Review* and *Energy Affordability* proceedings has provided reasons to reconsider this position. (Final Policy Statement and Order, at 92). The Commission observed that "[t]he current cost-recovery method for universal services, including CAP costs, is putting a significant burden on residential customer bills. . ." (Id.). The Commission's decision to substantially reduce the definition of an "affordable" burden will create even more universal service costs and increase that "significant burden" even more. According to the Commission:

> Given the significant past increase in EDC universal service spending – and the anticipated increases in both EDC and NGDC universal spending through 2021 – the Commission is concerned that recovering CAP costs (as well as other universal service costs) from only residential ratepayers will continue to make electric and/or natural gas bills increasingly unaffordable for non-CAP customers, especially those with incomes between 151-200% of the FPIG.

(Id., at 95). I agree with these observations. There is a substantial population of CGPA customers who have difficulties in paying their utility bills without being sufficiently "low-income" to qualify for CAP. The current CAP costs could prove to be problematic for these customers, and those costs will increase in the future, both for the reasons

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[15] http://www.puc.pa.gov/about_puc/consolidated_case_view.aspx?Docket=M-2019-3012599 (November 5, 2019) (last accessed May 16, 2020).

identified in the Commission's Final Order (pages 94 – 95) and for the reason that the Commission has reduced the percentage of income payments to be charged to CAP customers.[16]

As I will establish below, the Commission reached an appropriate conclusion when it stated in its Final Order that "[t] he Commission agrees that poverty, poor housing stock, and other factors that contribute to households struggling to afford utility service are not just "residential class" problems. Further, helping low-income families maintain utility service and remain in their homes is also a benefit to the economic climate of a community." (Id., at 96).

The Commission stated in its Final Order that "the Commission finds it appropriate to consider recovery of the costs of CAP costs from all ratepayer classes. Utilities and stakeholders are advised to be prepared to address CAP cost recovery in utility-specific rate cases consistent with the understanding that the Commission will no longer routinely exempt non-residential classes from universal service obligations. . ." (Id., at 99, notes omitted).[17] The discussion below is consistent with this Commission guidance.

A. The Commission-Identified Factors.

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

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[16] While the Office of Consumer Advocate has urged that CAP is designed to address long-term structural poverty, these costs might increase even more to the extent that COVID-19 results in structural job loss. Temporary loss of income due to COVID-19 should be considered to be addressed through a PUC-approved emergency relief program.

[17] The Commission observed that it was not making "a final precedential decision regarding cost recovery in this docket. We are merely providing that the recovery of CAP costs in particular can be fully explored in utility rate cases henceforth. " (Id., at note 150).

A. In its September 2019 Final Order quoted above, the Pennsylvania PUC identified several factors that "contribute to households struggling to afford utility service" and indicated that such factors "are not just residential class problems." Amongst those factors which the PUC identified were "poverty, poor housing stock, and other factors." In this section of my testimony, I address those specifically-identified factors. In my discussion below, I examine two aspects of "poverty."

The first aspect of "poverty" involves customers who are at or below differing ranges at or below CGPA's CAP income-eligibility maximum. I estimate these numbers by multiplying the number of customers for each CGPA zip code (OCA-IV-3) times the percentage of population at the varying population ranges.[18] I then sum the results for each zip code to obtain the number of customers at each Poverty range for the CGPA service territory as a whole.

The process I identify above yields an estimate of 76,847 low-income customers. The Company's report of 22,929 CAP participants (OCA-IV-3(b)) thus indicates that CGPA reaches fewer than 30% of its estimated low-income customer base (29.8%). I identify "low-income" as persons with income at or below 150% of Poverty. According to Census data by zip code, CGPA has 19.1% of its customer base living at or below 150% of Poverty. Of those, 5.1% live with income at or below 50% of Poverty, while 11.3% live at or below 100% of Poverty.

[18] American Community Survey, Table C17002, available at Data.Census.gov (last accessed July 13, 2020).

The second aspect of Poverty I examine involves customers who have income above the maximum income-eligibility established by the PUC for CAP (150% of Poverty), but whose income is sufficiently low that they can reasonably be expected to face difficulties paying their utility bills. I define this population of "near-poor" to include households who have income higher than 150% of Poverty, but lower than 200% of Poverty. An additional 8.2% of CGPA's customers are estimated to live with income of greater than 150% of Poverty, but less than 200%.

Q. HAVE YOU EXAMINED THE VULNERABILITY OF THESE HOUSEHOLDS WITH INCOME BETWEEN 150% AND 200% OF POVERTY?

A. Yes. A three-person household living with income equal to 150% of Poverty Level in 2018 would have had an income of $31,170.[19] This income for a 3-person household should be compared to the income needed to achieve "self-sufficiency" by county within Pennsylvania.[20] Those self-sufficiency incomes for all counties served in whole or part by CGPA are set forth in the Schedule RDC-2.[21] I have shaded the counties with a self-sufficiency income less than 150% of Poverty in blue. I have shaded the counties with a self-sufficiency income no more than $1,000 higher than 150% of Poverty in yellow.

[19] Federal Register, Vol. 83, No. 12, p.2643 (January 18, 2018) (100% of Poverty for 3-person household is $20,780).
[20] The Self-Sufficiency Standard determines the amount of income required for working families to meet basic needs at a minimally adequate level, taking into account family composition, ages of children, and geographic differences in costs.
[21] http://www.selfsufficiencystandard.org/pennsylvania (last accessed April 6, 2019).

Schedule RDC-3 shows both the number and percentage of persons[22] with "near poor" incomes[23] by county served by CGPA.[24] Schedule RDC-3 demonstrates that concerns regarding the "near poor"[25] are likely to be substantial. Of the 16 CGPA counties for which data is reported, two have 10% or more of their population living with incomes between 150% and 200% of Poverty. Seven (7) of CGPA's counties with data reported have 8% or more of their total population with incomes falling into this "near poor" range. The numbers are not small. More than 15,000 persons live with income between 150% and 200% of Poverty simply in the two counties with 10% or more of their population falling into that Poverty range. Nearly 65,000 (n=64,795) live in the seven counties with 8% or more of their population living with income between 150% and 200% of Poverty.

Q. WHAT DO YOU CONCLUDE?

A. The CGPA distributions of population by income below 150% of Poverty nearly exactly match statewide distributions (5.2% below 50%; 11.8% below 100%; 19.5% below 150%; 8.2% between 150 and 20%). For purposes of the PUC's consideration of whether to allocate universal service costs over all customer classes, the most important observation here is that nearly 54,000 customers with income at or below 150% of Poverty (n=53,918) do not participate in CAP notwithstanding their low-income status. In addition, 33,124 ***more*** customers live with incomes that are above the income-

[22] The Census does not report household data, so this data is for population (i.e., persons).

[23] For incomes exceeding 200% of Poverty, the narrowest income range is presented in 100% increments (e.g., 200% to 299%). Accordingly, data for 200% to 250% is not available.

[24] The Census does not report data for all Pennsylvania counties.

[25] This discussion of concerns regarding the "near poor" should not be read as downplaying concerns about the income-eligible who do not participate. The latter concerns, however, do not present the same questions regarding how to define an affordable burden (or at what level to set a burden as "affordable").

eligibility maximum of 150% of Poverty, but less than 200% of Poverty. Allocating universal service costs over all customer classes would help improve the affordability of CGPA bills to these nearly 90,000 residential customers (53,918 + 33,124 = 87,042) who are reasonably viewed as income-challenged but not participating in, or not eligible for, CGPA's universal service programs.

B. Poverty is Not Just a Residential Class Problem.

Q. PLEASE ADDRESS THE STATEMENT BY THE PUC THAT POVERTY IS "NOT JUST [A] RESIDENTIAL CLASS PROBLEM."

A. I agree with the PUC's observation that poverty is "not just [a] residential class problem." In reaching this conclusion, I examine broad economic factors throughout the CGPA service territory, not exclusively associated with the residential class, which contribute to the inability-to-pay of CGPA low-income customers.

Q. DO LOW WAGES AFFECT THE PARTICIPATION OF CUSTOMERS IN THE UNIVERSAL SERVICE PROGRAMS OF CGPA?

A. Yes. OCA asked CGPA to provide, by Poverty Level if available, the number of CAP participants with wage/salary income for all or part of their income, as well as the number of CAP participants with only public assistance as income. The data is set forth in the Table immediately below. The Table demonstrates that, according to CGPA's data, its CAP participation includes a substantial proportion of participants who are eligible notwithstanding the fact that they receive wage or salary income. In contrast, a very small proportion of CGPA's 20,000+ CAP participants have income from public assistance only.

Table 7. CAP Participants with Wage or Salary Income for All or Part of their Income and with Public Assistance as Only Source of Income
(OCA-IV-11)

	Wages / Salary	No Wages / Salary	Public Assistance Only
2018	10,783	N/A	596
2019	10,398	N/A	559
2020 (YTD)	8,120	16,162	483

CGPA was further able to provide the average income of CAP participants who received only wages or salaries as their income source. As the Table immediately below shows, CAP participants with annual income at or below 50% of Poverty are earning roughly $8,000 despite having wage and salary income. CAP participants with annual income between 50% and 100% of Poverty are earning substantially less than $20,000 despite having wage income.

Table 8. CAP Participants by Wage/Salary Income by Poverty Level
(OCA-IV-12)

Poverty Level	0-50%	51-100%	101-150%
2018	$8,027.28	$17,792.24	$28,517.87
2019	$8,135.83	$18,239.52	$29,369.11
2020 (YTD)	$8,350.32	$18,452.94	$28,569.23

Other than this data, CGPA states that it has performed "no formal demographic studies of CAP participants" (OCA-IV-13).

Q. CAN SIMILAR OBSERVATIONS ABOUT WAGE AND PUBLIC ASSISTANCE INCOMES BE MADE ABOUT LIURP?

A. Yes. According to the CGPA report to the PUC (OCA-III-1), a substantial number of LIURP recipients had employment income. As the Table below demonstrates, over the past three years, between 30% (2019) and 43% (2017) of LIURP recipients had employment income while fewer than 2% had public assistance income.

Table 9. LIURP by Employment Income (2016 – 2018)
(OCA-IV-1, Attachments A, B and C)

	2017		2018		2019	
	Employment	Public Assistance	Employment	Public Assistance	Employment	Public Assistance
Count	388	5	178	4	150	9
Total	440	440	433	433	497	497
Percent of total	42.7%	1.1%	41.1%	0.9%	30.2%	1.8%

Q. HAS CGPA STUDIED THE ECONOMIC HEALTH OF ITS SERVICE TERRITORY OR CONSIDERED HOW THE ECONOMIC HEALTH AFFECTS UNIVERSAL SERVICE PARTICIPATION?

A. No. When OCA asked CGPA for all studies "of the relationship between CAP enrollment and economic trends (e.g., unemployment, housing starts, consumer expenditures)" CGPA replied that it was "not aware of any studies performed of the relationship between CAP enrollment and economic trends." (OCA-IV-19). Moreover:

- When OCA asked for any studies of the economic health of the CGPA service territory, CGPA responded that it was "not aware of any studies performed of the relationship between CAP enrollment and economic trends. . ." (OCA-IV-20). Nor has CGPA developed (OCA-IV-21) or applied (OCA-IV-22) any metrics by which to measure the economic health of the Company's service territory. Nor has it relied on any such study of the economic health of

CGPA's service territory prepared by a party external to the Company. (OCA-IV-24, OCA-IV-25).

- CGPA has not provided any discussion or report of the economic health of the Company's service territory to Company management, Board or investors in the last five years. (OCA-IV-23).

Q. HAVE YOU HAD OCCASION TO EXAMINE THE VARIOUS UNDERLYING ECONOMIES WITHIN THE CGPA SERVICE TERRITORY?

A. Yes. It is important to recognize that the employment and wage data I discuss below predates the COVID-19 health pandemic. With this in mind, I examine wages in the following areas that CGPA has identified (OCA-IV-002) as comprising (in whole or part) its service territory including the metropolitan areas of: Chambersburg/Waynesboro; Gettysburg; Pittsburgh; State College; and York-Hanover. In addition, I have examined the wage data for Western Pennsylvania non-metropolitan areas and South Pennsylvania non-metropolitan area.[26]

I find that low wages are prevalent throughout the CGPA service territory. Based on this local wage data, I find that the inability-to-pay issues addressed by the universal service programs of CGPA are not "caused" by the residential customer class. They are instead broader societal issues that can be attributed to every customer class.

Q. UPON WHAT DO YOU BASE YOUR CONCLUSION THAT THESE LOW WAGES ARE PREVALENT THROUGHOUT THE CGPA SERVICE TERRITORY?

[26] The reporting areas are defined by the U.S. Bureau of Labor Statistics (available at https://www.bls.gov/oes/current/oessrcma.htm#P (last accessed July 13, 2020).

A. The purpose of the discussion above is not to identify the particular communities as having particular problems, but rather to identify these communities as illustrative of the social issues underlying a universal service program. The Table below shows the corresponding data for the Chambersburg-Waynesboro area, Gettysburg, Pittsburgh, State College, York-Hanover area, Western Pennsylvania nonmetropolitan area, and Southern Pennsylvania nonmetropolitan. As is evident, these low-wage jobs are prevalent throughout the CGPA service territory. They are not unique to any particular metropolitan area, nor to any particular region of the area which CGPA serves.

Table 10. Employment by Selected Median Hourly Wages and CGPA Metropolitan Areas[27]

	$9.00 or less	>$9.00 - $10.00	>$10.00 - $11.00	>$11.00 - $12.00
Chambersburg-Waynesboro[28]	470	5,720	1,550	2,420
Gettysburg[29]	160	1,510	3,510	1,100
Pittsburgh[30]	3,290	89,670	9,090	90,010
State College[31]	110	3,600	2,700	5,780
York-Hanover[32]	380	14,300	10,900	2,930
Western Pennsylvania nonmetropolitan[33]	1,730	16,100	6,110	5,490
Southern Pennsylvania nonmetropolitan[34]	1,800	19,930	8,760	5,550

Q. WHY DID YOU SELECT $12.00 AS THE TOP OF THE RANGE OF WORKER WAGES THAT YOU EXAMINED?

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27 Occupations and Wages, MSA, 2018, available at https://www.bls.gov/oes/tables.htm (last accessed May 20, 2020).
28 https://www.bls.gov/oes/current/oes_16540.htm
29 https://www.bls.gov/oes/current/oes_23900.htm
30 https://www.bls.gov/oes/current/oes_38300.htm
31 https://www.bls.gov/oes/current/oes_44300.htm
32 https://www.bls.gov/oes/current/oes_49620.htm
33 https://www.bls.gov/oes/current/oes_4200001.htm
34 https://www.bls.gov/oes/current/oes_4200003.htm

A. The most recent data reported by the Bureau of Labor Statistics for employee wages is for 2019. Accordingly, I took the 2019 Federal Poverty Guidelines and, for each household size (up to 3 persons), converted those guidelines into an hourly wage. I performed this conversion at 150% of Poverty, which is the Commission's definition of low-income. The Table below sets out the results for households with one to three persons in the household. The Table shows that the Poverty Wage (at 150% of Poverty) is almost exactly $12.00 per hour for a 2-person household. The Poverty wage is somewhat above $15.00 per hour for a 3-person household. It is clear that my use of $12.00 as the top code for my inquiry is a conservative measure of workers who are working at Poverty wages (defining a "Poverty wage" as the wage at 150% of Poverty).

Table 11. 150% of Poverty Level as an Hourly Wage

	100% FPL	150% FPL	No. Annual Hours	Hourly Wage
1	$12,490	$18,735	2080	$9.01
2	$16,910	$25,365	2080	$12.19
3	$21,330	$31,995	2080	$15.38

Q. WHAT DO YOU CONCLUDE BASED ON THIS DATA?

A. I conclude that the Pennsylvania PUC was correct when it observed in September 2019 that Poverty is a broad-based social problem not associated with any particular customer class, including specifically not being associated with the residential class exclusively. I find that a substantial number of wage-earning customers participate in CGPA's universal service programs. I find further that one reason that these customers income-qualify for CGPA's universal service programs is because a substantial number of people throughout the CGPA service territory are working at Poverty wages.

C. How Universal Service Benefits Business.

Q. HAVE YOU HAD OCCASION TO CONSIDER HOW PROVIDING UNIVERSAL SERVICE BENEFITS BUSINESS?

A. Yes. Any increase in natural gas costs from payment of universal service costs would be offset by increases in employee productivity. Poverty produces ill-prepared workers whose lives are easily disrupted by small catastrophes. If the car breaks down, if a child gets sick, it suddenly becomes impossible to be a reliable worker. Poverty also generates poor health among workers, making them less reliable still and raising the cost of employing them. Paying a small increase in costs to help generate these offsetting benefits is a reasonable investment for a business to make.

In addition to generating economic development impacts on their own accord, programs such as Pennsylvania's CAP help contribute to the overall competitiveness of the Pennsylvania economy. This conclusion is not disputed by researchers that consider the impacts of programs such as home energy affordability subsidies on private employers. One comprehensive study published in 2004 concluded:

> Why the under-use of public benefits is a problem. When most people hear about the idea of marketing public benefits through employers, their initial reaction is "why would a company want to get involved with a social service program?"
>
> In fact, employers have good reason to be concerned that large numbers of working people with low family incomes do not take advantage of the public benefits intended to help them and their families achieve economic sufficiency--benefits that also help employers by contributing to the economic stability of their workforces. These public benefits bolster the

> ability of low-income workers to meet their basic needs, in effect providing a wage supplement to employers.[35]

Note that these conclusions are made by business stakeholders: the U.S. Chamber of Commerce and the National Association of Manufacturers.

Q. HAS THE CONCLUSION THAT ADDRESSING UNIVERSAL SERVICE PROBLEMS BEEN REACHED THROUGH PENNSYLVANIA-SPECIFIC RESEARCH?

A. Yes. Addressing the problems of poverty is a critical element to restoring the competitiveness of Pennsylvania businesses. In its report *Back to Prosperity: A Competitive Agenda for Renewing Pennsylvania*,[36] the Brookings Institution Center on Urban and Metropolitan Policy consistently noted the need to address the factors contributing to the decline of communities, large and small, in the state. According to the report, funded by the Heinz Endowment and the William Penn Foundation, neighborhood decline "has become a contagious self-sustaining process in parts of older urban Pennsylvania." Such decline, the report found, triggers a slide in property values, brings negative perceptions, and erodes public health and safety, all of which impede the competitiveness of the state's business and industry. According to this analysis of the competitiveness of Pennsylvania business, and how to "restore prosperity," "the widening

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[35] Geri Scott (2004). "Private Employers and Public Benefits," Workforce Innovation Networks (WINS): Boston (MA) and Washington D.C. WINS is a collaboration of Jobs for the Future, the Center for Workforce Preparation of the U.S. Chamber of Commerce, and the Center for Workforce Success, The Manufacturing Institute of the National Association of Manufacturers. Available at: https://www.jff.org/resources/private-employers-and-public-benefits/ (last accessed April 7, 2020).

[36] Available at: https://www.brookings.edu/research/back-to-prosperity-a-competitive-agenda-for-renewing-pennsylvania/ (last accessed July 13, 2020).

social and economic gap between Pennsylvania's older communities and their suburbs has negative implications for the overall health of its regions."

Q. WILL PROGRAMS SUCH AS CAP HELP ADDRESS THESE PROBLEMS?

A. Programs such as CAP, while obviously not a solution standing by themselves, are one *part* of the solution. In addition to addressing utility payment problems, home energy affordability programs can help address trends toward housing abandonment, reductions in educational attainment,[37] and adverse health outcomes for payment-troubled utility customers.[38]

Universal service programs help to control the need to provide local government services, the cost of which is largely borne by non-residential taxpayers. There is a direct connection between unaffordable home energy bills and the costs of providing public health services.[39] There is a documented connection between unaffordable home energy

[37] Roger Colton (1996). "The Road Oft Taken: Unaffordable Home Energy Bills, Forced Mobility And Childhood Education in Missouri," 2 Journal on Children and Poverty 23.Available at: https://www.tandfonline.com/doi/abs/10.1080/10796129608414757 (last accessed July 13, 2020).

[38] See generally, Apprise, Inc. (2018). National Energy Assistance Survey: Final Report, National Energy Assistance Directors' Association: Washington D.C. Available at: http://www.appriseinc.org/resource-library/selected-reports/energy-survey-research-and-policy-analysis/ (last accessed July 13, 2020).

[39] See generally, Jamal Lewis, et al. (2019). Energy efficiency as energy justice: addressing racial inequities through investments in people and places, available at https://www.greenandhealthyhomes.org/wp-content/uploads/Energy-Efficiency-as-Energy-Justice_Final.pdf (last accessed July 13, 2020); see also, Maheswaran et al. (2004). Socio-economic deprivation and excess winter mortality and emergency hospital admissions in South Yorkshire Coalfields Health Action Zone, UK. Public Health 118. 167 – 176, available at https://pubmed.ncbi.nlm.nih.gov/15003406/ (Last accessed July 13, 2020); see also, Frank, D., Neault, N., Skalicky, A., Cook, J., Wilson, J., Levenson, S., Meyers, A., Heeren, T., Cutts, D., Casey, P., Black, M., and Berkowitz, C. (2006). Heat or Eat: Low Income Home Energy Assistance Program and Nutritional Risk Among Children Under 3 Years Old. Pediatrics, available at: https://pubmed.ncbi.nlm.nih.gov/17079530/ (last accessed July 13, 2020); Frank DA, Roos N, Meyers AF, et al., Seasonal variation in weight-for-age in a pediatric emergency room. Public Health Reports, 1996; 111:366-371; Bhattacharya J, DeLeire T, and Currie J. Heat or eat? Cold-weather shocks and nutrition in poor American families. Am. J. Public Health. 2003; 93:1149-1154.

bills and public safety costs.[40] The benefits of mitigating the need to provide these government services redound to the benefit of all taxpayers, including commercial and industrial entities.

Q. HAVE YOU HAD OCCASION TO REVIEW RESEARCH ON THE RELATIONSHIP BETWEEN INABILITY-TO-PAY AND THE MITIGATION OF HARMS TO BUSINESS THAT YOU IDENTIFY?

A. Yes. A 2014 study by the Consumer Financial Protection Bureau[41] (CFPB) reports that "even when the economy was booming, financial stress was sapping the productivity and hurting the health of millions of American workers."[42] According to the CFPB:

> Multiple surveys offer ample evidence of the impact of financial stress at work. For example, in 2012, roughly one in five employees admitted they had skipped work in the past year to deal with a financial problem. Among workers now in their 30's and 40's – a critical cohort of the American workforce - stress levels are even higher. Many Generation X workers (29%) say their personal finances distract them at work, and a majority (53%) find it stressful to deal with their personal finances. This is a particularly salient finding given that Gen Xers – those born between 1964 and 1980 – are beginning to enter their peak-earning years. If they are financially stressed now, Gen Xers may have more difficulty than other generations finding security in the future. Across workers of all generations, 24% admit their personal finances have been a distraction at work. And, of those workers who

[40] Canadian Housing and Rental Association (February 2005). Affordable & Efficient: Towards a National Energy Efficiency Strategy for Low-Income Canadians, as cited in Environmental Law Centre, University of Victoria, Conserving the Planet without Hurting Low-Income Families, available at: http://www.elc.uvic.ca/press/documents/Conserving-planet-without-hurting-low-income-families-April2010-FINAL.pdf (last accessed July 13, 2020).

[41] CFPB (August 2014). Financial wellness at work: A review of promising practices and policies. https://www.consumerfinance.gov/data-research/research-reports/financial-wellness-at-work/ (last accessed April 6, 2020).

[42] Financial wellness at work, at 6, citing E. Thomas Garman et al., Financial Stress Among American Workers: Final report: 30 Million Workers in America –One in Four—Are Seriously Financially Distressed and Dissatisfied Causing Negative Impacts on Individuals, Families, and Employers, 17 2005).

> are concerned about their finances, 39% spend at least three hours each week either thinking about or dealing with financial problems at work.[43]

According to the CFPB:

> It's not just employees who want help managing financial stress at work. Managers confront this stress every day. In a recent survey, 61% of human resources professionals say financial stress is having some impact on employee work performance. Twenty-two percent say worries over personal finances have a "large impact" on employee engagement.[44]

Q. HOW SUBSTANTIAL ARE THE RESULTING COSTS TO EMPLOYERS?

A. The costs to employers can be substantial, and engaging in activities to reduce these costs can be helpful to employers. One white paper presented "an overview of the research literature related to financial stress, how it can affect employee productivity, and real world data regarding the estimated costs to businesses when financially stressed employees are left to struggle on their own."[45]

Indeed, an increase in health care costs is one of the most cited costs imposed on employers due to financial stress. As CFPB reported:

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[43] Id., citing MetLife, Inc., 10th Annual Study of Employee Benefits Trends: Seeing Opportunity in Shifting Tides 51 (2012), available at http://www.winonaagency.com/img/~www.winonaagency.com/10th annual met life study of benefits trends.pdf ("22% of employees admit that they have taken unexpected time off in the past 12 months to deal with a financial issue and/or spent more time than they think they should at work on personal financial issues . . . ."). 15% of Gen Y respondents, 10% of Gen X respondents, 5% of Younger Boomer respondents, and 1% of Older Boomer respondents admitted to the same; PricewaterhouseCoopers, LLC, Employee Financial Wellness Survey 10,11 (2014), available at http://www.pwc.com/en_US/us/private-company-services/publications/assets/pwc-employee-financial-wellness-survey-2014-results.pdf.

[44] Id., citing Society for Human Resource Management, SHRM Research Spotlight: Financial Education Initiatives in the Workplace 2 (2012), available at https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/Documents/Financial_Education_Flier_FINAL.pdf (last accessed April 6, 2020).

[45] Martha Brown Menard, Ph.D. (June 2017). Improving Employees' Financial Wellness: Why it Matters and What Employers Can Do About It." https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3011461 (last accessed April 6, 2020).

there is reason to consider whether financial stress may also raise employer health care costs, specifically, the documented link between psychological stress and physical health and well-being. . . researchers have attempted to quantify the overall cost to employers from all forms of stress, and they have found those costs are not trivial. . . researchers at Ohio State surveyed 9,200 people between 2005 and 2011 to learn more about their stress levels. The findings of the Consumer Finance Monthly surveys indicate one in five people report debt stress has had a high negative impact on their health. Judging from the available survey evidence, a large share of the American population reports they suffer from chronic financial stress, and they blame that stress for hurting their health.

A recent report in Health Affairs analyzed the health risks and medical expenses of more than 92,000 employees over a three-year period. Those reporting high stress were $413 more costly per year on average than workers who were not at risk from stress. By comparison, smoking – a common health risk targeted by corporate wellness programs – was found to raise health care costs by $587 dollars on average. Since financial problems are an important stress factor, it appears employers may be paying a high cost for employee financial stress, but they do not recognize it because a large portion of that expense shows up indirectly as a health care expense.[46]

Moreover, financial stress adversely affects employers both through absenteeism and presenteeism.[47] According to Menard:

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[46] CFPB Financial Wellness at Work, supra, citing, Lucia F. Dunn & Ida A. Mirzaie, Working Paper, Determinants of Consumer Debt Stress: Differences by Debt Type and Gender (2012), available at http://www.chrr.org/content/surveys/cfm/doc/DSI-Working-Paper-07-19-12.pdf (last accessed April 6, 2020); Ron Z. Goetzel et al., Ten Modifiable Health Risk Factors Are Linked To More Than One-Fifth Of Employer-Employee Health Care Spending, 31 Health Affairs 2474 (2012).; Ron Z. Goetzel, et al., The relationship between modifiable health risks and health care expenditures, 40 J. Occup. Environ. Med. 843 (1998) (showing an analysis of the multi-employer HERO health risk and cost database). https://journals.lww.com/joem/Abstract/1998/10000/The_Relationship_Between_Modifiable_Health_Risks.3.aspx (last accessed April 6, 2020). https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2011.0819 (last accessed April 6, 2020); Health Poll, AP-AOL/ABT SRBI (2008), http://surveys.associatedpress.com/data/SRBI/AP-AOL%20Health%20Poll%20Topline%20040808_FINAL_debt%20stress.pdf (last accessed April 6, 2020).

[47] "Presenteeism" has long been recognized in both the industry and academic literature. See, e.g., Paul Hemp (October 2004). Presenteeism: At Work but Out of It, Harvard Business Review https://hbr.org/2004/10/presenteeism-at-work-but-out-of-it (last accessed April 6, 2020).

> Academic researchers have studied the costs of absenteeism, presenteeism, and employee turnover specifically associated with employee financial stress, and have estimated these costs based on real world data. Absenteeism from work resulting from worrying about personal finances and employee turnover in particular represents a problem that has been well documented in the literature, and higher levels of financial stress are associated with higher levels of absenteeism, particularly among blue-collar workers. A recent survey of over 5,000 US workers by the company Willis Towers Watson found that employees who are worried about their finances are absent on average for 3.5 days annually.[48]

According to Menard, "financially troubled employees bring [their] concerns to work." Dr. Menard reports:

> The previously mentioned Mercer survey found that 16% of employees reported spending more than 20 working hours each month worrying about money. The average across those surveyed was 13 hours per month. For an individual employee, that is equal to 7.8% of their annual work time spent being distracted as a result of their financial situation. Other estimates are even higher. Garman and colleagues peg financial presenteeism and absenteeism costs at 15-20% of total compensation paid to all employees in the businesses studied. . .The Mercer survey also found that 22 percent of employees report missing at least one day of work to handle financial problems, and a full 20 percent have had to resign from jobs due to financial stress.[49]

Menard's work was confirmed by research of the International Foundation of Employee Benefit Plans ("IFEBP"). That research concluded:

> Financially distressed workers are more likely to miss work—not surprising given persons with financial stress tend to have more physical and mental health problems than those who are financially healthy. In fact, 70% of all job absenteeism has been tied to stress-related illnesses.

[48] Menard, supra, at 6 (internal notes omitted).
[49] Menard, supra, at 7 (internal notes omitted).

> Even when employees do show up for work, they are likely to demonstrate some degree of presenteeism due to fatigue and/or an inability to concentrate. Presenteeism occurs when employees come to work but are not functioning up their capabilities. It manifests itself in a host of ways including more time spent on tasks poor-quality work, impaired social functioning, burnout, anger and low morale.
>
> One in five employees (20%) reports issues with personal finances have been a distraction at work. More than one-third (37%) say they spend three hours or more each week thinking about of dealing with issues related to personal finances.[50]

The fact that employee financial problems affect the employer is recognized widely within industry circles. For example, according to one report by the Society for Human Resource Management ("SHRM"), "when employees are stressed financially, their health and productivity can both suffer."[51] According to SHRM, 48 percent of human resource managers report workers are struggling and stressed over "covering basic living expenses." SHRM reports that 60% of employers indicate that personal financial issues affect their "workers inability to focus at work" and 34% report such issues result in "absenteeism and tardiness."

A different survey, this one of employers rather than employees, asked employers about their workers' financial stress. "The survey found that financially stressed employees are not able to check their worries at the door; they typically spend over three hours per week dealing with personal finance at work and lose nearly one month of productive work time (23-31 days per year) over financial concerns." This survey states that "there may be a

[50] Patricia Bonner (Nov./Dec. 2016). The Impact of Financial Stress on Your Employees, Plans and Trusts, Vol. 34:6: 18-24. https://www.ifebp.org/inforequest/ifebp/0200354.pdf (last accessed April 6, 2020).

[51] Stephen Miller (April 2016). Employees' Financial Issues Affect Their Job Performance." Available at: https://www.shrm.org/resourcesandtools/hr-topics/benefits/pages/employees-financial-issues-affect-their-job-performance.aspx (last accessed April 7, 2020).

strong correlation between poverty and financial stress," though it acknowledges that "low wages" are not "completely to blame."[52]

Q. IN ADDITION TO THE SPECIFIC FINANCIAL BENEFITS YOU HAVE DESCRIBED ABOVE, IS THERE A BROADER BENEFICIAL IMPACT ON THE ECONOMY FROM UNIVERSAL SERVICE PROGRAMS SUCH AS CAP AND LIURP?

A. Yes. As a significant contributor to economic development, low-income rate affordability programs provide substantive benefits to all customer classes. Because programs such as CAP contribute to income within the low-income population that can be spent in the general retail economy (on items such as food and clothing), it helps drive additional job creation, income generation, and economic activity.

A study prepared for Entergy Service Corporation, a major electric utility serving the Middle South, found that a low-income rate affordability program would be a significant generator of jobs, economic activity, and income throughout the region. The report found:[53]

> The distribution of energy assistance first creates economic activity for the Entergy states through the direct delivery of benefit dollars. In addition to the dollars of cash benefits, however, the delivery of energy assistance will also free up household dollars that would have been devoted to the costs arising from the payment and behavior consequences of energy bill

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[52] Dan Macklin (August 2019). Businesses Losing $500 Billion Due to Employees Financial Distress, H.R. Technologist Weekly Newsletter. Available at: https://www.hrtechnologist.com/articles/compensation-benefits/businesses-losing-500-billion-due-to-employees-financial-stress-2/ (last accessed April 7, 2020).

[53] Roger Colton (August 2003). The Economic Impacts of Home Energy Assistance: The Entergy States. Entergy Services Corp: Little Rock (AR). Available at: http://www.fsconline.com/downloads/Papers/2003%2010%20EAPasEconDev.pdf (last accessed May 16, 2020).

> unaffordability. These dollars, too, can then instead be spent (and circulated) in the local economy.
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> * * *
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> While the discussion of the economic impacts of energy assistance looks at economic benefits on a statewide basis, in fact, the economic impacts provide particular advantage to low-income communities. Existing research indicates that low-income households tend to shop at local retail establishments. For food in particular, low-income households tend to shop at small, local food stores. Moreover, not only are low-income *households* more likely to shop locally, but the *businesses* serving low-income households are more likely to shop locally as well. It is clear, therefore, that not only will the provision of energy assistance provide income and employment to low-income households, but the earnings and employment that are delivered to such households will likely be spent, retained and recirculated within the low-income community as well.
>
> The delivery of energy assistance in the four Entergy states accomplishes far more for those states than simply helping low-income residents avoid arrears on home energy bills and preventing the potential loss of home energy service due to nonpayment. The delivery of home energy assistance also serves as a substantial economic stimulant for the economies of the Entergy states.

Q. DOES THIS REASONING APPLY TO PENNSYLVANIA AND TO CGPA?

A. Yes. There is a direct relationship between the offer of a universal service program such as CAP and economic benefits to local commercial and industrial customers. For example:

- Turnover costs business money. We know that unaffordable home energy bills lead to the frequent mobility of households.[54]

- Time missed due to family care provision costs business money. We know that unaffordable home energy leads to more frequent childhood illnesses.[55]

[54] Roger Colton. "A Road Oft Taken: Unaffordable Home Energy Bills, Forced Mobility, and Childhood Education in Missouri," 2 Journal of Children and Poverty 23 (1996). Available at: https://www.tandfonline.com/doi/abs/10.1080/10796129608414757 (last accessed April 7, 2020).

- Time missed due to lack of employee productivity and employee illness costs business money. We know that the inability to stay warm due to unaffordable home energy bills leads to increased illnesses, including pneumonia, influenza, and other infectious diseases.[56]

In sum, increasing employee productivity directly contributes to the increased profitability of firms. With low-wage employees, in particular, unaffordable home energy directly contributes to lowered productivity. Increased personal illness, increased employee turnover, and increased family care responsibilities are but three of the factors contributing to lower employee productivity. The provision of affordable energy through universal service programs such as CAP positively affects each of these productivity factors.

Q. HAS THIS RELATIONSHIP BETWEEN INABILITY-TO-PAY AND ECONOMIC GROWTH GENERALLY BEEN RECOGNIZED?

A. Yes. Consider, for example, the findings of the Government Accountability Office (GAO). In its report Poverty in America,[57] GAO found:

> The relationship between poverty and adverse outcomes for individuals is complex, in part because most variables, like health status, can be both a cause and a result of poverty. Regardless of whether poverty is a cause or an effect, however, the conditions associated with poverty can work against the development of human capital—that is the ability of individuals to remain healthy and develop the skills, abilities, knowledge, and habits necessary to

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[55] Jayanta Bhattacharya et al. (June 2002). Heat or Eat? Cold Weather Shocks and Nutrition in Poor American Families, National Bureau of Economic Research: Cambridge (MA). Available at: https://ajph.aphapublications.org/doi/10.2105/AJPH.93.7.1149 (last accessed April 7, 2020).

[56] Apprise, Inc. (December 2018). 2018 National Energy Assistance Survey: Final Report, National Energy Assistance Directors' Association (NEADA): Washington D.C. Available at: http://www.appriseinc.org/wp-content/uploads/2019/02/NEADA-2018-LIHEAP-Survey.pdf (last accessed April 7, 2020).

[57] GAO (January 2007). Poverty in America: Economic Research Shows Adverse Impacts on Health Status and Other Social Conditions as well as the Economic Growth Rate, GAO Report GAO-07-344. (hereafter GAO Poverty Consequences). Available at: https://www.gao.gov/products/GAO-07-344 (last accessed April 7, 2020).

> fully participate in the labor force. Human capital development is considered one of the fundamental drivers of economic growth. An educated labor force, for example, is better at learning, creating, and implementing new technologies. Economic theory suggests that when poverty affects a significant portion of the population, these effects can extend to the society at large and produce slower rates of growth.[58]

As one can see, in other words, the results I discuss herein are not revolutionary conclusions, nor are they unique to the CGPA service territory. The causes and consequences which I have identified are widely recognized as being attributable to broad social forces unrelated to any particular population that happens to fall into a group which someone has seen fit to label as a particular class of utility customers.

Q. DO THE IMPACTS OF COVID-19 CHANGE YOUR CONCLUSIONS ABOUT THE IMPACTS OF UNIVERSAL SERVICE ON BUSINESSES?

A. No. There is no question but that businesses in Pennsylvania are being adversely affected by the COVID-19 pandemic. Many businesses have been ordered to close, or to substantially curtail, their operations during this time of public health emergency. However, residential customers are also impacted by the economic difficulties but still are responsible for universal service costs. Many of the residential customers paying the costs of the program are also low-income or near poverty and experiencing a similar economic impact that businesses are experiencing. The economic difficulties faced by business during this health emergency is not reason, unto itself, to decline to allocate universal service costs amongst all customer classes for all the reasons I have outlined above.

[58] GAO Poverty Consequences, at 2.

D. Allocation of Universal Service Costs and Ratemaking Principles.

Q. IS THE ALLOCATION OF UNIVERSAL SERVICE COSTS CONSISTENT WITH SOUND REGULATORY PRINCIPLES?

A. Yes. One well-accepted tenet of utility ratemaking is that certain expenses incurred by a public utility are for "public goods." Due to the nature of public goods, all customers receive benefits from public goods and, accordingly, the costs of such goods are spread over all customer classes. Each end user makes a financial contribution to the utility's delivery of public goods. The "public goods" doctrine is applied in a variety of settings as a justification to spread designated utility costs over all customer classes.

In economic theory, public goods are those products and services that are valuable to society but which are undersupplied when society relies on private markets to provide them. Because they are needed and will not be made sufficiently available through private markets, the government must supply public goods. Classic examples of public goods include streetlights, city roads, and police protection.

In addition, the "public goods" doctrine is applied in a variety of settings as a justification to spread designated utility costs over all customer classes. Fire hydrants, for example, have been found to be public goods. The basic telecommunications network has been found to be a "public good" as a justification for spreading network costs over all customer classes.

For these purposes, the Pennsylvania PUC should adopt the definition of "public good" articulated by the National Regulatory Research Institute (NRRI). NRRI stated:

> A public good can be defined as "any publicly induced or provided collective good" that "arise[s] whenever some segment of the public collectively wants and is prepared to pay for a different bundle of goods and services than the unhampered market will produce." (note omitted). In sharp contrast to the private-good model. . ., the emphasis of the public-good model is on the *total* societal benefits—both direct and indirect—associated with network modernization. As applied to the telecommunications network, the public-good model is based upon the premise that the costs of achieving and supporting a modern, state-of-the-art network infrastructure are ultimately borne by the general body of ratepayers as opposed to limited subsets of customers who exhibit a high demand for specific new services. The public-good model is conducive to establishing social policies which provide for a "supply driven definition" of infrastructure.
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> * * *
>
> Under the public-good model, infrastructure investment[s] that are in the "public interest" are mandated by regulatory commissions, which act as surrogates for marketplace forces for the very reason that those forces break down either because of the enormous risks involved because of uncertainty with respect to costs and demand or both, or because of the intangible or unmeasurable society benefits which are not valued by the marketplace. (emphasis in original).[59]

This NRRI discussion helps guide the PUC's consideration of universal service cost allocations in several ways.

- First, universal service is a "publicly induced or provided collective good" as described by the NRRI.

- Second, it is clear from prior Pennsylvania proceedings, that NRRI was correct in referring to such a "collective good" as one that not all ratepayers would choose to pay for. Indeed, the fact that the Pennsylvania General Assembly mandated that a

[59] National Regulatory Research Institute (October 1991). The Public Good/Private Good Framework for Identifying POTS Objectives for the Public Switched Network, NRRI: Columbus (OH). Available at: http://ipu.msu.edu/wp-content/uploads/2016/12/Kravtin-Selwyn-Keller-Pots-Objectives-91-15-Oct-91-1.pdf (last accessed April 7, 2020).

universal service charge be "nonbypassable" indicates that the General Assembly understood this aspect of a "public good" and that it affirmatively decided that ratepayers could not avoid this cost by switching suppliers.

- Third, the Pennsylvania universal service programs are consistent with NRRI's statement that the emphasis is on "the *total* societal benefits." Indeed, these benefits include not simply the benefits to participating customers, but also, in the words of NRRI, the benefits "both direct and indirect." Pennsylvania's CAP programs, as a public good, clearly fit this notion of generating not only direct social benefits, but also a wide range of indirect social benefits to all customer classes.

- Fourth, the finding that universal service is a "public good" has cost allocation implications to it. As NRRI points out, "the costs of achieving and supporting a modern, state-of-the-art network infrastructure are ultimately borne by the general body of ratepayers." While some ratepayer groups would limit the allocation of costs only to those customers who "use" the service of a universal service program, accepting this decision is at fundamental odds with universal service being determined to be a "public good."

Finally, the very fact that the public benefits of Pennsylvania's universal service programs such as CAP are hard to quantify is one of the reasons that universal service should be found to be a public good with costs allocated to all ratepayers. As NRRI points out, the public good approach applies "for the very reason that those [market] forces break down. . .because of . . .the intangible or unmeasurable society benefits which are not valued by the marketplace."

Q. HAS SOMEONE OTHER THAN THE NATIONAL REGULATORY RESEARCH INSTITUTE REACHED THIS SAME CONCLUSION?

A. Yes. It is not merely state utility regulatory commissions that recognize universal service as a "public good." In addition to the National Regulatory Research Institute (NRRI) discussion cited above, the National Association of Attorneys General (NAAG) has reached this same conclusion:

> At its spring 1998 meeting, the National Association of Attorneys General (NAAG) adopted a resolution addressing competition issues in electric utility transactions. . .NAAG endorsed the following principles:. . .(11) Any system benefit charges which are imposed to support public goods such as. . .universal service, and low-income assistance, should be applied in a competitively-neutral and non-avoidable manner.[60]

Q. PLEASE EXPLAIN HOW A "PUBLIC GOOD" CAN BE PROVIDED TO AN INDIVIDUAL.

A. A product can represent a "public good" even though the direct service is provided to an individual. For example, businesses do not go to school, individuals do. Businesses do not go to doctors, individuals do. Businesses do not place their children in day care, individuals do. Despite this, in each of these instances, the direct benefits to business from the affordable provision of these "public goods" have been documented. Affordable health care and child care are all akin to affordable home energy in their nature as public goods which provide direct and substantial benefits to business as well as individuals. Accordingly, businesses, as well as individuals, should be responsible for helping to pay for these public goods.

Q. HAVE YOU EXAMINED HOW OTHER STATES WITH UNIVERSAL SERVICE PROGRAMS SIMILAR TO CGPA ALLOCATED THEIR UNIVERSAL SERVICE COSTS AMONG CUSTOMER CLASSES?

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[60] Ilene Gotts and Gregory Racz, "Post-Script Regarding Electric Utilities Mergers," in Practising Law Institute, Telecommunications Mergers & Acquisitions 1998: Financing, Regulatory and Business Issues, Corporate Law and Practice Course Handbook Series, at 433, 434 (July 1998). Available at: https://plus.pli.edu/Details/Details?rows=10&fq=title_id~3A2822~229410~2229202B~id~3A282B22~229410-CH10~2229~&facet=true&qt=legal_boolean&mode=Detailed (last accessed April 7, 2020).

A. Yes. My review examined the states of Maine, Maryland, New Hampshire, New Jersey, Ohio, Illinois, Colorado and Nevada. My review found that all eight states who have PIPP-based programs allocate the cost responsibility for their programs over all customer classes.

Q. IS THERE ANY ANALOGY TO VIEWING UNIVERSAL SERVICE FOR CGPA AS A PUBLIC GOOD?

A. Yes. Affordable home energy can be analogized to other public goods. For example, child care is analogous to affordable energy because of the direct benefits it has been found to provide to business. The Committee on Economic Development has quantified the beneficial impacts to business from reducing the causes of employee absenteeism and employee turnover associated with unaffordable child care. According to CED:[61]

> Many businesses also find that helping parents meet their child care needs can potentially reduce absenteeism and employee turnover. The 1990 *National Child Care Survey* (NCCS) found that 15 percent of the mothers in its sample who worked outside the home reported losing some time from work (including arriving late, leaving early, or having to take a full day off) during the previous month because of a failure in their regular child care arrangement. Studies have found that employee turnover produces disruption and inefficiency in the work environment and that the cost of replacing employees is high. For example, Merck & Co., Inc. found that it costs. . . about 75 percent of salary to replace a clerical or technical employee. It also found that it may take considerable time to fill a vacant position and an average of 12.5 months for a new employee to become adjusted to the job.[62]

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[61] CED is a national business-academic partnership. One objective of CED is "to unite business judgment and experience with scholarship in analyzing the issues and develop recommendations to resolve the economic problems that constantly arise in a dynamic and democratic society." Objectives of the Committee for Economic Development. The Research and Policy Committee of the CED is directed under the organization's bylaws to "initiate studies into the principles of business policy and of public policy which will foster the full contribution by industry and commerce to the attainment and maintenance" of the objectives of the organization.

[62] Research and Policy Committee (1993). Why Child Care Matters: Preparing Young Children for a More Productive America, A Statement by the Research and Policy Committee of the Committee for Economic

E. Summary and Recommendation.

Q. WHAT DO YOU CONCLUDE?

A. Based on the data and discussion above, I find that programs such as the Pennsylvania universal service programs, directed toward preserving basic home energy service and relieving financial stress about a household's capacity to meet its fundamental household needs on a month-to-month basis, address a societal-wide problem that is not limited to the residential customer class. The problems that are related to unaffordable home energy are not "caused" by the residential class. Nor does the CGPA universal service programs deliver benefits that are limited to the residential class.

Accordingly, the costs of those programs should be allocated and spread over all of CGPA's customer classes. No reason exists for the residential class to be charged with paying the entire cost of programs that have the effect of improving business profitability by reducing business costs, including reducing absenteeism and turnover, and increasing employee productivity.

Q. WHAT DO YOU RECOMMEND?

A. I recommend that universal service charges be allocated between customer classes on a competitively neutral basis. The allocation of universal costs among customer classes should be based on the percentage of revenue provided by each customer class at base rates. This approach reflects the fact that these universal service costs are being treated

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Development, at 1, Committee for Economic Development: New York: NY. Available at: https://www.ced.org/pdf/Why_Child_Care_Matters_1993.pdf (last accessed April 7, 2020).

as a distribution-related expense. In addition, many of the benefits and savings of the programs are captured in the distribution component of the base rates. Finally, a cost allocation based on class contribution to total revenues at base rates would be administratively easy to apply. These revenues are identified in the Company's filing. (Ex. 103, Schedule 8, page 1).

Q. WHAT IS THE COST IMPACT ON EACH CUSTOMER CLASS OF YOUR PROPOSED ALLOCATION OF UNIVERSAL SERVICE COSTS?

A. Given that the future expenditures on CGPA universal service programs are not now known and measurable, I estimate the cost impacts of my recommendation using the past two complete years. CGPA reports that it collected $32,333,857.91 in Universal Service Revenues in 2018. CGPA reports that it collected $29,215,919.18 in Universal Service Revenues in 2019. (OCA-IV-17). The distribution of 2018 and 2019 Universal Service Revenues, had this allocation been in effect for those two years, is presented in Schedule RDC-4. I note that it is the percentage allocation that I recommend, not the dollar allocation. Should the dollars of revenue at base rates differ based on decisions in this proceeding, the percentages would change accordingly.

Part 4. CGPA's Proposed Increase to its Residential Customer Charge.

Q. PLEASE DESCRIBE THE COMPANY'S PROPOSED RESIDENTIAL CUSTOME CHARGE INCREASE.

A. CGPA proposes to increase its residential customer charge by $6.25, from $16.75 per month to $23.00 per month. (CGPA St. No. 3, at 35). The size of the residential customer charge is important to all residential customers because it is an "unavoidable" fixed monthly charge. I support OCA witness Jerome Mierzwa's recommendation regarding the residential customer charge. In this section, I explain the adverse impacts which the proposed increase in the CGPA customer charge will have on low-income customers, who disproportionately tend also to be low use.

A. Universal Service Programs Will Not Insulate Low-income Customers from Harms.

Q. WHAT PROPORTION OF KNOWN ("CONFIRMED") LOW-INCOME CUSTOMERS DOES CGPA ENROLL IN CAP?

A. It is not reasonable to expect CGPA to know who all of its low-income customers are. Unless the customer has occasion to have contact with the Company, in circumstances where the customer's income would be an input into decision-making, CGPA would not identify someone as being "low-income." Accordingly, CGPA has confirmed the low-income status of only some of its customer base. According to CGPA, it had confirmed the low-income status of 61,152 (OCA-IV-3), while estimating a total low-income population of 101,375. (USECP, at 33). CGPA has, in other words, confirmed the low-income status of only 60% of its estimated low-income population base.

Q. AMONGST THOSE CONFIRMED LOW-INCOME CUSTOMERS, PLEASE EXPLAIN WHY THE CGPA CUSTOMER ASSISTANCE PROGRAM (CAP) WILL NOT ADDRESS THE INCREASED UNAFFORDABILITY ATTRIBUTED TO THE INCREASED CUSTOMER CHARGE?

A. CGPA'S CAP reaches a very small proportion of its confirmed low-income customer base. According to CGPA, the Company's data indicates a CAP participation of 22,929.

(OCA-IV-003(c)). CGPA further reports that it has 402,649 total residential customers. (OCA-IV-003(a)). Using this data, I find that CGPA has enrolled 5.7% of its residential customers in CAP.

Moreover, the Company reports, however, that it has an estimated 101,375 low-income customers on its system. CAP, therefore, serves less than 23% (i.e., fewer than one-of-four) of CGPA's estimated low-income population. (22,929 / 101,375 = 0.226). CGPA's reported May 2020 CAP participation (n=22,441) represents an even lower percentage.

Q. DOES CAP ENROLLMENT PROTECT CUSTOMERS FROM BEING ADVERSELY AFFECTED BY THE INCREASE IN THE FIXED MONTHLY CUSTOMER CHARGE?

A. No. CGPA errs when it asserts that "The majority of CAP customers will experience no impact resulting from an increase in rates. . ." (CAUSE-PA-I-1). CGPA claims that there will be "no impact" because "their monthly CAP payment is based on factors unrelated to rates or monthly bills. This includes customers on the Percent of Income, Average of Bills and Minimum payment plans." (Id.) CGPA has different aspects to its CAP program: the percentage of income component; the average of past payments component; the percentage of bill component; and the minimum payment component.[63] (CAUSE-PA-1-2). According to the Company, its enrollment by program component in December 2019, and in May 2020, was as follows:

[63] I exclude the Senior Discount component as having no-one enrolled in it.

Table 12. Percentage of CGPA CAP Enrollment by CAP Program Component (CAUSE-PA-I-2)		
	December 2019	May 2020
Total	20,350	22,411
PIPP	18.7%	18.2%
Average of Payments	11.4%	10.5%
% of Bill	61.2%	61.8%
Minimum Payment	8.8%	9.5%

As can be seen in this Table, more than three out-of-five CGPA CAP participants participate in the "Percentage of Bill" program component. Through this CAP design, CAP participants pay a percentage of the bill at standard residential rates. If residential rates increase, in other words, the CAP participant's payment will increase correspondingly.

Q. WHAT DO YOU CONCLUDE?

A. I conclude that CGPA's CAP program protects a very small percentage of its low-income customer base from the harms of an increased customer charge. CGPA has confirmed the low-income status of only 61% of its estimated low-income population. Out of that 61%, CGPA has enrolled only 37% of those customers in CAP. Out of that, fewer than 40% are enrolled in a CAP program component that would protect the customer against bill increases. As can be seen, with all the limitations, contrary to CGPA's claim that "a majority" of low-income customers will see no adverse impact, fewer than 9,000 of CGPA's estimated 101,375 low-income customers are protected by the CGPA CAP program.

B. The Harms to Low-income Customers.

Q. WHY IS IT SIGNIFICANT THAT CGPA UNDER-ENROLLS ITS CONFIRMED LOW-INCOME CUSTOMER POPULATION INTO ITS CAP PROGRAM?

A. The under-enrollment of the CGPA confirmed low-income population into CAP is significant because the Company's confirmed low-income population has substantially greater payment difficulties than does the residential population as a whole. Table 13 sets forth the data from the BCS annual report on universal service programs and collections performance.

Table 13. Average Arrears[64] (CGPA)
(2014 – 2018)

	Residential	Confirmed Low-Income
2014	$488.88	$555.06
2015	$540.98	$619.67
2016	$440.53	$529.75
2017	$455.54	$549.70
2018	$507.04	$602.49

Table 13 shows that the confirmed low-income customers of CGPA are substantially more seriously in arrears than are residential customers generally. Indeed, the difference is even greater than shown. The "Residential" class has, as one sub-component, the "Confirmed Low-Income" customers. The higher numbers for the Confirmed Low-Income customers, in other words, will pull the Residential customer numbers upwards. If the comparison was between customers who are Confirmed Low-Income versus those who are ***not*** Confirmed Low-Income, the differences would be even greater.

[64] BCS (annual). Universal Service Programs and Collections Performance. available at: http://www.puc.state.pa.us/filing_resources/universal_service_reports.aspx (last accessed May 29, 2020).

Table 14 below shows the ratio of the payment difficulties of Confirmed Low-Income customers to Residential customers generally as presented in the annual BCS report. The average arrears for Confirmed Low-Income customers was from 14% to 21% higher than the average arrears for Residential customers for CGPA. As can be seen, when Confirmed Low-Income customers are in arrears they are also deeper in arrears than residential customers overall.

Table 14. Ratio Confirmed Low-Income (numerator) to Residential (denominator) Average Arrears of Accounts in Arrears (CGPA) (2014 – 2018)

CGPA	Average Arrears of Accounts in Arrears (Confirmed Low-Income / Residential)
2014	114%
2015	115%
2016	120%
2017	121%
2018	119%

Q. HOW DOES THIS RELATE TO THE PROPOSAL TO INCREASE THE COMPANY'S FIXED MONTHLY RESIDENTIAL CUSTOMER CHARGE?

A. This data relates to the Company's fixed monthly residential customer charge because CGPA is now proposing to increase the level of the fixed monthly customer charge that cannot be controlled by reducing consumption. An increase in the fixed customer charge of $6.25 per month represents an increase in the fixed customer charge of $75.00 per year ($6.25/month x 12 months = $75.00). Given the Company's estimated number of low-income customers (101,375: USECP, at 33), this would be an increase in unavoidable annual customer charges of $7.6 million (101,375 x $75.00 = $7,603,125) to the CGPA's low-income population.

Q. CAN YOU PUT THAT CUSTOMER CHARGE INCREASE INTO SOME CONTEXT?

A. To put this number into context, in program year 2018-2019, CGPA customers received $4.655 million in LIHEAP cash grants, while in the 2019-2020 program year, they received $4.527 in LIHEAP cash grants. (OCA-IV-5). Just the increase in the fixed customer charge, standing alone, (not the *total* fixed charge, simply the *increase* in the fixed charge), in other words, will exceed the total amount of 2019-2020 LIHEAP cash grants received by all low-income customers by nearly 70% ($7,603,125 / $4,527,711 = 1.68).

Moreover, the amount of funding that CGPA is receiving in LIHEAP cash grants has been declining. From Program Year 2017/2018 through Program Year 20192020, LIHEAP grants have declined further each year. (OCA-IV-5).

Q. PLEASE SUMMARIZE HOW THE INCREASED CUSTOMER CHARGE WILL HARM LOW-INCOME CUSTOMERS.

A. Without limitation, I conclude that the CGPA proposal to increase its customer charge will harm low-income customers in each of the following ways (with each bullet below incorporating every other bullet):

- It will increase both the breadth and depth of arrears, each of which imposes additional utility costs on low-income households along with the social consequences appurtenant thereto.

- It will increase the incidence of service disconnections for nonpayment, along with the increased utility costs on low-income households in addition to social consequences appurtenant thereto.

- It will increase in the incidence of the threat of service disconnections for nonpayment, along with the increased utility costs and social consequences appurtenant thereto.

- It will dilute the efficacy of federal fuel assistance (i.e., LIHEAP) benefits, along with the increased utility costs on low-income households, in addition to the social consequences appurtenant thereto.

- It will increase Home Energy Insecurity, along with the resulting utility costs on low-income households, in addition to the social consequences appurtenant thereto. [65]

- A reduction in the ability of low-income households to respond to inability-to-pay by reducing usage, and to reduce the consequences of inability-to-pay, along with the resulting utility costs on low-income households, in addition to the social consequences appurtenant thereto.

C. Income and Usage.

Q. DOES THE INCREASE IN THE RESIDENTIAL CUSTOMER CHARGE DISPROPORTIONATELY HARM LOW-INCOME CUSTOMERS IN ANY OTHER WAY?

A. Yes. Low-income customers, both disproportionately, and on average, are also low-use customers. In making this observation, I note the obvious: that my statement is ***not*** that ***all*** low-income customers are also low-use. My statement is that low-income customers are disproportionately, and on average, low-use. The proposed increase in the fixed

[65] See, Colton Direct, at 16-18, 35, 43, 59. See also, Colton, Measuring the Outcomes of Home Energy Assistance Programs through a Home Energy Insecurity Scale, which, by this reference thereto, is incorporated herein as if fully set forth, available at http://fsconline.com/05_FSCLibrary/lib2.html (last accessed July 14, 2020).

monthly residential customer charge imposes a disproportionate increase in bills to these low-income, low-use customers.

Q. PLEASE EXPLAIN THE BASIS FOR YOUR CONCLUSION THAT LOW-INCOME CUSTOMERS ARE DISPROPORTIONATELY LOW-USE CUSTOMERS.

A. While low-income households tend to have less efficient energy consumption than do residential customers generally on a per square foot of housing basis, because they live in much smaller housing units, they tend also to have lower overall natural gas consumption. The most recent data published by the U.S. Department of Energy (DOE) in its 2009 Residential Energy Consumption Survey (RECS), as presented in Table 15, shows the following for total energy usage in the Northeast (RECS, Table CE1.2).[66]

Table 15. Home Energy Use by Income
(Residential Energy Consumption Survey)

2009 Annual Household Income	Per Square Foot (thousand Btu)	Per Household (million Btu)
Less than $20,000	65.0	83.3
$20,000 to $39,999	56.3	98.2
$40,000 to $59,000	49.8	98.9
$60,000 to $79,999	48.4	99.9
$80,000 to $99,999	48.4	119.2
$100,000 to $119,999	42.4	131.1
$120,000 or More	45.9	154.8

The same results appertain when the examination is limited exclusively to natural gas. According to the DOE's RECS (Table CE2.2), in the Northeast, the region of which

[66] The 2009 RECS data referenced in Table 15, Table 16, and Table 17can be accessed at: https://www.eia.gov/consumption/residential/data/2009/ (last accessed May 29, 2020).

Pennsylvania is a part, as incomes increase, natural gas usage increases correspondingly (Table 16).

Table 16. Natural Gas Usage by Income
(Residential Energy Consumption Survey)

2009 Annual Household Income	mmBtu	MCF
Less than $20,000	58.7	57
$20,000 to $39,999	76.5	75
$40,000 to $59,000	69.7	68
$60,000 to $79,999	70.7	69
$80,000 to $99,999	81.2	79
$100,000 to $119,999	92.7	90
$120,000 or More	114.4	112

It does not matter which end-use is being examined. As income increases, so too, does natural gas usage increase. The average household data by natural gas end-use, in million BTU, for Northeast households using the end-use (RECS, Table CE3.2) is presented immediately below.

Table 17. Natural Gas Consumption by End-Use and Income (mmBtu) (Northeast)
(Residential Energy Consumption Survey)

2009 Annual Household Income	Total	Space Heating	Water Heating
Less than $20,000	83.3	51.2	12.5
$20,000 to $39,999	98.2	57.2	16.4
$40,000 to $59,000	98.9	55.1	16.1
$60,000 to $79,999	99.9	55.1	16.5
$80,000 to $99,999	119.2	64.0	19.0
$100,000 to $119,999	131.1	65.9	22.6
$120,000 or More	154.8	78.7	26.6

Q. DOES THE DEPARTMENT OF ENERGY PROVIDE DATA THAT HELPS TO EXPLAIN WHY LOW-INCOME CUSTOMERS TEND ALSO TO BE LOW USE CUSTOMERS?

A. Yes. The RECS data clearly shows that natural gas consumption increases as the size of the housing unit increases. The related housing characteristics support this conclusion. Residents of single family housing have greater consumption than residents of multi-family housing. Renters have lower consumption than do homeowners. And occupants of homes with more rooms have higher gas consumption than occupants of dwellings with fewer rooms.

Q. HAS CGPA UNDERTAKEN ANY STUDY OF GAS USAGE BY HOUSING TYPE?

A. No. When asked for any study of residential usage by housing type, as well as any study of residential usage by housing size (whether measured in terms of square feet, number of rooms, number of bedrooms, or some other metric), CGPA responded that "no such studies have been conducted by or on behalf of the Company within the past five years." (OCA-IV-31).

Q. IS THERE REASON TO BELIEVE THAT CAP PARTICIPANTS WOULD NOT BE REPRESENTATIVE OF LOW-INCOME CUSTOMERS GENERALLY?

A. Yes. By definition, participants in the Percentage of Income CAP program component are not likely to have low usage. Given an average household size in the CGPA service territory (2018) of 2.41 persons (American Community Survey, Table 25010),[67] annual incomes at 50%, 100%, 120% and 150% of Poverty, and the CGPA bills that would be required at those income levels (7%, 9%) to enroll in CAP, are as set forth in Table 18 immediately below. As is evident, at the time of these studies, a household at 50% of Poverty could not enroll in CAP without having a minimum bill of $770.10; a household at 100% of Poverty could not enroll in CAP without having a bill of $1,732.73; a household at 150% of Poverty could not enroll in CAP without having a bill of $2,887.89. If customers with bills lower than these levels sought to enroll in CAP, their bills would have been defined, under then-existing CAP burdens, to be "affordable" without receipt of CAP assistance as being at or below 8%, 9% or 10% of income.

Table 18. Minimum Bills to Participate in CAP at 50%, 100%, 120% and 150% of Poverty (Average HH size of 2.41 persons) (2018)

Income at Various Poverty Levels				Percentage of Income Bill at Various Poverty Levels (and CAP Percent)			
50%	100%	120%	150%	50% (7%)	100% (7%)	120% (9%)	150% (9%)
$9,116	$18,231	$21,877	$27,347	$638	$1,276	$1,969	$2,461

Q. WHAT DOES THIS TABLE TELL US?

A. According to CGPA, its average monthly residential bill is now $96.83 (OCA-IV-43). This would be an average residential annual bill of $1,162 ($96.83/month x 12 months = $1,162/year). As can be seen, under the percentage of income structure, for incomes levels other than 50% of Poverty in the above Table, bills (and thus usage) would need to be substantially above the residential average simply to participate in CAP. At 100% of Poverty, bills would need to be nearly 10% higher than average to participate in the percentage of income component. At 120% of Poverty, bills would need to be nearly

[67] Available at data.census.gov (last accessed May 21, 2020) (average is unweighted average of CGPA zip codes).

70% higher; at 150% of Poverty, bills would need to be more than 110% higher than average.

Q. HAS CGPA PERFORMED ANY DEMOGRAPHIC STUDIES OF ITS CAP CUSTOMERS?

A. No. When asked for such studies, CGPA replied that "The Company has not performed any formal demographic studies of CAP participants." (OCA-IV-13).

Q. DO THE UNDERLYING DEMOGRAPHICS IN PENNSYLVANIA PROVIDE SUPPORT FOR THE APPLICABILITY OF THE DEPARTMENT OF ENERGY CONCLUSIONS REGARDING INCOME AND ENERGY USAGE APPLY TO CGPA?

A. Yes. First, Schedule RDC-5 presents the average income in Pennsylvania by the number of rooms in a housing structure, as well as the average income in Pennsylvania by the number of bedrooms in a housing structure. Schedule RDC-5 clearly shows that as housing units get larger in Pennsylvania, average income increases.

There are two standard ways to compare the size of a housing unit when square footage is not available. One way is to look at the number of rooms; the other way is to look at the number of bedrooms. Both of these approaches document that lower-income households live in smaller sized housing units. Schedule RDC-5 shows that:

- While the average income of a Pennsylvania household living in a unit with one room is $40,399, the average income of a household living in an eight-room unit is $95,524. By the time a house gets to have nine rooms, the average income is $119,211.[68]

- The same relationship holds true for housing size measured by the number of bedrooms. While the average income for a Pennsylvania household living in a unit with no bedrooms (known as an "efficiency unit") is $41,716, the average income of a household living in a housing unit with three bedrooms is $69,626; the average income of a household living in a unit with five bedrooms is $136,317.

In both instances (number of rooms and number of bedrooms), the average income increases as the size of the housing unit increases.

In addition to this data, Schedule RDC-6 presents a distribution of Pennsylvania households by income and by the size of the housing unit in which they live, measuring housing unit size by the number of bedrooms in the unit. The data shows that a higher proportion of lower-income households live in smaller housing units and a higher proportion of higher income households live in larger housing units. For example, while roughly 13% to 17% of households with income less than $20,000 live in units with one bedroom or less, less than two percent (2%) of households with incomes greater than $150,000 live in units that small. Conversely, while roughly 46% to 52% of households with incomes of $150,000 or more live in units with four or more bedrooms, only 11% to 12% of households with incomes less than $30,000 do. Consistently, the percentage of households in each of the higher income ranges declines as the number of bedrooms declines. In Pennsylvania, higher income households tend disproportionately to live in larger homes than do lower income households.

[68] Housing units limited to those using natural gas service with housing occupants billed directly by the utility.

Q. DOES RECENT CENSUS DATA FOR THE CGPA SERVICE TERRITORY IN PARTICULAR SUPPORT DOE'S DATA ON THE RELATIONSHIP BETWEEN INCOME AND HOUSING SIZE?

A. Yes. In contrast to CGPA's lack of studies of usage and income, the following lines of inquiry support the conclusion that the demographics of CGPA's service territory support the applicability of the DOE data to CGPA. In undertaking this analysis, I began with the zip codes that CGPA provided in response to a query for the zip codes which comprise the CGPA service territory. (OCA-IV-2) I then used Census data[69] to perform the following analysis. Using those zip codes identified by CGPA, I matched CGPA's definition of its service territory to Census data obtained from the American Community Survey (2018). I then reviewed that Census data to determine whether the Census data supported the conclusions reported by the DOE regarding the relationship between low-income status and housing size. I find that the CGPA Census data supports the DOE's conclusions.

In the analysis which I pursued, for each variable, I rank-ordered the zip codes from "top" to "bottom" ("bottom" is the lowest value for each zip code; "top" is the highest value). For example, the zip code with the lowest percentage penetration of population with annual income below 100% of Poverty would be ranked #1, while the zip code with the highest penetration would be ranked #322 for that variable. The zip code with the lowest percentage of housing units with seven rooms or more would be ranked #1, while

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[69] Available at data.Census.gov (last accessed July 14, 2020).

the zip code with the highest percentage would be ranked #322 for that variable. I then divided each rank-ordering into deciles.[70]

Q. PLEASE EXPLAIN YOUR FINDINGS REGARDING POVERTY LEVEL AND THE DOE CHARACTERISTICS.

A. The zip code data for the CGPA service territory based on Poverty Level confirms that the data provided by DOE regarding the relationship between income and energy consumption (i.e., as income decreases, so, too, does natural gas use decrease) is applicable to CGPA.

First, I examined renters by level of income (setting "low-income" as being at or below $10,000). These households disproportionately live in smaller homes (with 3 rooms or fewer). In the three deciles of zip codes with low penetrations of households with income of $10,000 or lower, there were 31 zip codes who also had low penetrations of three-room homes; in contrast, in the three deciles of zip codes with high penetrations of households with low-incomes, there were only 22 zip codes that had low penetrations of three-room homes.

The flip-side of the analysis supports the DOE data as well. While only 37 zip codes with the lowest penetrations of low-income households fall in the four deciles with the highest penetration of three-rooms homes, 47 zip codes with the highest penetration of

[70] Since I had 322 Zip Codes with data, it was not exactly divisible by 10. Accordingly, Deciles 1 and 10 had 33 data points, while Deciles 2 through 9 had 32.

low-income households fall in the zip codes with the highest penetration of three room homes.

The analysis supporting the DOE's data for the CGPA service territory can be seen for large housing units as well. While twelve zip codes with the highest penetration of low-income households fall in the decile with the highest penetration of large (7-room) homes, only six (6) zip codes with the highest penetration of low-income households fall in the decile with the highest penetration of large homes. Similarly, while 35 of the zip codes that fall in the top three deciles with the lowest penetration of low-income households fall in the deciles with the highest percentage of large homes, only 25 of the zip codes with the highest penetration of low-income households fall into those three deciles with the highest penetration of larger homes.

The same type of relationship exists with the type of housing structure. While 43 zip codes with low penetrations of low-income households fall in the three deciles with the highest penetration of residents single-family detached homes, only 37 of the zip codes with high penetrations of low-income households have high penetrations of single-family detached homes.

Q. PLEASE EXPLAIN WHAT YOU FIND IF YOU EXAMINE HOUSEHOLDS WITH HIGH INCOMES RATHER THAN HOUSEHOLDS WITH LOW-INCOMES?

A. The same results appertain when one examines the data from a high income perspective. In the CGPA service territory, for example, while 48 zip codes with a low penetration of households with annual income exceeding $150,000 (bottom three deciles) also fall in the four deciles with the highest penetrations of renters, only 36 of the zip codes with a high penetration of higher income households fall in the in the three deciles with the highest percentage of renters. In contrast, while 35 of the zip codes with the higher percentage of higher income households fall into the deciles with the lowest percentage of renters, only 22 of the zip codes with low percentages of high income households fall into those deciles with the lowest percentages of renters.

As with low-incomes, income makes a difference in the size of the housing unit as well. Zip codes with lower percentages of high-income households also have higher percentages of small (3-room) homes. Zip codes with higher percentages of higher income households also fall within the deciles of zip codes with higher percentages of larger homes (7+ rooms).

The extent to which income and single-family detached homes are related is striking. While 14 of the zip codes with the lowest penetrations of higher income households fall into the deciles of zip codes with lower penetrations of single-family detached homes, only eight of the zip codes with high penetrations of higher income households fall into the zip codes with the deciles of zip codes with lower penetrations of single-family detached homes. The converse is true as well. While 30 of the zip codes falling into the three deciles with the highest penetration of higher income households also fall into the deciles with higher penetrations of single-family detached homes, only 23 of the zip codes with low penetrations of higher income households fall into the deciles of zip codes with higher penetrations of single-family detached homes.

Q. WHAT DO YOU CONCLUDE?

A. The demographic characteristics of CGPA's service territory, which CGPA concedes it has not studied (OCA-IV-13), support the DOE's findings regarding the relationship between natural gas usage and income. In the CGPA service territory, lower incomes are associated with rental status, while higher incomes are associated with homeowner status. In the CGPA service territory, lower incomes are associated with living in smaller homes (3 or fewer rooms), while higher incomes are associated with living in larger homes (7 or more rooms). In the CGPA service territory, higher incomes are associated with living in single-family detached homes. The data from CGPA's service territory is precisely the results one would expect from the DOE data reporting that while natural gas usage may be less efficient on a per square foot basis for lower income households, lower income households live in housing units that are sufficiently smaller that their total natural gas usage on a per household basis is less.

Q. WHAT DO YOU FURTHER CONCLUDE?

A. The DOE data I cite above establishes a relationship between income and natural gas usage. As income increases, natural gas usage increases. Low-income households disproportionately have lower natural gas usage than higher income households. While low-income households may have less efficient housing on a per square foot basis, that lack of efficiency is more than offset by other characteristics. Low-income households tend to be renters rather than homeowners, with renters using less natural gas. Low-income households tend to live in smaller housing units, with smaller units using less natural gas. Low-income households tend to live in multi-family housing rather than single-family housing, with multi-family housing units using less natural gas. I conclude that the data for CGPA zip codes confirms these DOE observations. CGPA's low-income households tend to be renters. CGPA's low-income households tend to live in smaller housing units. CGPA's low-income households tend to live in multi-family (rather than single-family) housing units. And, I conclude, CGPA's low-income households will, both disproportionately and on average, have lower natural gas usage than higher income households.

Q. DO THE ADVERSE LOW-INCOME IMPACTS OF AN INCREASED CUSTOMER CHARGE ALSO ADVERSELY AFFECT NON-LOW-INCOME CUSTOMERS?

A. Yes. The proposed $6.25 increase in the Company's fixed monthly customer charge imposes disproportionately high rate increases on low-use customers. Low-income customers tend more often than not to be amongst these low-use customers. As I demonstrate in detail above, not only are proportionately more confirmed low-income customers in arrears, but those who are in arrears, are ***deeper*** in arrears. CGPA proposes to respond to these circumstances by ***raising*** rates the most to these customers. The resulting increase in bad debt, working capital, and credit and collection costs will be borne by all ratepayers.

D. Recommendation.

Q. WHAT DO YOU RECOMMEND?

A. Based on the data and discussion presented above, I recommend that the proposed customer charge presented by OCA witness Jerome Mierzwa be adopted.

Part 5. Equity Return for Exemplary Management.

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. In this section of my testimony, I assess the Company's request for an increased equity return attributable to what Company witnesses refer to as "exemplary management." (CGPA St. 8, at 3, 5; CGPA St. 1, at 18 – 39). After I review PUC-provided data on CGPA collections, I conclude that the recommendation of OCA witness Kevin O'Donnell regarding this additional equity return should be adopted.

Q. WHAT DATA DO YOU EXAMINE WHEN YOU REVIEW CGPA COLLECTIONS?

A. The information I have examined is taken from the PUC's annual reports on Chapter 14 implementation.[71] This is the data used by the PUC to prepare its biannual report to the General Assembly regarding the implementation of Chapter 14. The data is set forth in the Table immediately below. The last of these data points (the number of customers) is provided simply to provide context for the other data points that are performance measures.

[71] Available at: http://www.puc.state.pa.us/filing_resources/biennial_report_pursuant_to_section_1415.aspx (last accessed July 23, 2020).

Table 19. Chapter 14 Collection Statistics (Columbia Gas) (Ranking Amongst PA Natural Gas Utilities) (2015 – 2019)					
	2015	2016	2017	2018	2019
Total # accts overdue	45,129 (4)	43,374 (4)	42,999 (4)	43,403 (4)	43,040 (4)
Total $s overdue	$16,115,031 (2)	$12,198,776 (2)	$12,125,514 (3)	$13,855,849 (3)	$14,939,587 (3)
Average arrears	$357.09 (2)	$281.25 (2)	$282.10 (2)	$319.24 (3)	$347.11 (3)
# Disconnections Nonpayment (DNP)	12,664 (2)	9,945 (3)	10,728 (2)	10,859 (3)	10,770 (3)
# reconnections	7,088 (2)	5,199 (3)	5,881 (3)	6,054 (4)	6,153 (5)
% reconnections	55.97% (7)	52.28% (7)	54.82% (7)	55.75% (7)	57.13% (7)
Collection expenses	$2,635,971 (2)	$3,289,73 (2)	$5,072,461 (2)	$4,848,900 (2)	$5,042,206 (2)
Total # customers	387,782 (2)	390,394 (2)	393,410 (2)	396,835 (2)	400,044 (2)

In addition to providing each data point, I present CGPA's ranking on that data point amongst Pennsylvania's seven (7) natural gas utilities. The rankings are from highest to lowest. Thus, for example, when CGPA is ranked #4 in 2019 on the number of accounts overdue (43,040), that means that there are three natural gas utilities with a higher number of total accounts overdue. When Columbia gas is ranked #3 on the number of nonpayment disconnections, that means that there are two natural gas utilities which have more nonpayment disconnections.

Based on the data I present below, I find that CGPA is not amongst the worst performing natural gas utilities in Pennsylvania on collections from residential customers, but neither does the Company's performance reflect "exemplary" management.

Q. UPON WHAT DATA DO YOU BASE THIS CONCLUSION?

A. CGPA consistently has either the second (2015-2016) or third (2017-2019) most total dollars overdue amongst Pennsylvania's seven gas utilities. At first glance, that may not be surprising, given that the Company has the second most number of residential customers. The story, however, is not that simple. While CGPA is the second biggest natural gas utility, over all five periods (2015 through 2019), it has only the fourth highest number of residential accounts in arrears. CGPA's dollar level of arrears, in other words, cannot be attributed to the fact that it is one of the biggest gas utilities in the state.

The fact that CGPA performs more poorly on collections is reflected in the fact that its ranking by total dollars overdue is higher than its ranking by total number of accounts overdue. If CGPA's were collecting its bills at the same rate as other gas utilities in Pennsylvania, its ranking on both metrics (number of accounts overdue, number of dollars overdue) would be the same. The fact that it is ranked higher in the number of dollars overdue than it is ranked in the number of accounts overdue means that CGPA's overdue customers owe, on average, more than is owed by other Pennsylvania utilities. In fact, the data in this Table shows this as well. The data shows that the average arrears (of accounts having arrears) is ranked third highest amongst Pennsylvania's gas utilities. While CGPA has improved its ranking on average arrears (from #2 to #3) from 2017 to 2019, that improvement has occurred because the performance of other gas utilities (UGI Gas, UGI Penn Natural) has deteriorated rather than because CGPA has improved. As the data shows, in reality, CGPA's average arrears dropped from $357.09 in 2015 to $281.25 in 2016, but has been steadily increasing ever since (increase to $319.24 in 2018 and further increase to $347.11 in 2019). CGPA's 2019 average arrears is nearly the same as the average arrears was in 2015.

CGPA's number of total accounts overdue remained virtually constant from 2017 (42,999) through 2019 (43,040), while its total dollars overdue deteriorated in that same time frame (increasing from $12.125 million in 2017 to $14.940 million in 2019). That performance remained constant (total number of accounts overdue), or deteriorated (total dollars overdue) despite the fact that CGPA was incurring some of the highest collection expenses in Pennsylvania. CGPA spent the second most dollar amount on collection expenses in every year from 2015 ($2.636 million) through 2019 ($5.042 million). Nonetheless, its total dollars overdue increased from $12.199 million in 2016 to $14.940 million in 2019.

CGPA disconnects service to a disproportionate number of overdue accounts, when compared to other natural gas utilities in Pennsylvania. As the data in the Table immediately above shows, even though CGPA has only the fourth highest number of overdue accounts in the state, it consistently has either the second or third highest number of nonpayment service disconnections between 2015 and 2019. Despite this large number of nonpayment disconnections, CGPA's average residential arrears remains among the three highest in the state.

A bigger problem from a management perspective is the small number of reconnections CGPA accomplishes after a residential customer has had service disconnected. The data in the Table above shows that CGPA reconnects a percentage of residential customers that is lower than every other gas utility in Pennsylvania. Fewer than three-of-five CGPA customers who have service disconnected subsequently have service reconnected. That ranks CGPA seventh highest out of Pennsylvania's seven natural gas utilities. A disconnection without a subsequent reconnection not only places collection of the underlying arrears at risk, but it also places future revenue from future sales in jeopardy.

Q. DID THE PUC'S MANAGEMENT AUDIT OF CGPA MAKE ANY FINDINGS REGARDING MANAGEMENT PERFORMANCE REGARDING COLLECTIONS?

A. Yes. The PUC's Management Audit, released in June 2020, reported as follows:

> CPA's overall average arrearages were compared to a panel of Pennsylvania natural gas distribution companies (NGDCs) for the years 2014-2018, which appear in the Universal Service Programs and Collections Performance Reports (USP & Collections Reports) published by BCS. As shown. . ., CPA's overall average arrearages were substantially higher than the panel average over the period.

(Management Audit, at 53). The PUC's Management Audit referred to CGPA's "less than average arrearage level performance." (Id., at 54). Moreover, the Management Audit said that CGPA's management actions "resulted in excessive arrearage levels CPA experienced throughout the audit period." (Id., at 55). My discussion above complements these PUC Management Audit findings. Both discussions (my discussion above; the PUC Management Audit findings) support the conclusion that CGPA has not engaged in "exemplary management" when considered from a collections perspective.

Q. WHAT DO YOU RECOMMEND?

A. Based on the data and discussion above, I recommend that the recommendations of OCA witness Kevin O'Donnell be adopted.

Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?

A. Yes, it does.

Colton Schedules

Schedule RDC-1
(OCA-IV-1, Attachments A, B and C)

CAP Collections (2017 – 2019)						
	2017		2018		2019	
	Bills	Full Payments	Bills	Full Payments	Bills	Full Payments
January	20,785	8,279	24,387	9,514	24,787	9,832
February	19,469	8,707	21,331	1,024	21,328	9,946
March	23,887	10,041	23,540	11,196	23,305	11,313
April	19,618	9,256	23,728	13,014	23,562	12,754
May	24,281	11,557	25,973	14,191	25,575	14,013
June	23,390	12,374	24,167	14,518	21,688	13,392
July	22,226	13,028	23,869	15,513	24,891	15,525
August	23,970	15,255	24,881	16,911	23,341	16,102
September	21,809	14,724	21,894	11,594	21,761	15,405
October	23,039	15,291	24,495	12,830	23,446	16,482
November	21,586	12,785	22,203	12,120	20,730	12,069
December	19,999	9,034	20,567	9,377	20,349	9,678
Total Number of CAP bills	264,059		281,035		274,763	
Total full on-time payments	122,419		135,950		133,268	
Avg monthly # bills/ full pyts	22,005	11,694	23,420	11,817	22,897	13,043
Total full payments	140,331		141,802		156,511	
Pct full on-time payments	46.4%		48.4%		48.5%	
Pct full payments	53.1%		50.5%		57.0%	
Annual CAP billed amount	$12,598,585		$13,972,031		$14,299,197	
Total CAP cash payments	$9,050,991		$10,262,398		$11,006,661	
Pct CAP payments of billed amts	71.8%		73.4%		77.0%	

Self-Sufficiency Income (PA) (2018)
For 3-person Households with Selected Compositions
(CGPA Counties) (OCA-IV-2)

State Name	County1	2 Adults--1 School age child	1 Adult--1 School-Age-1 Teen	1 Adult--1 School-Age-1 Infant
Pennsylvania	Adams County	$54,501	$47,796	$60,747
Pennsylvania	Allegheny County	$45,048	$38,812	$58,991
Pennsylvania	Armstrong County	$44,170	$35,255	$48,381
Pennsylvania	Beaver County	$42,369	$34,140	$49,643
Pennsylvania	Bedford County	$41,677	$33,525	$47,866
Pennsylvania	Centre County	$53,640	$46,956	$67,784
Pennsylvania	Chester County	$63,995	$57,053	$79,518
Pennsylvania	Clarion County	$40,123	$32,219	$46,954
Pennsylvania	Clearfield County	$39,179	$31,405	$43,895
Pennsylvania	Elk County	$41,679	$33,591	$46,838
Pennsylvania	Fayette County	$41,194	$33,194	$47,369
Pennsylvania	Forest County	$40,360	$32,485	$46,807
Pennsylvania	Franklin County	$50,587	$43,894	$55,008
Pennsylvania	Fulton County	$45,192	$36,516	$48,617
Pennsylvania	Greene County	$42,073	$33,833	$49,933
Pennsylvania	Indiana County	$44,511	$35,645	$49,890
Pennsylvania	Jefferson County	$38,505	$30,819	$43,953
Pennsylvania	Lawrence County	$43,942	$34,843	$52,259
Pennsylvania	McKean County	$40,481	$32,644	$45,730
Pennsylvania	Mercer County	$40,441	$32,392	$47,271
Pennsylvania	Somerset County	$39,640	$31,832	$44,659
Pennsylvania	Venango County	$40,585	$32,673	$48,889
Pennsylvania	Warren County	$41,622	$33,327	$46,724
Pennsylvania	Washington County	$48,039	$39,615	$57,442
Pennsylvania	Westmoreland County	$46,779	$38,220	$55,487
Pennsylvania	York County	$52,397	$45,683	$59,435

Yellow shaded cells are counties with self-sufficient income less than $1,000 higher than 150% of Poverty.
Blue-shaded cells are counties with self-sufficient incomes less than 150% of Poverty.

Population at "Near Poor" Poverty Ranges by County (CGPA 2017)
("near poor" = 150% - 199%)

Geography	Estimate; Total:	Population Pop 150 - 199%	Pct Population 150-199%
Adams	98,333	7,761	7.9%
Allegheny	1,189,264	90,648	7.6%
Armstrong	64,956	5,060	7.8%
Beaver	163,766	14,594	8.9%
Centre	143,641	11,335	7.9%
Chester	505,715	21,178	4.2%
Clearfield	73,688	7,939	10.8%
Fayette	127,092	10,822	8.5%
Franklin	151,928	11,838	7.8%
Indiana	79,145	7,280	9.2%
Lawrence	84,959	7,417	8.7%
Mercer	104,618	9,479	9.1%
Somerset	69,203	7,264	10.5%
Washington	202,404	15,483	7.6%
Westmoreland	345,761	26,533	7.7%
York	436,295	31,941	7.3%

	Total Revenue at Proposed Base Rates[72]		Universal Service Costs 2018	Universal Service Costs 2019
Residential sales – RS – CAP	$281,185,282	55.7%	$18,017,874	$16,280,418
Small General Service (=<6,440 therms annually)—SGSS	$30,176,738	6.0%	$1,933,674	$1,747,211
Small General Service (>6,440 to =<64,400 therms annually)--SGSS	$22,557,156	4.5%	$1,445,424	$1,306,043
Large General Sales Service (=<540,000 therms annually)--LGSS	$4,015,126	0.8%	$257,282	$232,473
Large General Service (>540,000 therms annually)—LGSS	$0	0.0%	$0	$0
Negotiated Sales Service – NSS	$20,281	0.0%	$1,300	$1,174
Residential Distribution Service (Choice) - RDS	$80,238,350	15.9%	$5,141,537	$4,645,741
Small Commercial Distribution Service (Choice =< 6,440 therms annually) -- SCD	$10,548,375	2.1%	$675,922	$610,743
Small Commercial Distribution Service (Choice >6,440 to 64,400 therms annually) -- SCD	$7,516,737	1.5%	$481,660	$435,213
Small General Distribution Service (=< 6,440 therms annually) -- SGDS	$1,532,302	0.3%	$98,187	$88,719
Small General Distribution Service (> 6,440 to <=64,400 therms annually) -- SGDS	$18,424,123	3.7%	$1,180,586	$1,066,743
Small Distribution Service - SDS	$23,475,785	4.7%	$1,504,288	$1,359,230
Large Distribution Service - LDS	$19,486,797	3.9%	$1,248,681	$1,128,271
Main Line Distribution Service Class 1 -- MLDS	$34,037	0.0%	$2,181	$1,971
Man Line Distribution Service Class II -- MLDS	$496,164	0.1%	$31,793	$28,728
Flexible Rate Provisions and Negotiated Contract Services	$4,891,965	1.0%	$313,469	$283,241
Total Revenue	$504,599,218	100.0%	$32,333,858	$29,215,919
Sum	$504,599,218		$32,333,858	$29,215,919
Check	$0		$0	$0

[72] Ex. 103, Schedule 8, page 1.

Schedule RDC-5

Average Income by Number of Rooms or Number of Bedrooms in Housing Unit (Pennsylvania)
American Community Survey (5-year data) (2012 – 2016)

Number of Rooms / Bedrooms	Average Income by Number of Rooms / Number of Bedrooms	
	Rooms	Bedrooms
0	N/A	$41,716
1	$40,399	$38,885
2	$47,498	$51,694
3	$40,382	$69,626
4	$46,608	$116,764
5 /a/	$54,110	$136,317
6	$62,018	
7	$77,180	
8	$95,524	
9 /b/	$119,211	
Total	$69,336	$75,671

NOTES:

/a/ For bedrooms, data is top-coded at 5 bedrooms.
/b/ For rooms, data is top coded at 9 rooms.

Distribution of Housing Units by Income and Housing Unit Size (Number of Bedrooms): Pennsylvania

	$1 - $10,000	$10 - $20,000	$20 - $30,000	$30 - $40,000	$40 - $50,000	$50 - $75,000	$75 - $150,000	$150 - $250,000	$250,000 or more
No bedroom	1.8%	1.1%	0.9%	0.6%	0.6%	0.3%	0.3%	0.1%	0.3%
1 bedroom	15.7%	11.8%	8.7%	8.0%	5.6%	4.8%	2.3%	1.2%	1.5%
2 bedrooms	32.9%	31.0%	29.8%	29.2%	28.3%	23.1%	15.5%	8.6%	9.9%
3 bedrooms	39.6%	46.5%	49.2%	49.4%	51.7%	55.4%	56.1%	44.7%	36.1%
4 bedrooms	8.5%	8.1%	9.6%	10.9%	12.3%	14.4%	23.3%	40.8%	45.3%
5 or more bedrooms	1.5%	1.5%	1.7%	1.9%	1.6%	1.9%	2.5%	4.5%	7.0%
Total bedrooms	1.8%	1.1%	0.9%	0.6%	0.6%	0.3%	0.3%	0.1%	0.3%

American Community Survey (5-year data) (2012 - 2016)

Appendix A: Colton Vitae

ROGER D. COLTON

BUSINESS ADDRESS:

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Public Finance and General Economics
34 Warwick Road, Belmont, MA 02478
617-484-0597 (voice) *** 617-484-0594 (fax)
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EDUCATION:

J.D. (Order of the Coif), University of Florida (1981)

M.A. (Regulatory Economics), McGregor School, Antioch University (1993)

B.A. Iowa State University (1975) (journalism, political science, speech)

PROFESSIONAL EXPERIENCE:

Fisher, Sheehan and Colton, Public Finance and General Economics: 1985 - present.

As a co-founder of this economics consulting partnership, Colton provides services in a variety of areas, including: regulatory economics, poverty law and economics, public benefits, fair housing, community development, energy efficiency, utility law and economics (energy, telecommunications, water/sewer), government budgeting, and planning and zoning.

Colton has testified in state and federal courts in the United States and Canada, as well as before regulatory and legislative bodies in more than three dozen states. He is particularly noted for creative program design and implementation within tight budget constraints.

Belmont Media Center – Belmont Journal: 2017 - present

Host of *Belmont* Journal, the weekly hyper-local news show for Belmont (MA), produced by the Belmont Media Center. Assistant producer of *Belmont Journal*.

Commentator: Belmont Citizen-Herald: 2014 – present

Author of biweekly "Community Conversations" column for Belmont Citizen-Herald, weekly newspaper (June 2014 to present).

Host of biweekly "Community Conversations" podcast, Belmont Media Center, BMC Podcast Network (October 2016 to present)

National Consumer Law Center (NCLC): 1986 - 1994

As a staff attorney with NCLC, Colton worked on low-income energy and utility issues. He pioneered cost-justifications for low-income affordable energy rates, as well as developing models to quantify the non-energy benefits (*e.g.*, reduced credit and collection costs, reduced working capital) of low-income energy efficiency. He designed and implemented low-income affordable rate and fuel assistance programs across the country. Colton was charged with developing new practical and theoretical underpinnings for solutions to low-income energy problems.

Community Action Research Group (CARG): 1981 - 1985

As staff attorney for this non-profit research and consulting organization, Colton worked primarily on energy and utility issues. He provided legal representation to low-income persons on public utility issues; provided legal and technical assistance to consumer and labor organizations; and provided legal and technical assistance to a variety of state and local governments nationwide on natural gas, electric, and telecommunications issues. He routinely appeared as an expert witness before regulatory agencies and legislative committees regarding energy and telecommunications issues.

PROFESSIONAL AFFILIATIONS:

Chair:	Belmont Zoning By-law Review Working Committee (climate change)
Member:	Board of Directors, Massachusetts Rivers Alliance
Columnist:	Belmont Citizen-Herald
Producer:	Belmont Media Center: BMC Podcast Network
Host:	Belmont Media Center: Belmont Journal
Member:	Belmont Town Meeting
Vice-chair:	Belmont Light General Manager Screening Committee
Chair:	Belmont Goes Solar
Coordinator:	BelmontBudget.org (Belmont's Community Budget Forum)
Coordinator:	Belmont Affordable Shelter Fund (BASF)
Chair:	Belmont Solar Initiative Oversight Committee
Member:	City of Detroit Blue Ribbon Panel on Water Affordability
Chair:	Belmont Energy Committee
Member:	Massachusetts Municipal Energy Group (Mass Municipal Association)
Past Chair:	Housing Work Group, Belmont (MA) Comprehensive Planning Process
Past Member:	Board of Directors, Belmont Housing Trust, Inc.
Past Chair:	Waverley Square Fire Station Re-use Study Committee (Belmont MA)
Past Member:	Belmont (MA) Energy and Facilities Work Group
Past Member:	Belmont (MA) Uplands Advisory Committee
Past Member:	Advisory Board: Fair Housing Center of Greater Boston.
Past Chair:	Fair Housing Committee, Town of Belmont (MA)
Past Member:	Aggregation Advisory Committee, New York State Energy Research and Development Authority.

Past Member:	Board of Directors, Vermont Energy Investment Corporation.
Past Member:	Board of Directors, National Fuel Funds Network
Past Member:	Board of Directors, Affordable Comfort, Inc. (ACI)
Past Member:	National Advisory Committee, U.S. Department of Health and Human Services, Administration for Children and Families, Performance Goals for Low-Income Home Energy Assistance.
Past Member:	Editorial Advisory Board, International Library, *Public Utility Law Anthology*.
Past Member:	ASHRAE Guidelines Committee, GPC-8, *Energy Cost Allocation of Comfort HVAC Systems for Multiple Occupancy Buildings*
Past Member:	National Advisory Committee, U.S. Department of Housing and Urban Development, Calculation of Utility Allowances for Public Housing.
Past Member:	National Advisory Board: Energy Financing Alternatives for Subsidized Housing, New York State Energy Research and Development Authority.

PROFESSIONAL ASSOCIATIONS:

National Association of Housing and Redevelopment Officials (NAHRO)
National Society of Newspaper Columnists (NSNC)
Association for Enterprise Opportunity (AEO)
Iowa State Bar Association
Energy Bar Association
Association for Institutional Thought (AFIT)
Association for Evolutionary Economics (AEE)
Society for the Study of Social Problems (SSSO)
International Society for Policy Studies
Association for Social Economics

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COLTON EXPERIENCE AS EXPERT WITNESS

1999 – PRESENT

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Columbia Gas of Pennsylvania	Office of Consumer Advocate	R-2020-3018835	Low-income program design	PA	20
I/M/O Pennsylvania-American Water Co.	Office of Consumer Advocate	R-2020-3019369	Low-income program design	PA	20
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	R-2020-3017206	Low-income program design	PA	20
I/M/O Philadelphia Water Department	City of Philadelphia/Public Advocate	None	Low-income program design	Philadelphia	20
I/M/O Pittsburgh Water and Sewer Authority	Office of Consumer Advocate	R-2020-3017951	Low-income program design	PA	20
I/M/O Consumers Energy (electric)	Michigan Office of Attorney General, et al.	U-20697	Low-income program design	Michigan	20
I/M/O Eversource	New Hampshire Legal Assistance	DE-19-057	Low-income program design / customer service	NH	19
I/M/O DTE (electric) rates	Michigan Office of Attorney General, et al.	U-20561	Low-income program design	Michigan	19
I/M/O DTE Energy Waste Reduction (EWR) Plan (gas)	Natural Resources Defense Council, et al.	U-20429	Low-income program design	Michigan	19
I/M/O DTE Energy Waste Reduction (EWR) Plan (electric)	Natural Resources Defense Council, et al.	U-20373	Low-income program design	Michigan	19
I/M/O Ameren Energy	Illinois Office of Attorney General	18-1486	Minimization of uncollectible accounts	Illinois	19
I/M/O Commonwealth Edison Company	Illinois Office of Attorney General	18-1456	Minimization of uncollectible accounts	Illinois	19
I/M/O NICOR Illinois	Illinois Office of Attorney General	18-1437	Minimization of uncollectible accounts	Illinois	19
I/M/O Peoples Gas	Office of Consumer Advocate	R-2018-3006818	Customer service / Low-income cost recovery	Pennsylvania	19

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O UGI Electric	Office of Consumer Advocate	R-2018-3006814	Customer service / Low-income cost recovery	Pennsylvania	19
I/M/O Pittsburgh Water Authority	Office of Consumer Advocate	M-2640802	Customer service / Low-income cost recovery	Pennsylvania	19
I/M/O Ameren Prepayment Meter	Illinois Office of Attorney General	Docket 18-1008 – 18-1009 (cons)	Prepayment meters	Illinois	18
I/M/O Pittsburgh Water and Sewer Authority	Office of Consumer Advocate	R-2018-3002645/3002647 (cons)	Customer service / Low-income cost recovery	Pennsylvania	18
I/M/O National Grid (electric)	Division of Public Utility Control	Docket No. 4770	Customer service / Low-income cost recovery	Rhode Island	18
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2018-2647577	Customer service / Low-income cost recovery	Pennsylvania	18
I/M/O PECO (electric)	Office of Consumer Advocate	R-2018-3000164	Customer service / Low-income cost recovery	Pennsylvania	18
i/N/O Duquesne Light Company	Office of Consumer Advocate	R-2018-3000124	Customer service / Low-income cost recovery	Pennsylvania	18
I/M/O UGI-Electric	Office of Consumer Advocate	R-2017-2640058	Customer service / Low-income cost recovery	Pennsylvania	18
I/M/O Philadelphia Water Department requested rates for 2019 - 2021	Philadelphia Public Advocate	None	Water rate:: low-income program cost recovery / public fire protection / storm water charge exemptions	Philadelphia	18
I/M/O Commonwealth Edison Prepayment Meters	Illinois Office of Attorney General	17-0837	Electric customer service	Illinois	18
I/M/O 2018/2020 Statewide Energy Efficiency Plan	The Way Home / New Hampshire Legal Assistance	DE 17-136	Non-energy impacts / Low-income energy efficiency	New Hampshire	17
I/M/O DTE (electric) / gas EWR (energy waste reduction) plan	Sierra Club / Natural Resources Defense Council	Case No. U-18262	Low-income energy efficiency	Michigan	17
I/M/O DTE (electric)	Sierra Club / Natural Resources Defense Council	Case No. U-18255	Low-income energy efficiency	Michigan	17
I/M/O Merger of AltaGas and WGL Holdings	Office of People's Counsel	Case No. 9449	Low-income / charitable contributions / community impacts	Maryland	17
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	R-2017-2587783	Low-income / rate design	Pennsylvania	17

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O UGI-Peoples Natural Gas	Office of Consumer Advocate	R-2016-2580030	Low-income	Pennsylvania	17
I/M/O Peoples Natural Gas	Office of Attorney General	16-0376	Low-income	Illinois	17
I/M/O UGI-PNG	Office of Consumer Advocate	R-2016-2580030	Rate deisgn/EE&CP/Low-Inocme	Pennsylvania	17
I/M/O Pacific Gas and Electric Company	TURN	15-09-001	Electric bill affordability	California	16
I/M/O FirstEnergy Companies (Met Ed, Penelec, PennPower, West Penn Power)	Office of Consumer Advocate	R-2016-2537349, R-2016-2537352, R-2016-2537355, R-2016-2537359 (consolidated)	Rate design / low-income program cost recovery	Pennsylvania	16
I/M/O PGW Demand Side Management	Office of Consumer Advocate	P-2014-2459362	Demand Side Manaement	Pennsylvania	16
I/M/O Columbia Gas of Pennsylvania	Office of Consumer Advocate	R-2016-2529660	Rate deisgn / customer service / Low-income program cost recovery	Pennsylvania	16
I/M/O Philadelphia Water Department	Public Advocate, City of Philadelphia	N/A	Low-income program design	Philadelphia	16
I/M/O UGI Gas	Office of Consumer Advocate	M-2015-2518438	Rate design, energy efficiency, customer service	Pennsylvania	16
Keener v. Consumers Energy	Keener (plaintiff)	15-146908-NO	Collections	State District Ct--MI	16
I/M/O Energy Efficiency and Conservation Plan, Phase III, PECO Energy	Office of Consumer Advocate	M-2015-2515691	Multi-Family Energy Efficiency	Pennsylvania	16
I/M/O Energy Efficiency and Conservation Plan, Phase III, Duquesne Light Company	Office of Consumer Advocate	M-2015-2515375	Multi-Family Energy Efficiency	Pennsylvania	16
I/M/O Energy Efficiency and Conservation Plan, Phase III, FirstEnergy Companies (Metropolitan Edison, Penelec, Penn Power, West Penn Power)	Office of Consumer Advocate	M-2015-2514767; M-2015-2514768; M-2015-2514769; M-2015-2514772	Multi-Family Energy Efficiency	Pennsylvania	16
I/M/O Energy Efficiency and Conservation Plan, Phase III, PPL Electric Corporation	Office of Consumer Advocate	M-2015-251-2515642	Multi-Family Energy Efficiency	Pennsylvania	16

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O BC Hydro	Public Interest Action Centre	N/A	Rate design / terms and conditions / energy efficiency	British Columbia	15 - 16
Augustin v. Philadelphia Gas Works	Augustin (Plaintiffs)	2:14—cv-04238	Constitutional notice issues	U.S. District Court (E.D. PA)	15
I/M/O PPL Utilities	Office of Consumer Advocate	R-2015-2469275	Rate design / customer service	Pennsylvania	15
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2015-2468056	Rate design / customer service	Pennsylvania	15
I/M/O PECO Energy Company	Office of Consumer Advocate	R-2015-2468981	Rate design / customer service	Pennsylvania	15
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	P-2014-2459362	Demand Side Management	Pennsylvania	15
I/M/O SBG Management v. Philadelphia Gas Works	SBG Management	C-2012-2308454	Customer service	Pennsylvania	15
I/M/O Manitoba Hydro	Resource Action Centre		Low-income affordability	Manitoba	15
I/M/O FirstEnergy Companies (Met Ed, WPP, Penelec, Penn Power)	Office of Consumer Advocate	R-2014-2428742 (8743, 8744, 8745)	Rate design / customer service / storm communications	Pennsylvania	14
I/M/O Xcel Energy Company	Energy CENTS Coalition	E002/GR-13-868	Rate design / energy conservation	Minnesota	14
I/M/O Peoples Gas Light and Coke Company / North Shore Gas	Office of Attorney General	14-0224 / 14--0225	Rate design / customer service	Illinois	14
I/M/O Columbia Gas of Pennsylvania	Office of Consumer Advocate	R-2014-2406274	Rate design / customer service	Pennsylvania	14
I/M/O Duquesne Light Company Rates	Office of Consumer Advocate	R-2013-2372129	Rate design / customer service / storm communications	Pennsylvania	13
I/M/O Duquesne Light Company Universal Service	Office of Consumer Advocate	M-2013-2350946	Low-income program design	Pennsylvania	13
I/M/O Peoples-TWP	Office of Consumer Advocate	P-2013-2355886	Low-income program design / rate design	Pennsylvania	13
I/M/O PECO CAP Shopping Plan	Office of Consumer Advocate	P-2013-2283641	Retail shopping	Pennsylvania	13
I/M/O PECO Universal Service Programs	Office of Consumer Advocate	M-201202290911	Low-income program design	Pennsylvania	13

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Privacy of Consumer Information	Legal Services Advocacy Project	CI-12-1344	Privacy of SSNs & consumer information	Minnesota	13
I/M/O Atlantic City Electric Company	Division of Rate Counsel	BPU-12121071	Customer service / Storm communications	New Jersey	13
I/M/O Jersey Central Power and Light Company	Division of Rate counsel	BPU-12111052	Customer service / Storm communications	New Jersey	13
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2012-2321748	Universal service	Pennsylvania	13
I/M/O Public Service Company of Colorado Low-Income Program Design	Xcel Energy d/b/a PSCo	12A--EG	Low-income program design / cost recovery	Colorado	12
I/M/O Philadelphia Water Department.	Philadelphia Public Advocate	No. Docket No.	Customer service	Philadelphia	12
I/M/O PPL Electric Power Corporation	Office of Consumer Advocate	R-2012-2290597	Rate design / low-income programs	Pennsylvania	12
I/M/O Peoples Natural Gas Company	Office of Consumer Advocate	R-2012-2285985	Rate design / low-income programs	Pennsylvania	12
I/M/O Merger of Constellation/Exelon	Office of Peoples Counsel	CASE 9271	Customer Service	Maryland	11
I/M/O Duke Energy Carolinas	North Carolina Justice Center	E-7, SUB-989	Customer service/low-income rates	North Carolina	11
Re. Duke Energy/Progress Energy merger	NC Equal Justice foundation	E-2, SUB 998	Low-income merger impacts	North Carolina	11
Re. Atlantic City Electric Company	Division of Rate Counsel	ER1186469	Customer Service	New Jersey	11
Re. Camelot Utilities	Office of Attorney General	11-0549	Rate shock	Illinois	11
Re. UGI—Central Penn Gas	Office of Consumer Advocate	R-2010-2214415	Low-income program design/cost recovery	Pennsylvania	11
Re. National Fuel Gas	Office of Consumer Advocate	M-2010-2192210	Low-income program cost recovery	Pennsylvania	11
Re. Philadelphia Gas Works	Office of Consumer Advocate	P-2010-2178610	Program design	Pennsylvania	11
Re. PPL	Office of Consumer Advocate	M-2010-2179796	Low-income program cost recovery	Pennsylvania	11
Re. Columbia Gas Company	Office of Consumer Advocate	R-2010-2215623	Rate design/Low-income program cost recovery	Pennsylvania	11
Crowder et al. v. Village of Kauffman	Crowder (plaintiffs)	3:09-CV-02181-M	Section 8 utility allowances	Texas Fed Court	11
I/M/O Peoples Natural Gas Company.	Office of Consumer Advocate	T-2010-220172	Low-income program design/cost recovery	Pennsylvania	11
I/M/O Commonwealth Edison	Office of Attorney General	10-0467	Rate design/revenue requirement	Illinois	10
I/M/O National Grid d/b/a Energy North	NH Legal Assistance	DG-10-017	Rate design/revenue requirement	New Hampshire	10
I/M/O Duquesne Light Company	Office of Consumer Advocate	R-2010-2179522	Low-income program cost recovery	Pennsylvania	10

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Avista Natural Gas Corporation	The Opportunity Council	UE-100467	Low-income assistance/rate design	Washington	10
I/M/O Manitoba Hydro	Resource Conservation Manitoba (RCM)	CASE NO. 17/10	Low-income program design	Manitoba	10
I/M/O TW Phillips	Office of Consumer Advocate	R-2010-2167797	Low-income program cost recovery	Pennsylvania	10
I/M/O PECO Energy—Gas Division	Office of Consumer Advocate	R-2010-2161592	Low-income program cost recovery	Pennsylvania	10
I/M/O PECO Energy—Electric Division	Office of Consumer Advocate	R-2010-2161575	Low-income program cost recovery	Pennsylvania	10
I/M/O PPL Energy	Office of Consumer Advocate	R-2010-2161694	Low-income program cost recovery	Pennsylvania	10
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2009-2149262	Low-income program design/cost recovery	Pennsylvania	10
I/M/O Atlantic City Electric Company	Office of Rate Council	R09080664	Customer service	New Jersey	10
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	R-2009-2139884	Low-income program cost recovery	Pennsylvania	10
I/M/O Philadelphia Gas Works	Office of Consumer Advocates	R-2009-2097639	Low-income program design	Pennsylvania	10
I/M/O Xcel Energy Company	Xcel Energy Company (PSCo)	085-146G	Low-income program design	Colorado	09
I/M/O Atmos Energy Company	Atmos Energy Company	09AL-507G	Low-income program funding	Colorado	09
I/M/O New Hampshire CORE Energy Efficiency Programs	New Hampshire Legal Assistance	D-09-170	Low-income efficiency funding	New Hampshire	09
I/M/O Public Service Company of New Mexico (electric)	Community Action of New Mexico	08-00273-UT	Rate Design	New Mexico	09
I/M/O UGI Pennsylvania Natural Gas Company (PNG)	Office of Consumer Advocate	R-2008-2079675	Low-income program	Pennsylvania	09
I/M/O UGI Central Penn Gas Company (CPG)	Office of Consumer Advocate	R-2008-2079660	Low-income program	Pennsylvania	09
I/M/O PECO Electric (provider of last resort)	Office of Consumer Advocate	R-2008-2028394	Low-income program	Pennsylvania	08
I/M/O Equitable Gas Company	Office of Consumer Advocate	R-2008-2029325	Low-income program	Pennsylvania	08
I/M/O Columbia Gas Company	Office of Ohio Consumers' Counsel	08-072-GA-AIR	Rate design	Ohio	08
I/M/O Dominion East Ohio Gas Company	Office of Ohio Consumers' Counsel	07-829-GA-AIR	Rate design	Ohio	08
I/M/O Vectren Energy Delivery Company	Office of Ohio Consumers' Counsel	07-1080-GA-AIR	Rate design	Ohio	08
I/M/O Public Service Company of North Carolina	NC Department of Justice	G-5, SUB 495	Rate design	North Carolina	08
I/M/O Piedmont Natural Gas Company	NC Department of Justice	G-9, SUB 550	Rate design	North Carolina	08

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O National Grid	New Hampshire Legal Assistance	DG-08-009	Low-income rate assistance	New Hampshire	08
I/M/O EmPower Maryland	Office of Peoples Counsel	PC-12	Low-income energy efficiency	Maryland	08
I/M/O Duke Energy Carolinas Save-a-Watt Program	NC Equal Justice Foundation	E-7, SUB 831	Low-income energy efficiency	North Carolina	08
I/M/O Zia Natural Gas Company	Community Action New Mexico	08-00036-UT	Low-income/low-use rate design	New Mexico	08
I/M/O Universal Service Fund Support for the Affordability of Local Rural Telecomm Service	Office of Consumer Advocate	I-0004010	Telecomm service affordability	Pennsylvania	08
I/M/O Philadelphia Water Department	Public Advocate	No Docket No.	Credit and Collections	Philadelphia	08
I/M/O Portland General Electric Company	Community Action--Oregon	UE-197	General rate case	Oregon	08
I/M/O Philadelphia Electric Company (electric)	Office of Consumer Advocate	M-00061945	Low-income program	Pennsylvania	08
I/M/O Philadelphia Electric Company (gas)	Office of Consumer Advocate	R-2008-2028394	Low-income program	Pennsylvania	08
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2008-2011621	Low-income program	Pennsylvania	08
I/M/O Public Service Company of New Mexico	Community Action New Mexico	08-00092-UT	Fuel adjustment clause	New Mexico	08
I/M/O Petition of Direct Energy for Low-Income Aggregation	Office of Peoples Counsel	CASE 9117	Low-income electricity aggregation	Maryland	07
I/M/O Office of Consumer Advocate et al. v. Verizon and Verizon North	Office of Consumer Advocate	C-20077197	Lifeline telecommunications rates	Pennsylvania	07
I/M/O Pennsylvania Power Company	Office of Consumer Advocate	P-00072437	Low-income program	Pennsylvania	07
I/M/O National Fuel Gas Distribution Corporation	Office of Consumer Advocate	M-00072019	Low-income program	Pennsylvania	07
I/M/O Public Service of New Mexico--Electric	Community Action New Mexico	07-00077-UT	Low-income programs	New Mexico	07
I/M/O Citizens Gas/NIPSCO/Vectren for Universal Service Program	Citizens Gas & Coke Utility/Northern Indiana Public Service/Vectren Energy	CASE 43077	Low-income program design	Indiana	07
I/M/O PPL Electric	Office of Consumer Advocate	R-00072155	Low-income program	Pennsylvania	07
I/M/O Section 15 Challenge to NSPI Rates	Energy Affordability Coalition	P-886	Discrimination in utility regulation	Nova Scotia	07
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	R-00061931	Low-income programs / credit and collections	Pennsylvania	07
I/M/O Equitable Gas Company	Office of Consumer Advocate	M-00061959	Low-income program	Pennsylvania	07

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Public Service Company of New Mexico	Community Action of New Mexico	Case No. 06-000210-UT	Late charges / winter moratorium / decoupling	New Mexico	06
I/M?O Verizon Massachusetts	ABCD	Case NO. DTE 06-26	Late charges	Massachusetts	06
I/M/O Section 11 Proceeding, Energy Restructuring	Office of Peoples Counsel	PC9074	Low-income needs and responses	Maryland	06
I/M/O Citizens Gas/NIPSCO/Vectren for Univ. Svc. Program	Citizens Gas & Coke Utility/Northern Indiana Public Service/Vectren Energy	Case No. 43077	Low-income program design	Indiana	06
I/M/O Public Service Co. of North Carolina	North Carolina Attorney General/Dept. of Justice	G-5, Sub 481	Low-income energy usage	North Carolina	06
I/M/O Electric Assistance Program	New Hampshire Legal Assistance	DE 06-079	Electric low-income program design	New Hampshire	06
I/M/O Verizon Petition for Alternative Regulation	New Hampshire Legal Assistance	DM-06-072	Basic local telephone service	New Hampshire	06
I/M/O Pennsylvania Electric Co/Metropolitan Edison Co.	Office of Consumer Advocate	N/A	Universal service cost recovery	Pennsylvania	06
I/M/O Duquesne Light Company	Office of Consumer Advocates	R-00061346	Universal service cost recovery	Pennsylvania	06
I/M/O Natural Gas DSM Planning	Low-Income Energy Network	EB-2006-0021	Low-income gas DSM program.	Ontario	06
I/M/O Union Gas Co.	Action Centre for Tenants Ontario (ACTO)	EB-2005-0520	Low-income program design	Ontario	06
I/M/O Public Service of New Mexico merchant plant	Community Action New Mexico	05-00275-UT	Low-income energy usage	New Mexico	06
I/M/O Customer Assistance Program design and cost recovery	Office of Consumer Advocate	M-00051923	Low-income program design	Pennsylvania	06
I/M/O NIPSCO Proposal to Extend Winter Warmth Program	Northern Indiana Public Service Company	Case 42927	Low-income energy program evaluation	Indiana	05
I/M/O Piedmont Natural Gas	North Carolina Attorney General/Dept. of Justice	G-9, Sub 499	Low-income energy usage	North Carolina	05
I/M/O PSEG merger with Exelon Corp.	Division of Ratepayer Advocate	EM05020106	Low-income issues	New Jersey	05
Re. Philadelphia Water Department	Public Advocate	No docket number	Water collection factors	Philadelphia	05
I/M/O statewide natural gas universal service program	New Hampshire Legal Assistance	N/A	Universal service	New Hampshire	05
I/M/O Sub-metering requirements for residential rental properties	Tenants Advocacy Centre of Ontario	EB-2005-0252	Sub-metering consumer protections	Ontario	05

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O National Fuel Gas Distribution Corp.	Office of Consumer Advocate	R-00049656	Universal service	Pennsylvania	05
I/M/O Philadelphia Gas Works (PGW)	Office of Consumer Advocate	R-00049157	Low-income and residential collections	Pennsylvania	04
I/M/O Nova Scotia Power, Inc.	Dalhousie Legal Aid Service	NSUARB-P-881	Universal service	Nova Scotia	04
I/M/O Lifeline Telephone Service	National Ass'n State Consumer Advocates (NASUCA)	WC 03-109	Lifeline rate eligibility	FCC	04
Mackay v. Verizon North	Office of Consumer Advocate	C20042544	Lifeline rates—vertical services	Pennsylvania	04
I/M/O PECO Energy	Office of Consumer Advocate	N/A	Low-income rates	Pennsylvania	04
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	P00042090	Credit and collections	Pennsylvania	04
I/M/O Citizens Gas & Coke/Vectren	Citizens Action Coalition of Indiana	Case 42590	Universal service	Indiana	04
I/M/O PPL Electric Corporation	Office of Consumer Advocate	R00049255	Universal service	Pennsylvania	04
I/M/O Consumers New Jersey Water Company	Division of Ratepayer Advocate	N/A	Low-income water rate	New Jersey	04
I/M/O Washington Gas Light Company	Office of Peoples Counsel	Case 8982	Low-income gas rate	Maryland	04
I/M/O National Fuel Gas	Office of Consumer Advocate	R-00038168	Low-income program design	Pennsylvania	03
I/M/O Washington Gas Light Company	Office of Peoples Counsel	Case 8959	Low-income gas rate	Maryland	03
Golden v. City of Columbus	Helen Golden	C2-01-710	ECOA disparate impacts	Ohio	02
Huegel v. City of Easton	Phyllis Huegel	00-CV-5077	Credit and collection	Pennsylvania	02
I/M/O Universal Service Fund	Public Utility Commission staff	N/A	Universal service funding	New Hampshire	02
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	M-00021612	Universal service	Pennsylvania	02
I/M/O Washington Gas Light Company	Office of Peoples Counsel	Case 8920	Rate design	Maryland	02
I/M/O Consumers Illinois Water Company	Illinois Citizens Utility Board	02-155	Credit and collection	Illinois	02
I/M/O Public Service Electric & Gas Rates	Division of Ratepayer Advocate	GR01050328	Universal service	New Jersey	01
I/M/O Pennsylvania-American Water Company	Office of Consumer Advocate	R-00016339	Low-income rates and water conservation	Pennsylvania	01
I/M/O Louisville Gas & Electric Prepayment Meters	Kentucky Community Action Association	200-548	Low-income energy	Kentucky	01

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O NICOR Budget Billing Plan Interest Charge	Cook County State's Attorney	01-0175	Rate Design	Illinois	01
I/M/O Rules Re. Payment Plans for High Natural Gas Prices	Cook County State's Attorney	01-0789	Budget Billing Plans	Illinois	01
I/M/O Philadelphia Water Department	Office of Public Advocate	No docket number	Credit and collections	Philadelphia	01
I/M/O Missouri Gas Energy	Office of Peoples Counsel	GR-2001-292	Low-income rate relief	Missouri	01
I/M/O Bell Atlantic--New Jersey Alternative Regulation	Division of Ratepayer Advocate	T001020095	Telecommunications universal service	New Jersey	01
I/M/O Entergy Merger	Low-Income Intervenors	2000-UA925	Consumer protections	Mississippi	01
I/M/O T.W. Phillips Gas and Oil Co.	Office of Consumer Advocate	R00994790	Ratemaking of universal service costs.	Pennsylvania	00
I/M/O Peoples Natural Gas Company	Office of Consumer Advocate	R-00994782	Ratemaking of universal service costs.	Pennsylvania	00
I/M/O UGI Gas Company	Office of Consumer Advocate	R-00994786	Ratemaking of universal service costs.	Pennsylvania	00
I/M/O PFG Gas Company	Office of Consumer Advocate	R00994788	Ratemaking of universal service costs.	Pennsylvania	00
Armstrong v. Gallia Metropolitan Housing Authority	Equal Justice Foundation	2:98-CV-373	Public housing utility allowances	Ohio	00
I/M/O Bell Atlantic--New Jersey Alternative Regulation	Division of Ratepayer Advocate	T099120934	Telecommunications universal service	New Jersey	00
I/M/O Universal Service Fund for Gas and Electric Utilities	Division of Ratepayer Advocate	EX00200091	Design and funding of low-income programs	New Jersey	00
I/M/O Consolidated Edison Merger with Northeast Utilities	Save Our Homes Organization	DE 00-009	Merger impacts on low-income	New Hampshire	00
I/M/O UtiliCorp Merger with St. Joseph Light & Power	Missouri Dept. of Natural Resources	EM2000-292	Merger impacts on low-income	Missouri	00
I/M/O UtiliCorp Merger with Empire District Electric	Missouri Dept. of Natural Resources	EM2000-369	Merger impacts on low-income	Missouri	00
I/M/O PacifiCorp	The Opportunity Council	UE-991832	Low-income energy affordability	Washington	00
I/M/O Public Service Co. of Colorado	Colorado Energy Assistance Foundation	99S-609G	Natural gas rate design	Colorado	00
I/M/O Avista Energy Corp.	Spokane Neighborhood Action Program	UE9911606	Low-income energy affordability	Washington	00
I/M/O TW Phillips Energy Co.	Office of Consumer Advocate	R-00994790	Universal service	Pennsylvania	00
I/M/O PECO Energy Company	Office of Consumer Advocate	R-00994787	Universal service	Pennsylvania	00

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O National Fuel Gas Distribution Corp.	Office of Consumer Advocate	R-00994785	Universal service	Pennsylvania	00
I/M/O PFG Gas Company/Northern Penn Gas	Office of Consumer Advocate	R-00005277	Universal service	Pennsylvania	00
I/M/O UGI Energy Company	Office of Consumer Advocate	R-00994786	Universal service	Pennsylvania	00
Re. PSCO/NSP Merger	Colorado Energy Assistance Foundation	99A-377EG	Merger impacts on low-income	Colorado	99 - 00
I/M/O Peoples Gas Company	Office of Consumer Advocate	R-00994782	Universal service	Pennsylvania	99
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-00994781	Universal service	Pennsylvania	99
I/M/O PG Energy Company	Office of Consumer Advocate	R-00994783	Universal service	Pennsylvania	99
I/M/O Equitable Gas Company	Office of Consumer Advocate	R-00994784	Universal service	Pennsylvania	99
Allerruzzo v. Klarchek	Barlow Allerruzzo	N/A	Mobile home fees and sales	Illinois	99
I/M/O Restructuring New Jersey's Natural Gas Industry	Division of Ratepayer Advocate	GO99030123	Universal service	New Jersey	99
I/M/O Bell Atlantic Local Competition	Public Utility Law Project	P-00991648	Lifeline telecommunications rates	Pennsylvania	99
I/M/O Merger Application for SBC and Ameritech Ohio	Edgemont Neighborhood Association	N/A	Merger impacts on low-income consumers	Ohio	98 - 99
I/M/O Baltimore Gas and Electric Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8794	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Delmarva Power and Light Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8795	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Potomac Electric Power Co. Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8796	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Potomac Edison Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8797	Consumer protection/basic generation service	Maryland	98 - 99

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2020-3018835
	:	
Columbia Gas of Pennsylvania, Inc.	:	

VERIFICATION

I, Roger D. Colton, hereby state that the facts set forth in my Direct Testimony, OCA Statement 5, are true and correct (or are true and correct to the best of my knowledge, information, and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: July 28, 2020
*293025

Signature: ______________________
Roger D. Colton

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Belmont, MA 02478