

COMMONWEALTH OF PENNSYLVANIA



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August 15, 2016

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

RE: Petition of Philadelphia Gas Works for  
Approval of Demand-Side Management  
Plan for FY 2016-2020  
and  
Philadelphia Gas Works Universal Service  
and Energy Conservation Plan for 2014-  
2016 52 Pa. Code § 62.4 – Request for  
Waivers  
Docket No. P-2014-2459362

Dear Secretary Chiavetta:

Enclosed please find the Office of Consumer Advocate's Comments in the above-referenced proceeding.

Copies have been served as indicated on the enclosed Certificate of Service.

Respectfully Submitted,

A handwritten signature in cursive script that reads "Christy M. Appleby".

Christy M. Appleby  
Assistant Consumer Advocate  
PA Attorney I.D. # 85824

Enclosures

cc: Honorable Christopher P. Pell, ALJ  
Honorable Marta Guhl, ALJ

200612

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

|   |   |                           |
|---|---|---------------------------|
| Petition of Philadelphia Gas Works          | : |                           |
| For Approval of Demand Side Management      | : |                           |
| Plan for FY 2016-2020                       | : |                           |
|   | : |                           |
| and   | : | Docket No. P-2014-2459362 |
|   | : |                           |
| Philadelphia Gas Works Universal Service    | : |                           |
| And Energy Conservation Plan For 2014-2016, | : |                           |
| 52 Pa. Code § 62.4 – Request for Waivers    | : |                           |

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COMMENTS OF THE  
OFFICE OF CONSUMER ADVOCATE

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Dated: August 15, 2016

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## **I. Introduction**

The Office of Consumer Advocate (OCA) is filing these Comments pursuant to the Tentative Order issued on August 4, 2016 by the Pennsylvania Public Utility Commission (Commission). In the Tentative Order, the Commission proposed a budget for PGW's Low Income Usage Reduction Program (LIURP) of \$5.8 million. Tentative Order at 68. The ALJs had recommended maintaining the existing \$7.6 million LIURP budget and issued Findings of Fact in support of the need for and the benefits provided by the \$7.6 million LIURP budget. R.D. at 12-13, 83-109; see, Findings of Fact numbers 43-53. The Commission's Tentative Order does not accept the ALJs' Recommended Decision in this proceeding primarily on the basis that the \$7.6 million budget was not based upon a needs assessment in PGW's service territory, that the \$7.6 million only maintained a budget that was established as a result of a settlement in the Company's most recent base rate proceeding and that the \$7.6 million budget is burdensome for PGW's non-participating ratepayers. Tentative Order at 65-66. The OCA respectfully submits that the facts in this matter do not provide support for these conclusions.

The OCA submits that the \$7.6 million budget recommended by the ALJs is based upon the need in the service territory as supported by the record evidence presented in this proceeding and the information provided in the Company's most recent Universal Service and Energy Conservation Plan. The facts of record show that the proposed budget of \$5.8 million in the Tentative Order is not sufficient to meet the needs of the service territory of PGW. Further, the record evidence demonstrates that the \$7.6 million LIURP budget has provided a significant benefit to ratepayers who pay the costs of the Customer Responsibility Program (CRP or CAP) by reducing the costs of the program borne by non-CRP ratepayers. In light of the evidence

presented, the OCA respectfully requests that the Commission maintain the existing \$7.6 million LIURP budget.

The Tentative Order requests comments on four issues: (1) an appropriate LIURP budget; (2) a reasonable timeline to complete needed LIURP projects; (3) the rate impact of differing LIURP budgets; and (4) whether LIURP should remain in the DSM process. Tentative Order at 65-71. The OCA addresses each of these issues in its Comments. In addition, the OCA discusses additional related issues raised by the Tentative Order regarding the LIURP budget --- the impact of the LIURP budget reduction on PGW's requested waiver of Sections 58.5 and 58.4(a) of the Commission's regulations. See, Tentative Order at 108-116; 52 Pa. Code §§ 58.4(a), 58.5. The OCA will refer in these Comments to the testimony of OCA's expert witness in the case, Roger D. Colton.<sup>1</sup> Mr. Colton provided testimony on the LIURP budget that has been admitted into the record. In that testimony, Mr. Colton fully supported the need for a LIURP budget of \$7.6 million. OCA St. 2 at 4-18; OCA St. 2-S at 12-16. The OCA also attaches the Affidavit of Roger D. Colton to present additional information related to the Commission's method of calculation of the LIURP budget presented in the Tentative Order. The OCA will reference Mr. Colton's testimony and the Affidavit as necessary in these Comments.

## **II. Comments**

### **A. LIURP Budget and Rate Impact**

#### **1. LIURP Budget**

##### **a. Overview**

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<sup>1</sup> Roger D. Colton is a principal in the firm of Fisher, Sheehan & Colton, Public Finance and General Economics. Mr. Colton provides technical assistance to a variety of public utilities, state agencies, and consumer organizations on rate and customer service issues for telephone, water/sewer, natural gas and electric utilities. Mr. Colton's work focuses on low-income energy issues, and he has testified and published extensively in this area. OCA St. 2 at 1-3, Appendix A.

The OCA submits that PGW's LIURP should be maintained at the \$7.6 million historic level. As discussed below, the current LIURP budget provides significant benefits to CRP participants and non-CRP ratepayers. PGW's LIURP has also been shown to benefit PGW's overall operations as a gas utility. Comparisons to other Pennsylvania utilities' LIURP programs and budgets as proposed in the Tentative Order fail to capture the unique demographic and economic realities found in PGW's service territory.

PGW's LIURP program provides weatherization assistance to low-income customers enrolled in the Company's Customer Responsibility Program (CRP). In its filing, PGW proposed a \$5.6 million LIURP budget decrease, or a 75% reduction, from the current budget level of \$7.6 million. PGW proposed spending \$2.0 million in 2016; \$2.075 million in 2017; \$2.0 million in 2018; and \$2.0 million in 2020. PGW St. 3 at Exh. TML-4 at 87, Table 50; OCA St. 2 at 5. PGW proposed a total \$10.155 million under its "Base Plan" with no Conservation Adjustment Mechanism (CAM) or Performance Incentives. Under the "Expanded Plan," PGW proposed to increase the budget to \$2.5 million per year, or a total of \$13,963,376 over the five-year program, if allowed to recover the CAM and PI. PGW St. 3 at Exh. TML-4 at 63,66. In its Rejoinder Testimony in this proceeding, PGW proposed a five year LIURP budget of \$15,945,846, or approximately \$3.2 million per year. PGW M.B. at 62-63, citing PGW St. 1-RJ at 1. The OCA, Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA) and Tenant Union Representative Network and Action Alliance of Senior Citizens of Greater Philadelphia (TURN *et al.*) recommend that PGW's LIURP budget be maintained at historic levels of \$7.6 million per year to meet the needs in PGW's service territory. OCA St. 2 at 5; CAUSE-PA St. 1 at 7-12; TURN *et al.* M.B. at 11-13. Those needs were set forth in the

expert witness testimonies of OCA witness Colton and CAUSE-PA witness Miller. OCA St. 2 at 4-18; OCA St. 2-S at 12-16; CAUSE-PA St. 1 at 7-13; CAUSE-PA St. 1-S at 1-5.

In its Tentative Order, the Commission proposed a budget of \$5.8 million based upon the results of the Commission's own calculations. Tentative Order at 65-71. The Tentative Order arrives at the figure using the statewide average for job completion in the first calculation and the statewide average job cost rate in the second calculation. Tentative Order at 67-68. These statewide average numbers are then applied to specific components of PGW's costs. Tentative Order at 67-68. Using the first calculation, the Commission arrives at a LIURP budget of \$6,455,203. Using the second calculation, the Commission arrives at a LIURP budget of \$5,265,808. The Commission then averages the two results together to calculate a proposed LIURP budget of \$5,860, 506. Tentative Order at 68.

PGW's LIURP program is mandated by statute. 66 Pa. C.S. § 2203(8). Section 2203(8) of the Natural Gas Choice and Competition Act requires that universal service programs, including the usage reduction program, must be "appropriately funded and available in each natural gas service territory." 66 Pa. C.S. § 2203(8). The Commission's regulations require that the LIURP budget must be accompanied by a needs assessment. Section 62.4(b) of the Commission's regulations requires that the needs assessment include the following:

The needs assessment shall include the number of identified low-income customers and an estimate of low-income customers, the number of identified payment-troubled, low-income customers, an estimate of payment troubled, low-income customers, the number of customers who still need LIURP services and the cost to serve that number, and enrollment size of CAP to serve all eligible customers.

52 Pa. Code § 62.4. The OCA submits that the seven identified factors provide a basis for understanding the on-going need in the specific utility's service territory as well as the costs of the program.

The Commission's regulations regarding LIURP establish the parameters and reporting requirements for the LIURP program. 52 Pa. Code § 58.1, *et seq.* Section 58.1 of the Commission's regulations identifies that the purpose of LIURP is to assist low-income customers to reduce their bills in a cost-effective manner and to benefit other ratepayers through decreases in costs. Section 58.1 states:

This chapter requires covered utilities to establish fair, effective and efficient energy usage reduction programs for their low income customers. The programs are intended to assist low income customers conserve energy and reduce residential energy bills. The reduction in energy bills should decrease the incidence and risk of customer payment delinquencies and the attendant utility costs associated with uncollectible accounts expense, collection costs and arrearage carrying costs. The programs are also intended to reduce the residential demand for electricity and gas and the peak demand for electricity so as to reduce costs related to the purchase of fuel or of power and concomitantly reduce demand which could lead to the need to construct new generating capacity. The programs should also result in improved health, safety and comfort levels for program recipients.

52 Pa. Code § 58.1.

The Commission has previously recognized that each service territory is unique and may require different LIURP programs to address the individual needs of the service territory. In prior Commission Orders, the Commission has stated that the needs assessment must be based upon these seven identified factors and emphasized the individualized needs of the service territory. Re Guidelines for Universal Service and Energy Conservation Program, 1997 Pa. PUC LEXIS 43, \*29, Order (July 10, 1997) (1997 Guidelines Order). In its 1997 Guidelines Order, the Commission stated:

In order to meet our charge under the statute it is necessary that the needs of the EDC's territory to be assessed. Such a study of the community is necessary to ensure that programs are well directed to meet the greatest need in the community for affordable energy. The needs assessment should examine the market for and acceptance of universal service programming in the territory.

1997 Guidelines Order at \*29.

The Commission maintained this standard in its more recent 2006 generic proceeding, Customer Assistance Programs: Funding Levels and Cost Recovery, 2006 Pa. PUC LEXIS 108, \*7-8, Order (December 18, 2006) (2006 CAP Funding Order). The 2006 CAP Funding Order provided that:

We agree that the most appropriate course is to continue our review of funding on a case-by-case basis as part of each utility's "triennial review" process under 52 Pa. Code §§ 54.74 and 62.4 rather than establish a specific level of funding. The Commission has historically considered demographics, consideration of need, and the costs of CAP when determining whether a utility's CAP is appropriately funded and available as required by statute. 66 Pa. C.S. §§ 2804(9), 2203(8). There are two additional factors that must be considered in making funding decisions. First, as explained below, the Commission will revise its policy statement on CAP to expressly state that the Commission will consider the interest of all customers, including those not enrolled in CAP programs. Second, the policy statement should be revised to state that the Commission will consider its previous decisions regarding the CAP funding levels of other utilities to the extent those utilities are similar in terms of size, demographics, etc., to the utility whose funding level is under review. While the Commission recognizes differences among utilities, we should also recognize similarities, and will strive to be consistent in our decisions.

2006 CAP Funding Order at \*7-8. In the 2006 CAP Funding Order, the Commission emphasized that the interests of non-CAP ratepayers should be considered and that consistency amongst the utilities was important. The 2006 CAP Funding Order, however, also limited this comparison to those utilities that are "similar in terms of size, demographics, etc., to the utility whose funding level is under review." 2006 CAP Funding Order at \*8. As discussed below and in the attached Affidavit of Roger Colton, PGW's service territory is unique in many respects, particularly as to the size and demographics.

Section 2203(8) requires that PGW's universal service program, including its weatherization program, be "appropriately funded and available in each natural gas service territory." 66 Pa. C.S. § 2203(8). The Commission's regulations and interpretations of its regulations have required that the needs assessment be used to determine the level of need and

the appropriate budget to meet that need. Such a needs assessment was part of the case below and part of the USECP case when the question of the \$7.6 million budget was considered. The OCA submits that the evidence presented in this case fully supports an annual budget of \$7.6 million for LIURP. In addition, the Affidavit of Roger Colton further demonstrates that PGW's service territory is unique and that there is an extraordinary need for weatherization services within the service territory. The use of the Tentative Order calculation based on statewide averages does not capture the need within PGW's service territory and does not result in a LIURP program that is appropriately funded and available in PGW's service territory. The OCA respectfully submits that PGW's LIURP budget should remain at the \$7.6 million.

b. Needs Assessment

i. The evidence of record establishes the need for a \$7.6 million LIURP budget.

The record in this case demonstrates that PGW is distinct in its needs for the low-income community from any other Pennsylvania utility. In its Main Brief, CAUSE-PA summarizes this distinction:

PGW serves a specific and unique service territory with significantly intractable poverty. LIURP budgets are based on the needs of each specific service territory and the history and current level of service provided within each territory program.

CAUSE-PA M.B. at 21. The record evidence supports the determination made by the ALJs that the need for low-income weatherization has not decreased. R.D. at 107. OCA witness Colton also provides the attached Affidavit which further supports the uniqueness of PGW's service territory.

As discussed in the attached Affidavit, PGW's service territory is distinctly different in its demographic and economic make-up from other Pennsylvania utilities. In his Affidavit, OCA witness Colton describes the level of poverty within Philadelphia and PGW's service territory.

PGW has the highest percentage of the total population below 100% of the Federal Poverty Level (26.7%) of any county in Pennsylvania. Colton Affidavit at 5. Those lowest income customers are also more deeply impoverished than any other low-income customers in Pennsylvania. OCA witness Colton states:

As can be seen, Philadelphia has the lowest mean income in both of the lowest two income quintiles. In the lowest income quintile, Philadelphia's mean income (\$6,741) is nearly 40% lower than the next highest county (Indiana County: \$9,430). In the second lowest income quintile, Philadelphia's mean income (\$20,504) is nearly 10% lower than the next highest county (Forest County: \$22,398).

Colton Affidavit at 4.

As Mr. Colton testifies in the Affidavit, "when low-income customers have rental burdens this high, they lack the discretionary income to invest in energy efficiency measures, even if such measures are "cost-effective" from the consumer's perspective." Colton Affidavit at 5. The low-income population in Philadelphia pays a significant portion of their income to rent alone. In Philadelphia, nearly 2/3 of households with income less than \$10,000 pay 40% or more of their annual income for rent, and nearly 73% of households with income between \$10,000 and \$20,000 also pay more than 40% of their annual income towards rent. Colton Affidavit at 5.

An analysis of the needs of PGW's specific territory highlights these distinctions. PGW's existing LIURP program is directed exclusively to low-income customers who participate in the Company's CRP program. R.D. Findings of Fact at 13, citing OCA St. 2 at 42. The CRP is designed to include customers that exhibit higher consumption than customers on average. R.D. Findings of Fact at 15, citing OCA St. 2 at 1. PGW has a LIURP eligible population of 71,625 customers who still need treatment (the difference between the numbers of customers currently enrolled in CRP and the number who received treatment in the prior two

years). Tentative Order at 67; R.D. Findings of Fact at 12.<sup>2</sup> PGW's budget estimate of \$7.6 million per year was sufficient to treat 2,108 homes. R.D. Findings of Fact at 12. The Commission directed PGW to also implement a multifamily component to its LIURP program to expand the type of customers treated. R.D. at 13-14.

PGW also fully uses the existing \$7.6 million budget every year to serve more customers than any other utility. As the ALJ's Findings of Fact in this case reflect, PGW spends at or near 100% of its LIURP budget every year. The ALJs found that in 2014, the Company spent 104% of its total LIURP budget (\$7.898 million spending vs. \$7.600 million budget). R.D. at 12, citing OCA St. 2 at 7. Moreover, PGW spent 99% of its LIURP budget in 2013 (\$7.538 million spending vs. \$7.642 million budget) and 100% of its LIURP budget in 2012 (\$6.077 million spending vs. \$6.077 million budget). R.D. at 12, citing OCA St. 2 at 7.

The need for LIURP measures has only increased over time. In the case below, OCA witness Colton testified:

For PGW, the rate of confirmed low-income service terminations for nonpayment has, with the exception of an uptick during the Great Recession of 2009, reached its highest point (11.90%) since 2006. The 2013 number of confirmed low-income disconnections for nonpayment (18,672) is 80% higher than the number of disconnections in 2005 (10,375). For PGW alone, the number of households entering the 2012-2013 winter heating season (the last year for which data is available) without heating service reached 7,742, a 45% increase over the 2004/2005 winter season.

OCA St. 2 at 14-15, citing the 2009 Penn State University LIURP study.

The current \$7.6 million LIURP budget has benefitted the low-income community in Philadelphia and enables low-income CRP customers to maintain service. CAUSE-PA witness

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<sup>2</sup> The next closest utility with similar LIURP treatment needs is PECO Gas with 32,170, or more than 50% fewer LIURP eligible customers than PGW's service territory. Tentative Order at 67. After that, Columbia is the third highest with 17,504 LIURP eligible customers. PGW has more than four times the number of LIURP eligible customers than Columbia Gas. Tentative Order at 67.

Miller testified that “PGW’s CRP customers who have received LIURP are far more secure in their ability to maintain essential gas service and to avoid involuntary service shut-off.” CAUSE-PA St. 1 at 14. Mr. Miller further testifies that from 2011-2014 “relatively few CRP households who received ELIRP [the LIURP program] were terminated as compared to the thousands of households who had not received ELIRP.” Id.

PGW’s low-income customer population is distinguishable from other Pennsylvania utility service territories because of the great level of poverty in Philadelphia and the significant need for weatherization. The OCA submits that the record evidence and the information presented in Mr. Colton’s Affidavit demonstrate the significant need for LIURP in PGW’s service territory. As will be discussed in Section A (2) below, the record evidence also demonstrates the benefits provided to low-income customers as a result of the existing \$7.6 million LIURP budget.

- ii. The Commission’s use of the statewide average is not appropriate.

Through the Tentative Order, the Commission performs a calculation to arrive at a LIURP budget for PGW. Tentative Order at 67-68. The Commission utilizes a table containing a summary of the LIURP program information for Columbia Gas Company, Peoples Equitable Gas Company, Peoples Gas Company, National Fuel, PECO, PGW, UGI and UGI-PNG. Tentative Order at 67. The information includes the total number of LIURP eligible customers; anticipated annual LIURP jobs; cost per job; LIURP annual spend; and job completion rate (anticipated jobs/eligible jobs). Tentative Order at 67.<sup>3</sup> The Tentative Order provides that:

[u]sing this information, we shall perform two separate calculations that directly take into account the four factors of a needs assessment contained with our

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<sup>3</sup> The OCA has not been able to confirm these numbers through the Orders cited by the Commission or through a review of the relevant Bureau of Consumer Services 2014 Report of Universal Service Programs and Collection Performance.

Regulations which we shall utilize to determine the appropriate LIURP budget for PGW on a going forward basis. The first calculation we propose to be utilized in this determination is the calculation of the Job Completion Rate. This methodology utilizes PGW's total number of eligible customers, the rate of job completion for the entire state, and PGW's historical costs per project to determine the expected number of completed jobs per year by multiplying PGW's total number of eligible LIURP Customers of 71,625 by the state's average job completion rate which is 2.5%. Then, we utilize this result, 1,791 jobs, and multiply it by the average cost per job for PGW of \$3,605. This needs based calculation method results in a total estimated LIURP budget result for PGW of \$6,455,203.

The second calculation we propose to be utilized in this determination is the Historical Cost Budget calculation. In this methodology we shall utilize PGW's historical program cost, the average cost of a job in the state, and PGW's average cost per job to determine a reasonable budget approximation for the Company. In this calculation we first determine the expected number of jobs to be completed each year by dividing the state average cost per job of \$5,203 into the historical total program cost for PGW of \$7,600,000. Then we utilize this result and multiply it by the average cost per job for PGW of \$3,605. This needs based calculation method results in an estimated total LIURP budget result for PGW of \$5,265,808.

We shall next determine the average of the results of the two calculations explained above which results in an estimated calculation LIURP budget amount of \$5,860,506 for PGW. Therefore, we shall direct PGW to utilize this amount for its future LIURP budget as it represents a reasonable result which is in the public interest.

Tentative Order at 67-68. This calculation methodology creates a LIURP budget range of \$5,265,808 to \$6,455,203. Tentative Order at 68. The Commission then averages those numbers to create an estimated LIURP budget of \$5,860,506. Id.

In its calculation, the Commission uses the statewide average for job completion rate in the first calculation and uses the average statewide job cost rate in the second calculation. These statewide average numbers are variously applied to specific components of PGW's costs. The OCA respectfully submits that using the statewide averages to calculate need in PGW's service territory is inappropriate. In the first calculation, the Commission utilizes a statewide average job completion rate of 2.5% which is substantially lower than PGW's actual job completion rate

of 2.94%. Using the statewide average job completion rate artificially deflates the productivity of PGW's weatherization vendors. PGW's job completion rate is distinct from other utilities, in part, because of PGW's unique arrangement with its vendors. PGW uses a unique vendor selection process, which provides incentives for greater savings and productivity achieved. See, OCA St. 2 at 17-18. OCA witness Colton testified:

One primary mechanism that PGW has used in the past to control administrative costs has been to reallocate the LIURP budget between the conservation providers based on "high performance." The reallocation occurs on two occasions. First, from its LIURP budget, PGW reserves a certain level of funds to be allocated to the highest performing providers mid-year. In the mid-year 2013 (February), for example, \$1,000,000 was assigned to the two highest performing providers. Second, the performance evaluation is used to reallocate funding for the subsequent year. The August 2013 evaluation, for example, resulted in a redistribution of \$589,110 to set new funding allocations for the new program year.

OCA St. 1 at 17. Reducing PGW's job completion rate to the statewide average essentially eliminates the benefits to ratepayers of this approach.

Other reasons account for differences in the job completion rates amongst service territories, making the use of statewide averages, particularly inappropriate. A vendor in an urban area with shorter distances to travel may be able to complete more jobs or work more efficiently than a vendor in a more rural area that requires significant travel.

In its second calculation, the Tentative Order uses the statewide average of job costs. This is also inappropriate. The age and type of needs within that housing stock, and hence the time it takes to complete a job, may also vary dramatically. As discussed in the attached Colton Affidavit, Philadelphia also has some of the oldest housing stock in Pennsylvania. Colton Affidavit at 3. For example, Philadelphia "has the greatest proportion of housing stock build before 1960; has the second greatest proportion of its housing stock built before 1950; and has the fourth greatest proportion of its housing stock built before 1940." Colton Affidavit at 3.

Therefore, as OCA witness Colton stated, “PGW’s housing stock would reasonably be expected to have a greater need of energy efficiency investments than housing statewide and cannot be represented by statewide averages.” Colton Affidavit at 3. The Commission’s calculation methodology does not take into account the difference in vendor costs or the measures needed in the PGW service territory versus another area of the state.

By using statewide averages, the two analyses used by the Commission do not sufficiently recognize the unique characteristics of PGW’s service territory. An analysis of the needs assessment must include *both* an analysis of the costs of the individual service territory and the unique characteristics of the demographics of the low-income community in the PGW service territory. Contrary to the Commission’s proposed \$5.8 million LIURP budget, the existing \$7.6 million LIURP budget is based upon PGW’s actual costs in its service territory and about meeting the specific needs of the low-income community in PGW’s service territory.

iii. Conclusion.

The OCA respectfully submits that the record evidence provides a sufficient basis to demonstrate the need for maintaining LIURP funding at the \$7.6 million annual level. Moreover, as discussed below, non-CRP ratepayers have benefitted from the \$7.6 million LIURP budget. The OCA submits that PGW’s service territory is uniquely impoverished and, therefore, meeting that need requires a PGW-specific needs assessment. It is important to recognize that PGW has been able to fully use the current \$7.6 million budget over the last three years for the benefit of all its ratepayers.

2. Lowering PGW’s LIURP budget would eliminate ratepayer benefits and result in rate increases for PGW’s customers.

The Tentative Order also requests Comments regarding the impact of the “higher budget on PGW’s customers.” Tentative Order at 69.<sup>4</sup> The OCA submits that ratepayers’ bills are actually lower than they otherwise would be because of PGW’s LIURP program. Curtailing PGW’s existing spending would, in fact, negatively impact PGW’s customers.

The LIURP program has consistently had a Total Resource Cost (TRC) of over 1.00. In year 2014, the TRC for LIURP was 1.26. In other words, in 2014, for every dollar spent, \$1.26 benefits were returned. OCA St. 2 at 11. This was an increase from the TRC of 1.22 in 2013, and the TRC of 1.04 in 2012. OCA St. 2 at 11. In the Company’s 5-Year Phase I Plan Report, the Company represented that through June 2014, LIURP represented 74% of the total DSM expenditures and 70% of the total present benefits of the DSM Portfolio. R.D. Findings of Fact at 13, citing OCA St. 2 at 11. The record evidence demonstrates that in fact, the CAP subsidy that other customers pay has been *reduced* by approximately \$54 million over the lifetime of the measures installed as a result of LIURP in the DSM portfolio. R.D. Findings of Fact at 13, citing CAUSE-PA St. 1 at 9; see also, OCA St. 2 at 17-18, citing PGW St. 4, Exh. TML-4, at Table 6.

The Tentative Order also expresses concern about the impact of \$7.6 million annual spending on ratepayers. Tentative Order at 69. The OCA would note that this is not an increase in rates for ratepayers but maintaining the current level of spending that is already included in their rates.<sup>5</sup> Moreover, PGW states that its total universal service program budget was

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<sup>4</sup> The OCA notes that the \$7.6 million was established in PGW’s 2010 base rate proceeding. Contrary to PGW’s arguments in the case below, the instant case would maintain the same budget.

<sup>5</sup> The OCA notes that the Commission recently approved an increase to PGW’s Distribution System Improvement Charge from 5.0% to 7.5% and to temporarily increase the DSIC recovery rate to 8.84% over the next two years. Petition of Philadelphia Gas Works for Waiver of Provisions of Act 11 to Increase the Distribution System Improvement Charge CAP and to Permit Levelization of DSIC Charges, Docket Nos. P-2015-2501500, C-2015-2504092, Order at 30 (July 6, 2016)(DSIC Order). The Commission notes in support of that Order that “overall rates have significantly decreased over the last few years as natural gas prices have deteriorated.” DSIC Order at 27. The Commission refers to the \$11 million annual increase as “having a modest impact on ratepayers.”

approximately \$75,920,345 for FY2016, and the LIURP budget was \$7.6 million, or approximately 10% of the total budget. Philadelphia Gas Works Universal Service and Energy Conservation Plan for 2014-2016, Docket No M-2013-2366301, Order at 69 (August 6, 2014) (PGW USECP Order).<sup>6</sup>

Both PGW and PGW ratepayers benefit from the LIURP budget of \$7.6 million. The goals of the weatherization programs are twofold: (1) to reduce usage for CAP customers and (2) to benefit non-CAP customers who pay the costs of the program through a reduction to the CAP Shortfall. CAUSE-PA witness Miller identifies the benefit provided to non-CRP customers who pay the costs of the program. Mr. Miller cites in his testimony PGW's response to TURN Set I-1(a) and states "PGW projects that the DSM I programs directed at CRP customers will reduce the CRP subsidy by more than \$54 million (PV 2014\$) over the lifetime of the measures." CAUSE-PA St. 1 at 9.

A reduced LIURP budget provides reduced benefits, reduces the off-set to the CAP Shortfall, and, therefore, ultimately results in higher ratepayer distribution rates. OCA witness Colton testified:

PGW reports that the total reduction in CRP subsidies paid by CRP non-participants resulting from LIURP investments in Phase I of DSM Plan reached \$54,631,743 (2014\$). (TURN-I-1). In contrast, the reduced LIURP budget proposed by PGW in this proceeding is estimated to result in a reduced subsidy of \$1.4 million. Exh. TML-4, at Table 6, OCA-V-2). Because of this reduction in the amount of reduced subsidies, PGW ratepayers would pay higher distribution bills if the LIURP budget proposed in the 5-Year DSM Plan is approved.

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DSIC Order at 10. The LIURP budget would not be an increase to rates at all but would maintain the same budget and rates at a level of \$7.6 million.

<sup>6</sup> The Tentative Order states that "it is a matter of public record that PGW already has the highest universal service budget of any public utility in this Commonwealth." Tentative Order at 69. While PGW does have the highest LIURP budget in the Commonwealth, PGW's overall universal service budget is less than PECO's universal service budget. PECO Electric's universal service budget in 2014 was \$94,812,522. See, 2014 Report of Universal Service Programs & Collections Performance at 47. PGW's budget was \$75,920,345.

OCA St. 2 at 12-13.

The record evidence demonstrates that LIURP is a cost-effective program which provides significant, demonstrated benefits to both CRP participants and to the ratepayers who pay the costs of the program. The Phase I LIURP budget of \$7.6 million has resulted in actual savings to the CAP Shortfall for ratepayers and will continue to result in savings over the lifetime of the measures. For the reasons set forth above, the OCA recommends that PGW's LIURP budget be maintained at \$7.6 million per year.

3. The LIURP Program will not have a negative impact on PGW operations.

The Tentative Order, in support of reducing PGW's LIURP budget, also notes PGW's argument that maintaining the existing LIURP budget might negatively impact PGW's other operations or pipeline replacement program. Tentative Order at 70-71. Such argument is misplaced. The OCA submits that the LIURP budget level will not impact PGW's proposed pipeline replacement efforts. First, PGW is already expending the \$7.6 million and has identified no problems. Second, the statutorily-mandated LIURP program, and the other three universal service program components are recovered through a straight pass-through to ratepayers through the Universal Service Charge. Third, LIURP produces savings for the Company by reducing other operating costs.

It is important to note that in the interim between testimony and the Exceptions phase of this proceeding, the Commission granted an increase to PGW's DSIC in order to accelerate the Company's pipeline distribution replacement program efforts. See, Petition of Philadelphia Gas Works for Waiver of Provisions of Act 11 to Increase the Distribution System Improvement Charge CAP and to Permit Levelization of DSIC Charges, Docket Nos. P-2015-2501500, C-2015-2504092, Order (July 6, 2016)(DSIC Order). The Commission increased PGW's DSIC

from 5% to 7.5% of distribution revenues and to temporarily increase the recovery to 8.84% of distribution revenues. DSIC Order at 30. The LIURP budget was in place when these increases were granted, and the impact of LIURP has been fully recognized in these increases.

PGW currently funds its LIURP program at \$7.6 million and has not experienced the financial problems that the Tentative Order identifies as concerns. In fact, as OSBA witness Knecht points out the financial concerns with the DSM programs have not materialized. Mr. Knecht testified:

Unlike other Pennsylvania NGDCs, PGW is regulated on a cash flow basis. In the Company's last base rates case, the Company's rate submission was based substantially on the need to repair a highly leveraged balance sheet, despite the fact that PGW's rates far exceeded those at other Pennsylvania NGDCs.

To a material extent, PGW has succeeded in achieving that goal. Despite its stated concerns in this proceeding relating to financial losses from successful conservation programs, PGW appears to have made significant progress in improving its books equity position...

As shown [in Table IEc-1], PGW has generally been able to materially reduce its long term debt and increase its equity over this period. In addition, PGW's revenues over expenses totaled some \$188 million over this period, and in 2012 began making annual \$18 million payments to its shareholder. Thus, in total, PGW has earned \$242 million over the past five years. In effect, PGW has achieved a return to 100 percent of its equity base over this period. Moreover, despite the purported negative effects of its DSM program, PGW's net returns in 2013 and 2014 (\$61 and \$67 million respectively) were higher than that in any of the previous three years.

In light of the recent strong income performance and growth in book equity, a full cash flow requirements analysis in base rates proceeding may suggest that a rate decrease is in order.

OSBA St. 1 at 10-12.

In addition, the LIURP program will actually reduce PGW's other operating costs. The LIURP will generate reduced arrearages for treated customers which will benefit the utility and reduce expenses such as uncollectibles and cash working capital. OCA witness Colton testified:

LIURP investments result in a substantial reduction in arrearages by treated customers. As a result, a range of expense reductions will be experienced on a between-rate case basis that will benefit the utility and offset lost margins. The loss of revenue that PGW attributes to LIURP, in other words, is accompanied by a reduction in expenses as well. That decrease in expenses is available to replace any decrease in contribution to margin, if any, on a between-rate-case basis.

OCA St. 2 at 25 (footnote omitted).

The benefits of LIURP on PGW customers' payment patterns have been shown in the Company's 2006, 2008, and 2011 LIURP program evaluations. Mr. Colton testified:

PGW addressed the impact of LIURP weatherization treatment on payment patterns in the Company's LIURP evaluations in 2006, 2008 and 2011. (OCA-IV-7).

- In the 2011 LIURP Evaluation, PGW found that while the *number* of annual payments stayed the same pre- and post-treatment (at 12 payments per year), the *dollars* of customer payments increased by \$105 (in contrast to an increased asked-to-pay amount of \$34). (2011 Evaluation, at 18).
- In the 2008 LIURP Evaluation, PGW reported that "customer payment increased by an average of \$80 for participants while declining by an average of \$59 for the comparison group, yielding a net of \$139 increase in customer payments." (2008 Evaluation, at 17).
- In the 2006 LIURP Evaluation, PGW reported that "customer payment increased by an average of \$10 for participants, while declining by an average of \$95 for the comparison group, yielding a net \$105 increase in customer payments." (2006 Evaluation, at 18).

OCA St. 2 at 29.

Moreover, the underlying premise that the LIURP program will harm PGW is flawed. PGW, as a gas utility, benefits from the LIURP program. In fact, by its own calculations, PGW benefits *as a gas utility* by \$1.12 for every \$1.00 invested in LIURP. PGW St. 3 at Exh. TML-4, Table 22.

The OCA submits that the statutorily-mandated LIURP budget will not negatively impact PGW's pipeline replacement efforts. The DSIC and the universal service programs are

separately recovered as a straight pass-through to ratepayers. LIURP will actually provide benefits to these endeavors by reducing costs.

B. Timeline for LIURP Project Completion

The Tentative Order requests Comments regarding the timeline for LIURP project completion. Tentative Order at 69. The Commission states that “in this way, the budget would be driven by the timeline needed to accomplish total saturation of eligible LIURP customers.” Id. The OCA submits that the timeline for total saturation of providing a one-time treatment to currently identified eligible LIURP customers would be approximately 45 years. See, Colton Affidavit at 8. But this is not the proper analysis or the end of the inquiry. Determining a timeline for saturation of the LIURP eligible population is a complex task. Mr. Colton discusses the complexities in his Affidavit:

A PGW LIURP budget of \$5,860,506, with an average per-unit production cost of \$3,605, implies that the “total saturation” of eligible LIURP customers (assuming the population of “eligible LIURP customers” is 71,625) would occur within roughly 45 years. As the data above indicates, however, PGW’s projected population of LIURP-eligible customers (71,625) is understated. Moreover, a 45-year time period exceeds the expected life-span of the installed efficiency measures. As a result, homes that have been treated through LIURP will need to be treated again before the total saturation of eligible LIURP customers has been achieved. Accordingly, a LIURP budget of \$5,860,506 implies that PGW will never achieve a total saturation of LIURP-eligible customers.

Colton Affidavit at 8.

As Mr. Colton points out, the single point-in time number of 71,625 is understated. Colton Affidavit at 8. This number does not accurately reflect the total number of customers that participate in PGW’s CRP over the course of the 12-month period. CRP participants change from year to year, but also within the year, so there is a continuing mix of new and old participants. This is referred to as “churn.” OCA witness Colton describes in his Affidavit the “churn” in PGW’s low-income population. He states:

Moreover, a single point-in-time number does not accurately reflect the *total* number of customers that participate in PGW's CRP over the course of a twelve-month period. CRP participants change not only from year-to-year, but also within a year, so that there is a mix of new participants and continuing participants. This phenomenon, called program "churn," is a recognized phenomenon in PGW's CRP (and other Pennsylvania Customer Assistance Programs, CAPs). PGW's third party evaluation of its CRP reported that only 69% of its CRP customers participated in every month. A single point-in-time CRP participation number does not accurately indicate the *total* number of CRP participants that would be eligible for LIURP even within a single twelve-month time period.

Colton Affidavit at 6-7.

Second, using CRP customers as the only eligibility criterion misses customers whose consumption would be within the highest 30% of users but do not participate in CRP. The Commission's regulations for the needs assessment includes seven factors not limited to CAP or CRP participation. The regulations require: (1) number of identified low-income customers; (2) an estimate of low-income customers; (3) the number of identified payment-troubled, low-income customers; (4) an estimate of payment troubled, low-income customers; (5) the number of customers who still need LIURP services; (6) the cost to serve that number; and (7) enrollment size of CAP to serve all eligible customers. See, 52 Pa. Code § 62.4.

Third, as Mr. Colton points out, once a home is weatherized, a home may need weatherization again as measures deteriorate over time and new structural problems arise. Colton Affidavit at 3. As a result, homes that have been treated through LIURP will need to be treated again before the total saturation of eligible LIURP customers has been achieved. Colton Affidavit at 3.

The timeline for LIURP saturation is a moving target. A lower LIURP budget, however, may move the LIURP saturation target further away due to a lower number of jobs being

completed in a given year. The OCA submits that the current \$7.6 million budget should be maintained to optimize the LIURP saturation opportunity.

C. Whether LIURP Should Remain Within the DSM.

The Tentative Order requested Comments regarding whether the LIURP program should remain within PGW's Demand Side Management program. Tentative Order at 70. The Tentative Order states that the lack of record evidence in this DSM Plan proceeding makes it more difficult to make an informed decision about the LIURP funding for the Company and suggests that the LIURP funding issue should be addressed in the Company's next USECP proceeding to address this problem. Tentative Order at 70. The OCA identified efficiencies in including the program within the DSM portfolio and would suggest retaining these efficiencies. See, OCA St. 1 at 10. If the Commission moves the LIURP program to the USECP proceeding, the OCA has some concerns.

The OCA is concerned that the record evidence presented regarding the LIURP budget has been more extensive in this litigated proceeding than a typical USECP proceeding. PGW's most recent triennial plan did not include discovery, expert testimony, or an evidentiary record. The information presented consisted of the Company's USECP, the Commission's Tentative Order requesting further information from the Company and comments within 20 days from interested stakeholders, and Reply Comments within 10 days filed by interested stakeholders. The Commission issued its Final Order in the matter based solely upon this information. The litigated proceeding here, however, produced expert testimony of nine witnesses and a total of seventeen sets of discovery from the OCA (eight sets), PGW (five sets), OSBA (one set),

PICGUG (one set) and TURN *et al.* (two sets). One day of hearings was held on October 28, 2015.<sup>7</sup> The record also included Main Briefs and Reply Briefs.

A potential alternative would be to keep the LIURP program in the DSM portfolio to maintain the efficiencies, but direct PGW to include the information the Commission finds necessary in the record of the DSM proceeding. The Commission could specifically identify the information and inquiry similar to what occurs in a suspension Order of a base rate case.

D. Other Issues

The OCA submits that the Commission's Tentative Order raises concerns regarding Sections 58.4 and 58.5 of the Commission's regulations. 52 Pa. Code §§ 58.4, 58.5. The OCA supports the Commission's determination to not grant the requested waiver of Section 58.4, but as discussed below, the required public notice has not been provided for a decrease in the LIURP budget. The Commission also granted a waiver of Section 58.5. The ALJs' R.D. approving the waiver of Section 58.5 was based upon maintaining the level of the LIURP funding at \$7.6 million and the administrative efficiencies achieved at that level of LIURP funding. R.D. at 173. The OCA respectfully requests that those inconsistencies be addressed in the Commission's Final Order.

1. Waiver of 58.4

In its Tentative Order, the Commission denied PGW's requested waiver of 58.4 regarding the decrease in its LIURP funding Tentative Order at 116. Section 58.4(a) requires public notice of any decrease in LIURP. 52 Pa. Code § 58.4(a). The Tentative Order states:

[D]espite the involvement of the public advocacy groups in this fully litigated proceeding, there is still a need for public notice and due process as required in 52 Pa. Code § 58.4, especially, because PGW is proposing a reduction in its program funding. Further, we find that PGW has not established any "special

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<sup>7</sup> Cross-examination was waived by all parties in the proceeding, and hearings were held for the purposes of admission of the testimony and stipulations in proceeding.

circumstances” to justify a waiver request of Section 58.4 of the LIURP Regulations at this time. Therefore, we shall deny the Exceptions of PGW on this issue and adopt the ALJ’s recommendation that denies PGW’s waiver request of Section 58.4 of the Commission’s LIURP Regulation.

Tentative Order at 116. The Commission, however, concludes to decrease the LIURP budget to \$5.8 million without this further public notice. The OCA submits that public notice be required.

2. Waiver of 58.5

The Commission’s Tentative Order grants PGW’s request for waiver of Section 58.5 of the Commission’s regulations. Tentative Order at 110; 52 Pa. Code § 58.5. Section 58.5 requires that “not more than 15% of a covered utility’s annual budget for its usage reduction program may be spent on administrative costs.” 52 Pa. Code § 58.5. The Commission correctly states that the OCA did not object to this waiver request but expressed concern about the administrative cost levels. Tentative Order at 110.

As Mr. Colton testified, PGW was able to support its administrative expenses, even though in excess of 20% of the budget, because of the successful process used to reallocate the LIURP budget between conservation providers based on “high performance.” OCA St. 2 at 17; see also, OCA R.B. at 34-35. The OCA agreed with the Company’s current use of a “high performance” reallocation of its LIURP budget for its conservation service providers because the process improved overall performance. The Company indicated, however, with its reduced budget that the Company would no longer be using this existing process. OCA St. 2 at 18; see, OCA R.B. at 35.

The Commission’s Tentative Order does not identify that the OCA’s lack of opposition to the high administrative costs was tied to the \$7.6 million budget level. The ALJs’ Recommended Decision approved the \$7.6 million LIURP. The ALJs stated that because the LIURP program is “projected to enjoy a positive TRC, the level of administrative costs should

not be of concern.” R.D. at 173. The ALJs correctly concluded that since they had adopted the \$7.6 million budget, there was “no remaining opposition” to the waiver of this requirement. R.D. at 173.

To the extent that the Commission grants a LIURP budget that is lower than \$7.6 million, the administrative efficiencies will be diminished. The OCA submits that to the extent a lower LIURP budget is permitted, PGW should not be granted a waiver of Section 58.5.

### III. Conclusion

The Office of Consumer Advocate appreciates the opportunity to provide Comments on the Commission's proposed \$5.8 million LIURP budget. For the reasons set forth above and in the testimony of OCA witness Roger D. Colton and attached Affidavit of Roger D. Colton, the OCA respectfully requests that the current \$7.6 million LIURP budget be maintained.

Respectfully Submitted,



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DATE: August 15, 2016  
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BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Philadelphia Gas Works :  
For Approval of Demand Side Management :  
Plan for FY 2016-2020 :  
: :  
and : Docket No. P-2014-2459362  
: :  
Philadelphia Gas Works Universal Service :  
And Energy Conservation Plan For 2014-2016, :  
52 Pa. Code § 62.4 – Request for Waivers :

**AFFIDAVIT OF ROGER D. COLTON**  
August 15, 2016

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PETITION OF PHILADELPHIA GAS WORKS )  
FOR APPROVAL OF DEMAND SIDE )  
MANAGEMENT PLAN FOR FY 2016 - 2020 )  
 )  
and )  
 )  
PHILADELPHIA GAS WORKS UNIVERSAL )  
SERVICE AND ENERGY CONSERVATION )  
PLAN FOR 2014-2016, 52 PA. CODE §62.4 – )  
REQUEST FOR WAIVERS )

Docket No. P-2014-2459362

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AFFIDAVIT OF  
ROGER D. COLTON

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1. My name is Roger D. Colton. I am a principal in the firm of Fisher, Sheehan & Colton, Public Finance and General Economics. My address is 34 Warwick Road, Belmont, MA 02478.
2. I previously filed Direct, Rebuttal and Surrebuttal Testimony in this proceeding on behalf of the Office of Consumer Advocate. The purpose of the information presented in this Affidavit is to facilitate an assessment of the need for LIURP investments by PGW.
3. To support a recommended LIURP budget for PGW, the Commission decided to “perform an independent needs assessment” for the Company. (Tentative Order, at 66, August 4, 2016). This methodology utilized PGW’s total number of eligible customers, the rate of job completion for the entire state, and PGW’s historical costs per project to determine a reasonable budget approximation for the Company. (Tentative Order, at 67).

4. The Commission's needs assessment involved three steps:
  - a. First, the Commission used a "Job Completion Rate." This calculation determined the expected number of completed jobs per year by multiplying PGW's total number of eligible LIURP Customers by the state's average job completion rate. (Tentative Order, at 67).
  - b. Second, the Commission used an "Historical Cost Budget." This calculation determined the expected number of jobs to be completed each year by dividing the state average cost per job into the historical total program cost for PGW. The Commission then multiplied this by the average cost per job for PGW. (Tentative Order, at 68).
  - c. Third, the Commission took the average of the results of the first two steps to use as a recommended budget. (Tentative Order, at 68).
5. The Tentative Order requested comments on four issues: (1) an appropriate LIURP budget; (2) a reasonable timeline to complete needed LIURP projects; (3) the rate impact of differing LIURP budgets; and (4) whether LIURP should remain in the DSM process. This affidavit presents facts that relate to Issue #1 (appropriate budget) and Issue #2 (reasonable timeline). The factual presentation below is intended to supplement the existing record. Facts that have been previously placed in the record are not repeated herein.
6. The City of Philadelphia, which comprises the territory served by the Philadelphia Gas Works ("PGW") presents unique circumstances in Pennsylvania that cannot be addressed through either a comparison of PGW LIURP investments to non-Philadelphia utilities or a comparison of PGW LIURP investments to a statewide average of natural gas utilities. PGW's housing stock would reasonably be expected to have a greater need of energy

efficiency investments than housing statewide and cannot be represented by statewide averages. Schedule RDC-1 uses information from the most recent American Community Survey of the U.S. Census Bureau (5-year data: 2014) (Table B25034 and Table B25035) to document that Philadelphia has some of the oldest housing stock in Pennsylvania.<sup>1</sup> Schedule RDC-1 documents that Philadelphia has the third oldest median housing stock when measured in terms of the median year in which the housing stock was constructed. Schedule RDC-1 further documents that, of all Pennsylvania's counties, Philadelphia has the greatest proportion of its housing stock built before 1960; has the second greatest proportion of its housing stock built before 1950; and has the fourth greatest proportion of its housing stock built before 1940. In contrast to the two other counties which report old housing stock (Schuylkill and Northumberland), Philadelphia has nearly 670,000 *total* housing units, compared to a total of 69,232 housing units (Schuylkill County) and a total of 44,995 housing units (Northumberland).

7. Combined with these old and energy inefficient housing units are the lowest incomes in Pennsylvania. Schedule RDC-2 uses information from the most recent American Community Survey of the U.S. Census Bureau (5-year data: 2014) (Table B19081). Schedule RDC-2 shows the mean (average) income for the two lowest income quintiles in each county.<sup>2</sup> This analysis takes all households in each Pennsylvania county and divides them into five equal parts (called a "quintile"). The analysis then calculates the average income for each of the five equal parts. To focus on a comparison of low-income households, Schedule RDC-2 ranks each county by the average income for each of the two

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<sup>1</sup> Schedule RDC-1 lists all Pennsylvania counties. In addition, it lists the City of Philadelphia separately to demonstrate that the City of Philadelphia and the County of Philadelphia are identical.

<sup>2</sup> As in Schedule RDC-1, and in all other Schedules used in this affidavit, the Schedule lists the City of Philadelphia separately to demonstrate that the City of Philadelphia and the County of Philadelphia are identical.

lowest income quintiles. As can be seen, Philadelphia has the lowest mean income in both of the two lowest income quintiles. In the lowest income quintile, Philadelphia's mean income (\$6,741) is nearly 40% lower than the next highest county (Indiana County: \$9,430). In the second lowest income quintile, Philadelphia's mean income (\$20,504) is nearly 10% lower than the next highest county (Forest County: \$22,398).

8. The lowest-income status of Philadelphia is confirmed by Schedule RDC-3, which uses information from the most recent American Community Survey of the U.S. Census Bureau (5-year data: 2014) (Table B19082). Schedule RDC-3 shows the share of total aggregate income that falls within each income quintile. The share is calculated by dividing the total income for all households in each income quintile by the total income for all households in the county as a whole. In Philadelphia, for example, the lowest income quintile (i.e., the 20% of households with the lowest incomes) have 2.44% of all income in Philadelphia. The second lowest income quintile for Philadelphia (again, each "quintile" is 20% of all households) have 7.41% of the all income in Philadelphia. For both the bottom income quintile and the second lowest income quintile, Philadelphia has the smallest shares of all Pennsylvania counties.
9. Schedule RDC-4 uses information from the most recent American Community Survey of the U.S. Census Bureau (5-year data: 2014) (Table C17002). Schedule RDC-4 documents the relative low-income status of Philadelphia households taking household size into account. The measure of low-income status, taking into account household size, is referred to as the Federal Poverty Level ("FPL"). Philadelphia has the highest percentage of total population below 100% of FPL (26.7%) of any county in Pennsylvania. Indeed, the county with the second highest proportion of population below FPL is Centre County, with only 20.3%.

Moreover, Centre County has a *total* population of only 139,471 people, fewer people than the number of people that Philadelphia has living below 50% of FPL (187,747).

10. The low-income status of Philadelphia households results in these households having disproportionate housing expense burdens. Schedule RDC-5 uses information from the most recent American Community Survey of the U.S. Census Bureau (5-year data: 2014) (Table B25071). Schedule RDC-5 presents the median gross rent as a percentage of income by county in Pennsylvania. Philadelphia has the third highest median rent burden (i.e., rent as a percentage of income) in the state (34.7%). Only Centre County (36.4%) and Pike County (36.6%) have higher rent burdens. In Philadelphia, the rent burdens for households with incomes below \$35,000 are extreme. In Philadelphia, nearly two-thirds (63%) of households with income less than \$10,000 pay 40% or more of their annual income for rent; nearly three-quarters (73%) of households with income between \$10,000 and \$20,000 do; nearly half of households with income between \$20,000 and \$35,000 do. When low-income households have rental burdens this high, they lack the discretionary income to invest in energy efficiency measures, even if such measures are “cost-effective” from the consumer’s perspective.

| Gross Rent as a Percentage of Annual Household Income (Philadelphia) |  |          |   |          |   |          |
|--|--|----------|---|----------|---|----------|
|  | Rent Burden for<br>Income Below \$10,000 |          | Rent Burden for<br>Income \$10,000 - \$19,999 |          | Rent Burden for<br>Income \$20,000 - \$34,999 |          |
|  | 35% plus                                 | 40% plus | 35% plus                                      | 40% plus | 35% plus                                      | 40% plus |
| Philadelphia   | 64%                                      | 63%      | 77%   | 73%      | 62%   | 48%      |

NOTE: “Gross rent” includes the contract rent paid the property owner plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid for by the renter (or paid for the renter by someone else).

SOURCE: American Community Survey (5-Year data: 2014): Table B25074.

11. I conclude, based on the data presented and discussed above, that the geographic area served by PGW not only has the greatest need for investments in energy efficiency, but has, by far, a

low-income population with the least ability to make those investments on their own without external assistance through a utility LIURP initiative.

12. The PGW projected LIURP eligibility level of 71,625 customers, as cited by the Commission, is a month-end point-in-time participation rate for CRP reported by PGW for the end of March 2013. (PGW USECP, pages 8, 14). The PGW participation rate for CRP, however, is not a good indicator of the number of low-income customers (as defined by PUC regulation). PGW’s CRP participation has substantially decreased in recent years, even though its estimated low-income population has not. This makes using CRP participation (minus those units previously treated LIURP) as a measure of LIURP need inappropriate.
13. PGW’s CRP participation is well below its number of estimated low-income customers.

| PGW CRP Participation as a Percentage of Confirmed Low-Income |      |      |      |      |
|---|------|------|------|------|
| 2010  | 2011 | 2012 | 2013 | 2014 |
| 53%   | 49%  | 48%  | 37%  | 34%  |

BCS Annual Report on Universal Service Programs and Collections Performance.

Moreover, a single point-in-time number does not accurately reflect the *total* number of customers that participate in PGW’s CRP over the course of a twelve-month period. CRP participants change not only from year-to-year, but also within a year, so that there is a mix of new participants and continuing participants. This phenomenon, called program “churn,” is a recognized phenomenon in PGW’s CRP (and other Pennsylvania Customer Assistance Programs, CAPs). PGW’s third party evaluation of its CRP reported that only 69% of its CRP customers participated in every month. A single point-in-time CRP participation number does not accurately indicate the *total* number of CRP participants that would be eligible for LIURP even within a single twelve-month time period.

14. PGW has considerable high-usage low-income customers who do not participate in CRP and thus would not be eligible for LIURP under PGW’s existing LIURP eligibility program rules. As can be seen, in the year for which it has most recently reported numbers, PGW has more than 20,000 customers (20,348) that the Company has identified as “low-income” but who are not enrolled in CRP, and whose consumption places them within the 30% of highest users. Nearly 35,000 (33,940) customers have been found to be “low-income” by PGW, but are not enrolled in CRP, and have usage that places them within the 50% of highest users. According to PGW, “low-income customers were defined as customers that received a grant, such as LIHEAP, CRISIS or USEF in the previous two years, CRP and former CRP customers, and customers that have a broken or maintained level-1 payment arrangement.” (OCA-Colton-2).

| Number of CRP Participants and Low-Income Non-CRP Participants with High Usage |         |            |         |            |         |            |
|--|---------|------------|---------|------------|---------|------------|
|  | FY 2012 |            | FY 2013 |            | FY 2014 |            |
|  | CRP     | LI Non-CRP | CRP     | LI Non-CRP | CRP     | LI Non-CRP |
| Top 50% of users /a/   | 41,676  | 40,159     | 34,770  | 43,782     | 32,417  | 33,940     |
| Top 30% of users /b/   | 24,967  | 24,073     | 20,831  | 26,266     | 19,456  | 20,348     |

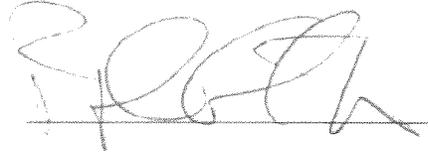
SOURCE:  
/a/ OCA-Colton-1.  
/b/ OCA-Colton-2.

15. PECO Energy, the electric utility serving Philadelphia, is the best utility against which to compare PGW’s low-income energy efficiency investments. In its most recent Universal Service and Energy Conservation Plan (“USECP”), PECO projected that it would expend \$7.85 million for LIURP, with \$5.6 million directed toward electric (Philadelphia) and \$2.25 directed toward gas (outside the City). PECO’s projected enrollment level of 9,000 each year was not disaggregated between gas and electricity. The PUC approved this budget level in PECO’s most recent USECP proceeding. In addition, PECO’s low-

income Act 129 portfolio budget is \$7.0 million each year (escalating to \$7.3 million in 2019 and \$7.8 million in 2020). PECO's total Act 129 budget is \$31.1 million for the 2016 through 2020 program. (PECO 2016-2020 Act 129 Phase III Energy Efficiency and Conservation Plan, at 17, Docket M-2015-2515691). In addition, in PECO's proposed 2016-2018 Universal Service and Energy Conservation Plan, the company proposed an additional \$700,000 for LIURP for three years to address de factor space heating.

16. The Commission's Tentative Order indicated that the LIURP budget for PGW "would be driven by the timeline needed to accomplish total saturation of eligible LIURP customers." A PGW LIURP budget of \$5,860,506, with an average per-unit production cost of \$3,605, implies that the "total saturation" of eligible LIURP customers (assuming the population of "eligible LIURP customers" is 71,625) would occur within roughly 45 years. As the data above indicates, however, PGW's projected population of LIURP-eligible customers (71,625) is understated. Moreover, a 45-year time period exceeds the expected life-span of the installed efficiency measures. As a result, homes that have been treated through LIURP will need to be treated again before the total saturation of eligible LIURP customers has been achieved. Accordingly, a LIURP budget of \$5,860,506 implies that PGW will never achieve a total saturation of LIURP-eligible customers.

Further Affiant sayeth not.



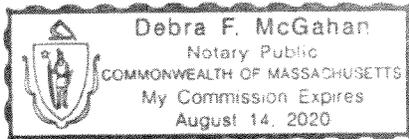
Roger D. Colton

Subscribed and sworn to before me on this 11<sup>th</sup> day of August 2016.

  
Notary Public

My Commission Expires: 8/14/22

County: Middlesex



Schedule RDC-1: Housing Units by Year of Construction (Pennsylvania)

| County                | Median Year Housing Unit Built |                             |                         | Years in which Housing Units Built |                  |             |                  |             |                  |
|-----------------------|--------------------------------|-----------------------------|-------------------------|------------------------------------|------------------|-------------|------------------|-------------|------------------|
|                       | Total Housing Units            | Median year structure built | Rank: Median Year Built | Before 1940                        | Rank Before 1940 | Before 1950 | Rank Before 1950 | Before 1960 | Rank before 1960 |
| Schuylkill County     | 69,232                         | 1942                        | 1                       | 49%                                | 67               | 56%         | 67               | 65%         | 66               |
| Northumberland County | 44,995                         | 1946                        | 2                       | 45%                                | 66               | 53%         | 65               | 62%         | 63               |
| Philadelphia city     | 669,642                        | 1947                        | 3                       | 40%                                | 63               | 55%         | 66               | 72%         | 67               |
| Philadelphia County   | 669,642                        | 1947                        |                         | 40%                                |                  | 55%         |                  | 72%         |                  |
| McKean County         | 21,136                         | 1949                        | 4                       | 40%                                | 64               | 51%         | 64               | 63%         | 65               |
| Lackawanna County     | 96,747                         | 1951                        | 5                       | 41%                                | 65               | 49%         | 63               | 58%         | 60               |
| Luzerne County        | 148,551                        | 1953                        | 7                       | 37%                                | 62               | 47%         | 62               | 57%         | 58               |
| Cambria County        | 65,426                         | 1953                        | 6                       | 34%                                | 55               | 46%         | 61               | 62%         | 62               |
| Allegheny County      | 589,211                        | 1955                        | 8                       | 31%                                | 47               | 41%         | 55               | 60%         | 61               |
| Delaware County       | 222,430                        | 1955                        | 9                       | 22%                                | 16               | 36%         | 40               | 62%         | 64               |
| Armstrong County      | 32,442                         | 1956                        | 10                      | 34%                                | 56               | 42%         | 60               | 56%         | 56               |
| Lawrence County       | 40,887                         | 1956                        | 12                      | 29%                                | 38               | 39%         | 50               | 57%         | 57               |
| Beaver County         | 78,340                         | 1956                        | 11                      | 25%                                | 26               | 37%         | 43               | 57%         | 59               |
| Venango County        | 27,385                         | 1957                        | 15                      | 36%                                | 60               | 41%         | 56               | 53%         | 52               |
| Blair County          | 56,211                         | 1957                        | 13                      | 34%                                | 57               | 42%         | 59               | 54%         | 54               |
| Cameron County        | 4,422                          | 1957                        | 14                      | 26%                                | 27               | 37%         | 41               | 55%         | 55               |
| Fayette County        | 62,810                         | 1958                        | 17                      | 33%                                | 52               | 40%         | 54               | 52%         | 48               |
| Lycoming County       | 52,586                         | 1958                        | 18                      | 32%                                | 51               | 40%         | 53               | 52%         | 50               |
| Warren County         | 23,445                         | 1958                        | 19                      | 31%                                | 49               | 38%         | 48               | 53%         | 51               |
| Elk County            | 17,542                         | 1958                        | 16                      | 30%                                | 44               | 39%         | 51               | 53%         | 53               |
| Jefferson County      | 22,422                         | 1959                        | 20                      | 34%                                | 58               | 42%         | 58               | 51%         | 47               |
| Mercer County         | 51,666                         | 1959                        | 21                      | 26%                                | 28               | 36%         | 38               | 52%         | 49               |
| Erie County           | 119,506                        | 1960                        | 23                      | 27%                                | 30               | 35%         | 37               | 50%         | 44               |
| Columbia County       | 29,595                         | 1960                        | 22                      | 36%                                | 61               | 42%         | 57               | 50%         | 45               |

Schedule RDC-1: Housing Units by Year of Construction (Pennsylvania)

| County              | Median Year Housing Unit Built |                             |                         |                  | Years in which Housing Units Built |             |             |             | Rank before 1960 |
|---------------------|--------------------------------|-----------------------------|-------------------------|------------------|------------------------------------|-------------|-------------|-------------|------------------|
|                     | Total Housing Units            | Median year structure built | Rank: Median Year Built | Rank: Year Built | Before 1940                        | Before 1950 | Before 1960 | Before 1960 |                  |
| Mifflin County      | 21,539                         | 1960                        | 24                      | 46               | 30%                                | 38%         | 46          | 50%         | 46               |
| Greene County       | 16,440                         | 1961                        | 25                      | 48               | 31%                                | 39%         | 49          | 49%         | 42               |
| Washington County   | 93,442                         | 1961                        | 26                      | 29               | 27%                                | 35%         | 36          | 49%         | 43               |
| Westmoreland County | 168,299                        | 1962                        | 28                      | 17               | 22%                                | 31%         | 23          | 48%         | 39               |
| Somerset County     | 38,054                         | 1962                        | 27                      | 45               | 30%                                | 38%         | 45          | 48%         | 41               |
| Clearfield County   | 38,594                         | 1963                        | 29                      | 50               | 32%                                | 38%         | 47          | 48%         | 40               |
| Clinton County      | 19,045                         | 1964                        | 30                      | 37               | 29%                                | 34%         | 33          | 45%         | 36               |
| Crawford County     | 44,581                         | 1964                        | 31                      | 35               | 28%                                | 36%         | 39          | 47%         | 38               |
| Dauphin County      | 121,125                        | 1965                        | 33                      | 19               | 23%                                | 29%         | 19          | 44%         | 33               |
| Berks County        | 164,822                        | 1965                        | 32                      | 36               | 29%                                | 35%         | 35          | 46%         | 37               |
| Montgomery County   | 326,528                        | 1966                        | 36                      | 9                | 18%                                | 26%         | 13          | 42%         | 28               |
| Lehigh County       | 143,082                        | 1966                        | 35                      | 23               | 25%                                | 30%         | 20          | 43%         | 30               |
| Bradford County     | 30,082                         | 1966                        | 34                      | 59               | 35%                                | 39%         | 52          | 45%         | 34               |
| Northampton County  | 120,787                        | 1966                        | 37                      | 33               | 28%                                | 33%         | 27          | 45%         | 35               |
| Clarion County      | 19,920                         | 1968                        | 39                      | 34               | 28%                                | 34%         | 32          | 42%         | 26               |
| Bedford County      | 23,984                         | 1968                        | 38                      | 31               | 27%                                | 32%         | 25          | 42%         | 27               |
| Tioga County        | 21,452                         | 1968                        | 41                      | 54               | 34%                                | 37%         | 42          | 43%         | 29               |
| Lebanon County      | 55,843                         | 1968                        | 40                      | 21               | 24%                                | 31%         | 24          | 43%         | 31               |
| Carbon County       | 34,374                         | 1969                        | 42                      | 53               | 34%                                | 38%         | 44          | 44%         | 32               |
| Indiana County      | 38,352                         | 1970                        | 44                      | 22               | 25%                                | 31%         | 21          | 40%         | 21               |
| Huntingdon County   | 22,402                         | 1970                        | 43                      | 32               | 28%                                | 33%         | 28          | 42%         | 25               |
| Wyoming County      | 13,296                         | 1971                        | 46                      | 43               | 30%                                | 34%         | 31          | 40%         | 23               |
| Potter County       | 12,891                         | 1971                        | 45                      | 40               | 29%                                | 34%         | 34          | 41%         | 24               |

Schedule RDC-1: Housing Units by Year of Construction (Pennsylvania)

| County             | Median Year Housing Unit Built |                             |                         |  | Years in which Housing Units Built |                  |             |                  |             |                  |
|--------------------|--------------------------------|-----------------------------|-------------------------|--|------------------------------------|------------------|-------------|------------------|-------------|------------------|
|                    | Total Housing Units            | Median year structure built | Rank: Median Year Built |  | Before 1940                        | Rank Before 1940 | Before 1950 | Rank Before 1950 | Before 1960 | Rank before 1960 |
| Forest County      | 8,725                          | 1972                        | 47                      |  | 13%                                | 4                | 18%         | 4                | 28%         | 4                |
| Snyder County      | 16,090                         | 1972                        | 50                      |  | 21%                                | 14               | 28%         | 16               | 36%         | 15               |
| Union County       | 17,027                         | 1972                        | 53                      |  | 23%                                | 18               | 28%         | 17               | 39%         | 17               |
| Juniata County     | 10,998                         | 1972                        | 48                      |  | 25%                                | 25               | 31%         | 22               | 39%         | 18               |
| Susquehanna County | 22,993                         | 1972                        | 52                      |  | 29%                                | 39               | 33%         | 30               | 39%         | 19               |
| Montour County     | 8,013                          | 1972                        | 49                      |  | 30%                                | 42               | 33%         | 26               | 40%         | 20               |
| Sullivan County    | 6,304                          | 1972                        | 51                      |  | 30%                                | 41               | 33%         | 29               | 40%         | 22               |
| Bucks County       | 246,231                        | 1973                        | 54                      |  | 10%                                | 2                | 13%         | 3                | 30%         | 7                |
| Fulton County      | 7,115                          | 1973                        | 55                      |  | 22%                                | 15               | 27%         | 14               | 34%         | 12               |
| Perry County       | 20,444                         | 1973                        | 57                      |  | 25%                                | 24               | 29%         | 18               | 36%         | 13               |
| York County        | 179,812                        | 1973                        | 58                      |  | 19%                                | 11               | 25%         | 12               | 36%         | 14               |
| Lancaster County   | 204,772                        | 1973                        | 56                      |  | 23%                                | 20               | 27%         | 15               | 37%         | 16               |
| Cumberland County  | 101,370                        | 1974                        | 59                      |  | 16%                                | 8                | 22%         | 7                | 33%         | 10               |
| Centre County      | 64,043                         | 1975                        | 60                      |  | 16%                                | 7                | 20%         | 6                | 30%         | 6                |
| Franklin County    | 63,779                         | 1975                        | 61                      |  | 19%                                | 10               | 24%         | 11               | 33%         | 11               |
| Butler County      | 79,095                         | 1976                        | 62                      |  | 16%                                | 6                | 22%         | 8                | 33%         | 9                |
| Wayne County       | 31,795                         | 1978                        | 64                      |  | 20%                                | 13               | 23%         | 9                | 29%         | 5                |
| Adams County       | 41,078                         | 1978                        | 63                      |  | 20%                                | 12               | 24%         | 10               | 32%         | 8                |
| Chester County     | 194,095                        | 1979                        | 65                      |  | 15%                                | 5                | 18%         | 5                | 27%         | 3                |
| Monroe County      | 80,569                         | 1983                        | 66                      |  | 10%                                | 3                | 13%         | 2                | 19%         | 2                |
| Pike County        | 38,482                         | 1984                        | 67                      |  | 8%                                 | 1                | 11%         | 1                | 16%         | 1                |

SOURCE: 5-Year American Community Survey (2014), Table B25034 and Table 25035.

Schedule RDC-2: Mean Income for Two Lowest Quintiles of Income by County (Pennsylvania)

| County                | Lowest Quintile | Rank Lowest | Second Quintile | Rank Second |
|-----------------------|-----------------|-------------|-----------------|-------------|
| Philadelphia County   | \$6,741         | 1           | \$20,504        | 1           |
| Philadelphia city     | \$6,741         |             | \$20,504        |             |
| Indiana County        | \$9,430         | 2           | \$26,219        | 11          |
| Centre County         | \$9,465         | 3           | \$29,023        | 34          |
| Fayette County        | \$9,641         | 4           | \$23,193        | 3           |
| Clarion County        | \$9,868         | 5           | \$25,025        | 5           |
| Columbia County       | \$10,082        | 6           | \$26,986        | 20          |
| Cambria County        | \$10,662        | 7           | \$25,340        | 6           |
| Clearfield County     | \$10,703        | 8           | \$24,769        | 4           |
| Erie County           | \$10,706        | 9           | \$27,171        | 23          |
| Luzerne County        | \$10,783        | 10          | \$26,427        | 15          |
| Lawrence County       | \$10,786        | 11          | \$25,925        | 9           |
| Clinton County        | \$10,969        | 12          | \$26,295        | 12          |
| Huntingdon County     | \$11,075        | 13          | \$27,083        | 22          |
| McKean County         | \$11,158        | 14          | \$26,314        | 13          |
| Blair County          | \$11,265        | 15          | \$26,847        | 18          |
| Forest County         | \$11,370        | 16          | \$22,398        | 2           |
| Jefferson County      | \$11,397        | 17          | \$25,980        | 10          |
| Allegheny County      | \$11,498        | 18          | \$30,244        | 40          |
| Lackawanna County     | \$11,507        | 19          | \$27,657        | 27          |
| Lycoming County       | \$11,519        | 20          | \$28,297        | 32          |
| Mercer County         | \$11,570        | 21          | \$27,334        | 24          |
| Mifflin County        | \$11,612        | 22          | \$25,859        | 7           |
| Northumberland County | \$11,646        | 23          | \$26,358        | 14          |
| Cameron County        | \$11,657        | 24          | \$26,441        | 16          |
| Potter County         | \$11,762        | 25          | \$25,895        | 8           |
| Tioga County          | \$11,879        | 26          | \$28,210        | 31          |
| Schuylkill County     | \$11,889        | 27          | \$27,429        | 25          |
| Sullivan County       | \$12,089        | 28          | \$27,688        | 28          |
| Crawford County       | \$12,136        | 29          | \$26,767        | 17          |
| Somerset County       | \$12,142        | 30          | \$27,529        | 26          |

Schedule RDC-2: Mean Income for Two Lowest Quintiles of Income by County (Pennsylvania)

| County              | Lowest Quintile | Rank Lowest | Second Quintile | Rank Second |
|---------------------|-----------------|-------------|-----------------|-------------|
| Beaver County       | \$12,172        | 31          | \$30,073        | 39          |
| Venango County      | \$12,316        | 32          | \$27,040        | 21          |
| Armstrong County    | \$12,397        | 33          | \$28,125        | 30          |
| Bedford County      | \$12,434        | 34          | \$26,879        | 19          |
| Bradford County     | \$12,594        | 35          | \$29,685        | 36          |
| Greene County       | \$12,630        | 36          | \$28,898        | 33          |
| Warren County       | \$12,653        | 37          | \$27,706        | 29          |
| Fulton County       | \$12,821        | 38          | \$30,502        | 42          |
| Westmoreland County | \$12,871        | 39          | \$30,895        | 43          |
| Montour County      | \$12,947        | 40          | \$31,745        | 46          |
| Susquehanna County  | \$13,019        | 41          | \$30,398        | 41          |
| Wyoming County      | \$13,028        | 42          | \$31,597        | 45          |
| Lehigh County       | \$13,077        | 43          | \$33,550        | 50          |
| Washington County   | \$13,106        | 44          | \$33,269        | 49          |
| Elk County          | \$13,166        | 45          | \$29,842        | 37          |
| Dauphin County      | \$13,299        | 46          | \$33,899        | 52          |
| Juniata County      | \$13,388        | 47          | \$29,451        | 35          |
| Berks County        | \$13,468        | 48          | \$33,662        | 51          |
| Wayne County        | \$13,609        | 49          | \$29,881        | 38          |
| Union County        | \$13,973        | 50          | \$31,163        | 44          |
| Carbon County       | \$14,054        | 51          | \$31,824        | 47          |
| Snyder County       | \$14,642        | 52          | \$31,991        | 48          |
| Monroe County       | \$14,674        | 53          | \$35,715        | 54          |
| Delaware County     | \$14,910        | 54          | \$38,096        | 63          |
| Lebanon County      | \$14,936        | 55          | \$36,252        | 56          |
| Butler County       | \$15,014        | 56          | \$36,762        | 57          |
| Franklin County     | \$15,101        | 57          | \$34,617        | 53          |
| Northampton County  | \$15,158        | 58          | \$37,384        | 59          |
| York County         | \$15,273        | 59          | \$36,889        | 58          |
| Lancaster County    | \$15,307        | 60          | \$36,177        | 55          |
| Pike County         | \$15,419        | 61          | \$38,029        | 62          |

Schedule RDC-2: Mean Income for Two Lowest Quintiles of Income by County (Pennsylvania)

| County            | Lowest Quintile | Rank Lowest | Second Quintile | Rank Second |
|-------------------|-----------------|-------------|-----------------|-------------|
| Adams County      | \$16,532        | 62          | \$37,573        | 61          |
| Perry County      | \$16,565        | 63          | \$37,449        | 60          |
| Cumberland County | \$16,620        | 64          | \$39,161        | 64          |
| Montgomery County | \$19,217        | 65          | \$48,620        | 66          |
| Bucks County      | \$19,865        | 66          | \$47,898        | 65          |
| Chester County    | \$20,914        | 67          | \$52,437        | 67          |

SOURCE: 5-Year American Community Survey (2014), Table B19081..

Schedule RDC-3: Shares of Aggregate Household Income (Pennsylvania)

| County              | Lowest Quintile | Rank Lowest | Second Quintile | Rank Second |
|---------------------|-----------------|-------------|-----------------|-------------|
| Philadelphia County | 2.44            | 1           | 7.41            | 1           |
| Philadelphia city   | 2.44            |             | 7.41            |             |
| Centre County       | 2.79            | 2           | 8.57            | 4           |
| Allegheny County    | 3.12            | 3           | 8.2             | 2           |
| Indiana County      | 3.21            | 4           | 8.92            | 8           |
| Columbia County     | 3.34            | 5           | 8.95            | 9           |
| Delaware County     | 3.35            | 6           | 8.54            | 3           |
| Montour County      | 3.52            | 7           | 8.63            | 5           |
| Erie County         | 3.53            | 8           | 8.96            | 10          |
| Montgomery County   | 3.58            | 9           | 9.05            | 11          |
| Luzerne County      | 3.59            | 10          | 8.8             | 6           |
| Lehigh County       | 3.61            | 11          | 9.26            | 19          |
| Clarion County      | 3.62            | 12          | 9.18            | 13          |
| Washington County   | 3.63            | 13          | 9.2             | 14          |
| Chester County      | 3.67            | 14          | 9.21            | 17          |
| Lackawanna County   | 3.71            | 15          | 8.9             | 7           |
| Dauphin County      | 3.72            | 16          | 9.47            | 25          |
| Fayette County      | 3.8             | 17          | 9.12            | 12          |
| Berks County        | 3.82            | 18          | 9.54            | 27          |
| Westmoreland County | 3.83            | 19          | 9.2             | 15          |
| Beaver County       | 3.84            | 20          | 9.48            | 26          |
| Butler County       | 3.84            | 21          | 9.4             | 21          |
| Lawrence County     | 3.84            | 22          | 9.22            | 18          |
| Cambria County      | 3.87            | 23          | 9.2             | 16          |
| Northampton County  | 3.89            | 24          | 9.59            | 31          |
| Blair County        | 3.95            | 25          | 9.41            | 22          |
| Bucks County        | 3.97            | 26          | 9.58            | 30          |
| Clinton County      | 3.98            | 27          | 9.55            | 28          |
| Lycoming County     | 3.99            | 28          | 9.79            | 41          |
| Mercer County       | 4.08            | 29          | 9.64            | 34          |
| Tioga County        | 4.08            | 30          | 9.69            | 36          |

Schedule RDC-3: Shares of Aggregate Household Income (Pennsylvania)

| County                | Lowest Quintile | Rank Lowest | Second Quintile | Rank Second |
|-----------------------|-----------------|-------------|-----------------|-------------|
| Wyoming County        | 4.12            | 31          | 9.97            | 49          |
| Bradford County       | 4.13            | 32          | 9.74            | 38          |
| Clearfield County     | 4.16            | 33          | 9.62            | 33          |
| Huntingdon County     | 4.16            | 34          | 10.16           | 56          |
| Greene County         | 4.18            | 35          | 9.57            | 29          |
| Monroe County         | 4.19            | 36          | 10.15           | 55          |
| McKean County         | 4.2             | 37          | 9.9             | 46          |
| York County           | 4.21            | 38          | 10.17           | 57          |
| Cumberland County     | 4.23            | 39          | 9.95            | 48          |
| Schuylkill County     | 4.23            | 40          | 9.75            | 39          |
| Susquehanna County    | 4.23            | 41          | 9.86            | 45          |
| Union County          | 4.23            | 42          | 9.42            | 23          |
| Potter County         | 4.24            | 43          | 9.32            | 20          |
| Pike County           | 4.26            | 44          | 10.5            | 62          |
| Lancaster County      | 4.28            | 45          | 10.11           | 54          |
| Cameron County        | 4.31            | 46          | 9.78            | 40          |
| Warren County         | 4.32            | 47          | 9.45            | 24          |
| Northumberland County | 4.33            | 48          | 9.79            | 42          |
| Somerset County       | 4.34            | 49          | 9.83            | 43          |
| Armstrong County      | 4.35            | 50          | 9.84            | 44          |
| Crawford County       | 4.35            | 51          | 9.59            | 32          |
| Lebanon County        | 4.35            | 52          | 10.55           | 63          |
| Jefferson County      | 4.36            | 53          | 9.93            | 47          |
| Wayne County          | 4.43            | 54          | 9.73            | 37          |
| Sullivan County       | 4.44            | 55          | 10.09           | 53          |
| Bedford County        | 4.47            | 56          | 9.64            | 35          |
| Fulton County         | 4.51            | 57          | 10.74           | 66          |
| Carbon County         | 4.55            | 58          | 10.3            | 59          |
| Venango County        | 4.55            | 59          | 9.99            | 50          |
| Adams County          | 4.56            | 60          | 10.37           | 60          |
| Snyder County         | 4.58            | 61          | 10              | 51          |

Schedule RDC-3: Shares of Aggregate Household Income (Pennsylvania)

| County          | Lowest Quintile | Rank Lowest | Second Quintile | Rank Second |
|-----------------|-----------------|-------------|-----------------|-------------|
| Mifflin County  | 4.62            | 62          | 10.27           | 58          |
| Franklin County | 4.68            | 63          | 10.71           | 65          |
| Elk County      | 4.72            | 64          | 10.7            | 64          |
| Juniata County  | 4.73            | 65          | 10.4            | 61          |
| Perry County    | 5.06            | 66          | 11.41           | 67          |
| Forest County   | 5.09            | 67          | 10.03           | 52          |

SOURCE: American Community Survey (5-Year data: 2014): Table B19082

Schedule RDC-4: Population by Ratio of Annual Income to Federal Poverty Level ("FPL") (Below 100%)

| County              | Total:  | Under .50 | .50 to .99 | Pct Below 50% FPL | Rank Below 50% FPL | Pct Below 100% FPL | Rank Below 100% FPL |
|---------------------|---------|-----------|------------|-------------------|--------------------|--------------------|---------------------|
| Bucks County        | 617,670 | 14,830    | 21,446     | 2.4%              | 1                  | 5.9%               | 1                   |
| Montgomery County   | 789,516 | 23,034    | 27,654     | 2.9%              | 2                  | 6.4%               | 2                   |
| Chester County      | 493,535 | 16,125    | 18,811     | 3.3%              | 3                  | 7.1%               | 3                   |
| Butler County       | 179,822 | 6,485     | 9,565      | 3.6%              | 4                  | 8.9%               | 5                   |
| Wayne County        | 48,235  | 1,822     | 4,433      | 3.8%              | 5                  | 13.0%              | 31                  |
| Franklin County     | 148,872 | 5,776     | 11,494     | 3.9%              | 6                  | 11.6%              | 21                  |
| Cumberland County   | 225,892 | 8,786     | 10,769     | 3.9%              | 7                  | 8.7%               | 4                   |
| Carbon County       | 63,898  | 2,611     | 4,501      | 4.1%              | 8                  | 11.1%              | 19                  |
| Lancaster County    | 512,222 | 21,200    | 32,951     | 4.1%              | 9                  | 10.6%              | 16                  |
| Snyder County       | 37,609  | 1,561     | 2,578      | 4.2%              | 10                 | 11.0%              | 18                  |
| Susquehanna County  | 42,230  | 1,764     | 3,590      | 4.2%              | 11                 | 12.7%              | 27                  |
| Northampton County  | 288,350 | 12,065    | 16,313     | 4.2%              | 12                 | 9.8%               | 8                   |
| Juniata County      | 24,452  | 1,031     | 1,996      | 4.2%              | 13                 | 12.4%              | 25                  |
| Adams County        | 97,195  | 4,112     | 5,556      | 4.2%              | 14                 | 9.9%               | 9                   |
| Somerset County     | 72,475  | 3,083     | 6,123      | 4.3%              | 15                 | 12.7%              | 28                  |
| Pike County         | 56,118  | 2,398     | 3,084      | 4.3%              | 16                 | 9.8%               | 7                   |
| Westmoreland County | 354,629 | 15,160    | 21,433     | 4.3%              | 17                 | 10.3%              | 10                  |
| Perry County        | 45,066  | 1,978     | 2,377      | 4.4%              | 18                 | 9.7%               | 6                   |
| Wyoming County      | 27,518  | 1,217     | 1,901      | 4.4%              | 19                 | 11.3%              | 20                  |
| Elk County          | 31,140  | 1,388     | 1,826      | 4.5%              | 20                 | 10.3%              | 11                  |
| York County         | 429,027 | 19,182    | 25,192     | 4.5%              | 21                 | 10.3%              | 12                  |
| Fulton County       | 14,636  | 656       | 1,053      | 4.5%              | 22                 | 11.7%              | 22                  |
| Union County        | 35,737  | 1,619     | 2,598      | 4.5%              | 23                 | 11.8%              | 23                  |
| Washington County   | 203,251 | 9,711     | 11,666     | 4.8%              | 24                 | 10.5%              | 13                  |

Schedule RDC-4: Population by Ratio of Annual Income to Federal Poverty Level ("FPL") (Below 100%)

| County                   | Total:    | Under .50 | .50 to .99 | Pct Below<br>50% FPL | Rank<br>Below<br>50% FPL | Pct Below<br>100% FPL | Rank<br>Below<br>100% FPL |
|--------------------------|-----------|-----------|------------|----------------------|--------------------------|-----------------------|---------------------------|
| Warren County            | 40,221    | 1,980     | 3,244      | 4.9%                 | 25                       | 13.0%                 | 32                        |
| Bedford County           | 48,580    | 2,421     | 4,154      | 5.0%                 | 26                       | 13.5%                 | 37                        |
| Delaware County          | 539,465   | 27,240    | 29,628     | 5.0%                 | 27                       | 10.5%                 | 14                        |
| Montour County           | 17,766    | 909       | 966        | 5.1%                 | 28                       | 10.6%                 | 15                        |
| Jefferson County         | 44,075    | 2,257     | 4,297      | 5.1%                 | 29                       | 14.9%                 | 50                        |
| Armstrong County         | 67,532    | 3,478     | 5,494      | 5.2%                 | 30                       | 13.3%                 | 34                        |
| Mercer County            | 108,475   | 5,597     | 9,588      | 5.2%                 | 31                       | 14.0%                 | 40                        |
| Lebanon County           | 131,886   | 6,905     | 7,474      | 5.2%                 | 32                       | 10.9%                 | 17                        |
| Cameron County           | 4,866     | 258       | 365        | 5.3%                 | 33                       | 12.8%                 | 29                        |
| Northumberland<br>County | 89,517    | 4,777     | 7,896      | 5.3%                 | 34                       | 14.2%                 | 41                        |
| Schuylkill County        | 139,848   | 7,521     | 11,158     | 5.4%                 | 35                       | 13.4%                 | 35                        |
| Venango County           | 53,124    | 2,860     | 5,627      | 5.4%                 | 36                       | 16.0%                 | 58                        |
| Crawford County          | 83,986    | 4,542     | 8,592      | 5.4%                 | 37                       | 15.6%                 | 54                        |
| Bradford County          | 61,488    | 3,340     | 4,766      | 5.4%                 | 38                       | 13.2%                 | 33                        |
| Monroe County            | 165,152   | 8,981     | 11,735     | 5.4%                 | 39                       | 12.5%                 | 26                        |
| Potter County            | 17,152    | 934       | 1,541      | 5.4%                 | 40                       | 14.4%                 | 45                        |
| Beaver County            | 167,300   | 9,136     | 11,082     | 5.5%                 | 41                       | 12.1%                 | 24                        |
| Clearfield County        | 76,142    | 4,209     | 7,195      | 5.5%                 | 42                       | 15.0%                 | 52                        |
| Forest County            | 4,265     | 239       | 438        | 5.6%                 | 43                       | 15.9%                 | 57                        |
| Greene County            | 33,828    | 1,910     | 3,007      | 5.6%                 | 44                       | 14.5%                 | 47                        |
| Sullivan County          | 6,226     | 361       | 559        | 5.8%                 | 45                       | 14.8%                 | 49                        |
| Cambria County           | 132,831   | 7,879     | 11,967     | 5.9%                 | 46                       | 14.9%                 | 51                        |
| Lackawanna<br>County     | 206,077   | 12,322    | 16,904     | 6.0%                 | 47                       | 14.2%                 | 42                        |
| Huntingdon County        | 40,785    | 2,464     | 3,137      | 6.0%                 | 48                       | 13.7%                 | 39                        |
| Allegheny County         | 1,195,755 | 72,532    | 82,107     | 6.1%                 | 49                       | 12.9%                 | 30                        |
| Tioga County             | 40,821    | 2,481     | 3,718      | 6.1%                 | 50                       | 15.2%                 | 53                        |

Schedule RDC-4: Population by Ratio of Annual Income to Federal Poverty Level ("FPL") (Below 100%)

| County                 | Total:    | Under .50 | .50 to .99 | Pct Below<br>50% FPL | Rank<br>Below<br>50% FPL | Pct Below<br>100% FPL | Rank<br>Below<br>100% FPL |
|------------------------|-----------|-----------|------------|----------------------|--------------------------|-----------------------|---------------------------|
| Blair County           | 123,534   | 7,536     | 10,056     | 6.1%                 | 51                       | 14.2%                 | 43                        |
| Lehigh County          | 345,265   | 21,234    | 24,897     | 6.2%                 | 52                       | 13.4%                 | 36                        |
| Mifflin County         | 45,877    | 2,841     | 4,407      | 6.2%                 | 53                       | 15.8%                 | 56                        |
| Lawrence County        | 87,472    | 5,543     | 7,117      | 6.3%                 | 54                       | 14.5%                 | 46                        |
| Lycoming County        | 111,109   | 7,369     | 9,026      | 6.6%                 | 55                       | 14.8%                 | 48                        |
| Berks County           | 400,042   | 26,750    | 30,489     | 6.7%                 | 56                       | 14.3%                 | 44                        |
| Dauphin County         | 265,172   | 17,732    | 18,413     | 6.7%                 | 57                       | 13.6%                 | 38                        |
| Erie County            | 267,836   | 18,628    | 26,115     | 7.0%                 | 58                       | 16.7%                 | 61                        |
| McKean County          | 39,828    | 2,867     | 3,755      | 7.2%                 | 59                       | 16.6%                 | 60                        |
| Luzerne County         | 308,711   | 23,075    | 27,220     | 7.5%                 | 60                       | 16.3%                 | 59                        |
| Fayette County         | 131,497   | 10,860    | 14,158     | 8.3%                 | 61                       | 19.0%                 | 65                        |
| Clinton County         | 37,005    | 3,202     | 3,046      | 8.7%                 | 62                       | 16.9%                 | 62                        |
| Indiana County         | 82,870    | 7,267     | 6,956      | 8.8%                 | 63                       | 17.2%                 | 63                        |
| Columbia County        | 62,846    | 5,557     | 4,368      | 8.8%                 | 64                       | 15.8%                 | 55                        |
| Clarion County         | 37,681    | 3,710     | 3,425      | 9.8%                 | 65                       | 18.9%                 | 64                        |
| Philadelphia<br>County | 1,503,859 | 187,747   | 213,472    | 12.5%                | 66                       | 26.7%                 | 67                        |
| Philadelphia city      | 1,503,859 | 187,747   | 213,472    | 12.5%                |                          | 26.7%                 |                           |
| Centre County          | 139,471   | 17,673    | 10,671     | 12.7%                | 67                       | 20.3%                 | 66                        |

SOURCE: American Community Survey (5-Year data: 2014): Table C17002.

Schedule RDC-5

Median Gross Rent as a Percentage of Household Income in the Past 12 Months (Pennsylvania)  
 Median Gross Rent as a Percentage of HH

| County                | Income | Ranking |
|-----------------------|--------|---------|
| Forest County         | 25.3%  | 1       |
| Fulton County         | 25.7%  | 2       |
| Armstrong County      | 25.9%  | 3       |
| Snyder County         | 26.1%  | 4       |
| Somerset County       | 26.1%  | 5       |
| Perry County          | 26.2%  | 6       |
| Cameron County        | 26.3%  | 7       |
| Warren County         | 26.3%  | 8       |
| Juniata County        | 26.5%  | 9       |
| Jefferson County      | 26.6%  | 10      |
| Montour County        | 26.9%  | 11      |
| Schuylkill County     | 27.0%  | 12      |
| Mifflin County        | 27.1%  | 13      |
| Washington County     | 27.2%  | 14      |
| Westmoreland County   | 27.3%  | 15      |
| Bradford County       | 27.6%  | 16      |
| Elk County            | 27.6%  | 17      |
| Huntingdon County     | 27.65  | 18      |
| Lebanon County        | 27.6%  | 19      |
| Cambria County        | 27.9%  | 20      |
| Northumberland County | 27.9%  | 21      |
| Crawford County       | 28.0%  | 22      |
| Cumberland County     | 28.0%  | 23      |
| Fayette County        | 28.0%  | 24      |
| Greene County         | 28.0%  | 25      |
| Beaver County         | 28.1%  | 26      |
| Bedford County        | 28.2%  | 27      |
| Franklin County       | 28.3%  | 28      |
| Lackawanna County     | 28.5%  | 29      |

Schedule RDC-5

Median Gross Rent as a Percentage of Household Income in the Past 12 Months (Pennsylvania)

| County             | Median Gross Rent as a Percentage of HH Income | Ranking |
|--------------------|--|---------|
| Venango County     | 28.5%  | 30      |
| Clinton County     | 28.6%  | 31      |
| Union County       | 28.6%  | 32      |
| Allegheny County   | 28.8%  | 33      |
| Clearfield County  | 28.8%  | 34      |
| Tioga County       | 28.8%  | 35      |
| Blair County       | 28.9%  | 36      |
| Butler County      | 28.9%  | 37      |
| Dauphin County     | 28.9%  | 38      |
| Susquehanna County | 29.0%  | 39      |
| Wyoming County     | 29.1%  | 40      |
| Chester County     | 29.3%  | 41      |
| Luzerne County     | 29.3%  | 42      |
| Lycoming County    | 29.3%  | 43      |
| Potter County      | 29.3%  | 44      |
| Montgomery County  | 29.4%  | 45      |
| Mercer County      | 29.5%  | 46      |
| York County        | 30.0%  | 47      |
| Sullivan County    | 30.1%  | 48      |
| Clarion County     | 30.3%  | 49      |
| Adams County       | 30.5%  | 50      |
| Lawrence County    | 30.7%  | 51      |
| Erie County        | 30.9%  | 52      |
| McKean County      | 30.9%  | 53      |
| Columbia County    | 31.2%  | 54      |
| Bucks County       | 31.4%  | 55      |
| Lancaster County   | 31.4%  | 56      |
| Indiana County     | 31.8%  | 57      |
| Carbon County      | 31.9%  | 58      |

Schedule RDC-5

Median Gross Rent as a Percentage of Household Income in the Past 12 Months (Pennsylvania)

| County              | Income | Ranking |
|---------------------|--------|---------|
| Northampton County  | 32%    | 59      |
| Berks County        | 32.1%  | 60      |
| Delaware County     | 32.5%  | 61      |
| Lehigh County       | 33%    | 62      |
| Monroe County       | 33.9%  | 63      |
| Wayne County        | 34.3%  | 64      |
| Philadelphia County | 34.7%  | 65      |
| Philadelphia city   | 34.7%  |         |
| Centre County       | 36.4%  | 66      |
| Pike County         | 36.6%  | 67      |

SOURCE: American Community Survey (5-Year data: 2014): Table B25071.

CERTIFICATE OF SERVICE

Petition of Philadelphia Gas Works :  
For Approval of Demand-Side Management :  
Plan For FY 2016-2020 :  
 : Docket No. P-2014-2459362  
Philadelphia Gas Works Universal Service :  
And Energy Conservation Plan :  
For 2014-2016, 52 Pa. Code § 62.4- :  
Request for Waivers :

I hereby certify that I have this day served a true copy of the foregoing document, the Office of Consumer Advocate's Comments, upon parties of record in this proceeding in accordance with the requirements of 52 Pa. Code Section 1.54 (relating to service by a participant), in the manner and upon the persons listed below:

Dated this 15th day of August 2016.

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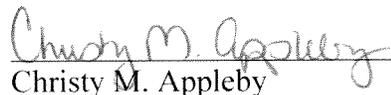
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