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December 20, 2019

Via Hand Delivery

Rosemary Chiavetta, Secretary
PA Public Utility Commission
PO Box 3265
Harrisburg, PA 17105-3265

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:

On behalf of Philadelphia Gas Works (“PGW”) enclosed for filing please its Demand Side Management Program Annual Report Fiscal Year 2019 Results with regard to the above-referenced matter. This document is being submitted consistent with the directives of the Commission in its tentative opinion and order entered August 4, 2016 and its final opinion and order entered November 1, 2016 at this docket. Copies to be served in accordance with the attached Certificate of Service.

Sincerely,

Deanne M. O'Dell
DMO/lww
Enclosure

cc: Hon. Christopher Pell w/enc.
Hon. Marta Guhl w/enc.
Cert. of Service w/enc.
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CERTIFICATE OF SERVICE

I hereby certify that this day I served a copy of PGW's Demand Side Management Program Annual Report FY 2019 Results upon the parties and persons listed below in the manner indicated in accordance with the requirements of 52 Pa. Code Section 1.54.

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Date: December 20, 2019

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Demand Side Management Program Annual Report

FY 2019 Results

December 2019

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Prepared by Philadelphia Gas Works (PGW) with assistance from Green Energy Economics Group, Inc. (GEEG)

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1. Portfolio Overview

1.1. Introduction

This report presents and discusses the results from PGW's implementation of its Demand Side Management ("DSM") portfolio of energy-efficiency programs in Fiscal Year 2019 ("FY 2019").¹

PGW's FY 2019 DSM program budget was approved by Commission Order entered on November 1, 2016 at Docket Number P-2014-2459362. The programs were implemented in accordance with the EnergySense Demand Side Management Portfolio Phase II Compliance Plan for Fiscal Years 2017-2020 filed on December 27, 2016 at Docket Number P-2014-2459362.²

PGW committed to filing its annual report four months after the end of the program year to report on program outcomes to date. This report provides quantitative tables of portfolio operations and outcomes for all four DSM programs:³

- Residential Equipment Rebates ("RER");
- Efficient Building Grants ("EBG");
- Commercial Equipment Rebates ("CER"); and
- Efficient Construction Grants ("ECG").

1.2. Portfolio-Level Updates

FY 2019 marked the second year in which the program's management, administration, rebates processing, marketing, and technical review was under the purview of one vendor. The improvements launched during the previous year were expanded upon in FY 2019, allowing for more efficient programming. The program administrator oversaw a strategic marketing plan which included outreach to HVAC contractors and trade allies, real estate professionals and civic associations.

¹ September 1, 2018 through August 31, 2019.

² In its Final Order approving PGW's DSM program, the PUC directed PGW to submit an amendment to its then pending Universal Service and Energy Conservation Plan 2017-2020 ("USECP") regarding the low income usage reduction program ("LIURP") budget and return of the LIURP to USECP. See *Petition of Philadelphia Gas Works for Approval of Demand-Side Management Plan*, Docket No. P-2014-245936 Order entered November 1, 2016 ("Final DSM Order"). Pursuant to this (and other directives), PGW filed two amendments to its Universal Service and Energy Conservation Plan 2017-2020 at Docket No. M-2016-2542415. Ultimately, the Commission approved PGW's proposal that the administrative costs of the LIURP budget remain combined with the DSM Plan and allocated proportionally across all programs as done historically given the cost efficiencies that can be achieved. See *Second Amended Universal Service and Energy Conservation Plan 2017-2020* dated August 31, 2017 at 27-28. The Commission entered a Final Order approving PGW's Second Amended USECP for the period of 2017-2020 on October 5, 2017. PGW expects it will submit a filing for continuation of its DSM portfolio in 2020.

³ PGW's LIURP was an included program in the DSM portfolio from January 1, 2011 through August 31, 2018 at which point it was moved to PGW's USECP as directed by the Commission. See *Final DSM Order* at 26-27.

In FY 2019, numerous projects included in PGW's internal project lead pipeline – built over the course of FY 2018 – received EnergySense incentives, many of which were CER and ECG projects. Several projects that applied for incentives in FY 2018 and FY 2019 but were not completed by the end of FY 2019 may still be eligible for incentives in FY 2020. .

PGW conducted program evaluations for the CER and ECG programs in FY 2019. These were initially planned for FY 2018, though moved to FY 2019 in order to achieve larger sample sizes. The results will be used to inform future program design.

1.3. Summary of Results⁴

In FY 2019, PGW spent \$1,146,114 on DSM programming, approximately 45 percent of the FY 2019 budget filed by PGW in its FY 2017-2020 Compliance Plan. PGW achieved estimated first year gas savings of 30.3 Billion Btu (“BBtu”) and 681 BBtu over the lifetime of the measures installed. The FY 2019 DSM activities have resulted in present value total resource net benefits of \$1,189,161 (2014\$).

TABLE 1. DSM COSTS AND BUDGETS BY PROGRAM (NOMINAL)⁵

Program	FY 2019		
	Actual	Goal	%
Residential Equipment Rebates (RER)	\$382,938	\$727,000	53%
Efficient Building Grants (EBG)	\$33,441	\$366,300	9%
Commercial Equipment Rebates (CER)	\$181,696	\$321,650	56%
Efficient Construction Grants (ECG)	\$232,097	\$237,000	98%
Portfolio-wide Costs ⁶	\$311,212	\$874,000	36%
Utility Total	\$1,141,386	\$2,525,950	45%
Participant Costs ⁷	\$2,628,549	\$1,660,228	158%
Total	\$3,769,934	\$4,186,178	90%

⁴ All figures expressed in dollars are rounded to the nearest dollar.

⁵ All PGW Efficiency Cost Recovery Surcharge collections are shown in Appendix A. FY 2018 over-collections were refunded to the appropriate customer classes in FY 2019.

⁶ Portfolio-wide Costs were allocated proportionally between LIURP and the EnergySense market rate portfolio, pursuant to the Final DSM Order.

⁷ Participant costs are significantly higher than the goal, and rose disproportionately in comparison to the Utility Total. This is due to several large ECG and CER projects in which incentives were capped at the program limits of \$60,000 and \$25,000, respectively.

TABLE 2. DSM COSTS AND BUDGETS BY CATEGORY (NOMINAL)

Category	FY 2019		
	Actual	Goal	%
Customer Incentives	\$618,195	\$1,319,550	47%
Administration and Management ⁸	\$46,705	\$659,000	7%
Marketing and Business Development	\$135,551	\$160,000	85%
Contractor Costs ⁹	\$226,157	\$227,100	100%
Inspection and Verification	\$19,635	\$50,300	39%
Evaluation ¹⁰	\$95,143	\$110,000	86%
Utility Total	\$1,141,386	\$2,525,950	45%
Participant Costs	\$2,628,549	\$1,660,228	158%
Total	\$3,769,934	\$4,186,178	90%

TABLE 3. PORTFOLIO-WIDE INCREMENTAL FIRST YEAR GAS SAVINGS (MMBTU)

Program	FY 2019		
	Actual	Goal	%
Residential Equipment Rebates (RER)	6,768	13,558	50%
Efficient Building Grants (EBG)	253	5,981	4%
Commercial Equipment Rebates (CER)	9,550	10,056	95%
Efficient Construction Grants (ECG)	13,775	2,778	496%
Portfolio Total	30,346	32,372	94%

TABLE 4. PORTFOLIO-WIDE INCREMENTAL LIFETIME GAS SAVINGS (MMBTU)

Program	FY 2019		
	Actual	Goal	%
Residential Equipment Rebates (RER)	144,305	296,175	49%
Efficient Building Grants (EBG)	8,059	111,850	7%
Commercial Equipment Rebates (CER)	202,067	156,427	129%
Efficient Construction Grants (ECG)	326,289	50,586	645%
Portfolio Total	680,720	615,037	111%

⁸ Administration and Management costs were allocated proportionally between LIURP and the EnergySense market rate portfolio, pursuant to the Final DSM Order.

⁹ Contractor costs were higher than originally projected for several reasons: 1) complex analysis was required for more projects than originally anticipated; 2) several projects reviewed did not qualify for an incentive after the analysis was completed; and 3) several projects reviewed were not completed by the customers.

¹⁰ Evaluation costs were higher than originally projected because the ECG and CER studies were moved from FY 2018 to FY 2019 so a larger sample size could be analyzed.

TABLE 5. NON-GAS BENEFITS

Category	FY 2019		
	Actual	Goal	%
First Year Energy Savings Installed (kWh)	154,038	147,470	104%
Lifetime Energy Savings Installed (kWh)	3,128,973	3,128,033	100%
First Year Water Savings Installed (million gallons)	3.1		
Lifetime Water Savings Installed (million gallons)	32		

TABLE 6. TOTAL ANNUAL SAVINGS FY 2011 THROUGH FY 2019

Cumulative EnergySense Portfolio Savings ¹¹	
Natural Gas (MMBtu)	531,555
Energy Savings (kWh)	4,530,029
Summer Peak Demand Savings (kW)	1,214
Water Savings (million gallons)	42.08

TABLE 7. TOTAL RESOURCE COST TEST RESULTS FOR FY 2019 (2014\$) BASE AVOIDED COST SCENARIO

Program	FY 2019			
	PV of Benefits	PV of Costs	PV of Net Benefits	BCR
Residential Equipment Rebates (RER)	\$1,096,404	\$819,649	\$276,756	1.34
Efficient Building Grants (EBG)	\$57,456	\$38,475	\$18,981	1.49
Commercial Equipment Rebates (CER)	\$1,235,346	\$201,686	\$1,033,660	6.13
Efficient Construction Grants (ECG)	\$1,778,412	\$1,670,621	\$107,792	1.06
All Programs	\$4,167,619	\$2,730,430	\$1,437,188	1.53
Portfolio Wide Costs	\$0	\$248,027	(\$248,027)	
Portfolio Total	\$4,167,619	\$2,978,457	\$1,189,161	1.40

¹¹ Savings includes DSM portfolio savings from January 1, 2011 through August 31, 2019. These figures include savings for PGW's LIURP from January 1, 2011 through August 31, 2016, at which point it was moved to PGW's USECP.

TABLE 8. TOTAL RESOURCE COST TEST RESULTS FOR FY 2019 (2014\$) AVOIDED COST SCENARIO INCLUDING CO2

Program	FY 2019			
	PV of Benefits	PV of Costs	PV of Net Benefits	BCR
Residential Equipment Rebates (RER)	\$1,360,131	\$819,649	\$540,483	1.66
Efficient Building Grants (EBG)	\$58,249	\$38,475	\$19,775	1.51
Commercial Equipment Rebates (CER)	\$1,488,736	\$201,686	\$1,287,050	7.38
Efficient Construction Grants (ECG)	\$2,103,766	\$1,670,621	\$433,145	1.26
All Programs	\$5,010,883	\$2,730,430	\$2,280,453	1.84
Portfolio Wide Costs	\$0	\$248,027	(\$248,027)	
Portfolio Total	\$5,010,883	\$2,978,457	\$2,032,425	1.68

2. Residential Equipment Rebate Program

The Residential Equipment Rebate program offers prescriptive rebates on premium efficiency heating equipment to increase the penetration of these technologies in the homes of PGW's customers. The program has the following objectives:

- Promote the selection of premium efficiency furnaces and boilers at the time of purchase of residential-sized gas heating equipment.
- Increase consumers' awareness of the breadth of energy efficiency opportunities in their homes.
- Strengthen PGW's relationship with customers as a partner in energy efficiency.
- Encourage market actors throughout the supply chain to provide and promote high efficiency options.
- Align incentives with other programs.
- Aid in market transformation towards highest-efficiency options.

TABLE 9. RESIDENTIAL EQUIPMENT REBATES RESULTS FOR FY 2019

	FY 2019		
	Actual	Goal	%
PARTICIPATION			
Completed Applications	582	1,030	57%
COSTS (Nominal)			
Non-Incentive Spending	\$28,638	\$56,000	51%
Contractor Costs	\$14,383		
Inspection and Verification	\$14,255		
Customer Incentives	\$354,300	\$671,000	53%
Total Program Spending	\$382,938	\$727,000	53%
Participant Costs	\$671,048		
Total Costs	\$1,053,986		
SAVINGS			
First Year MMBtus	6,768	13,558	50%
Lifetime MMBtus	144,305	296,175	49%
First Year kWh	148,400		
Lifetime kWh	2,968,000		
Measures			
Furnaces	493		
Boilers	89		

TABLE 10. TRC COST-EFFECTIVENESS RESULTS FOR RESIDENTIAL EQUIPMENT REBATES FOR FY 2019 (2014\$)

Metric	Result
PV of Benefits	\$1,096,404
PV of Costs	\$819,649
PV of Net Benefits	\$276,756
BCR	1.34

2.1. Notable Program Activities in FY 2019

In FY 2019, there were four hundred ninety three (493) residential furnaces installed and eighty nine (89) residential boilers installed. The program saw an increase in activity over the previous year, and it continues to be cost-effective.

In FY 2019, the greatest sources of applications continued to be HVAC contractors and supply houses, as shown in Table 11. PGW continued its outreach to these trade allies through activities similar to those conducted in previous program years, and as a result three quarters of applications were referrals from this source.

TABLE 11. SOURCE OF RESIDENTIAL EQUIPMENT REBATES REFERRALS FROM INCEPTION THROUGH FY 2019

Source	Percent
Family / Friend	3%
Contractor / Supply House	75%
Website	5%
Gas Bill	11%
Other	6%

Quality Assurance and Verifications

There were 60 on-site rebate verifications performed in 2019, accounting for 10 percent of all rebate projects. Projects were selected at random for verification, with verifications performed prior to issuing the rebate check. Projects in which the combined total rebate awarded was greater than \$5,000 were required to receive verification prior to receiving a rebate. Projects that failed on-site verification were not issued rebates.

3. Efficient Building Grants

The Efficient Building Grants program promotes natural gas energy efficiency retrofit investments by PGW's multi-family residential, commercial, and industrial customers. The program provides technical assistance and customized financial incentives for cost-effective gas-saving investments including high-efficiency heating system replacements, improved system controls, and building thermal performance enhancements. The program has the following objectives:

- Save natural gas through cost-effective energy efficiency retrofit projects.
- Make comprehensive energy-efficiency retrofits affordable by offering customized financial incentives.
- Promote a better understanding of energy efficiency options available to PGW's nonresidential customers.

TABLE 12. EFFICIENT BUILDING GRANTS PROGRAM ACTIVITY FOR FY 2019

	FY 2019		
	Actual	Goal	%
PARTICIPATION			
Applications	9		
Customers with Installations	1		
COSTS (Nominal)			
Non-Incentive Spending	\$ 29,056	\$113,400	26%
Contractor Costs and Project Analysis	\$28,788		
On-Site Verifications	\$268		
Customer Incentives	\$4,385	\$252,900	2%
Total Program Spending	\$33,441	\$366,300	9%
Participant Costs	\$14,233		
Total Costs	\$47,674		
SAVINGS			
First Year MMBtus	253	5,981	4%
Lifetime MMBtus	8,059	111,850	7%
First Year kWh	4,891		
Lifetime kWh	139,640		

TABLE 13. COST-EFFECTIVENESS RESULTS FOR EFFICIENT BUILDING GRANTS FOR FY 2019 (2014\$)

Metric	Result
PV of Benefits	\$57,456
PV of Costs	\$38,475
PV of Net Benefits	\$18,981
BCR	1.49

3.1. Notable Program Activities in FY 2019

Project Timelines

In 2019, PGW completed one project in the Efficient Building Grants program, and maintained program cost-effectiveness. Efficient Building Grants projects are typically discretionary and can take a significant amount of lead time for the customer to plan the project and obtain all necessary approvals. Perhaps linked to the lower than projected participation in 2019, several prospective projects were diverted to the prescriptive rebates program. The inter-program referrals were primarily in cases where customers were not interested in a comprehensive project, or where the comprehensive project did not meet cost-effectiveness requirements.

4. Commercial Equipment Rebates

The Commercial Equipment Rebates program issues prescriptive rebates on premium efficiency gas appliances and heating equipment to increase the penetration of these measures in the facilities of PGW nonresidential customers. The program has the following objectives:

- Promote the selection of premium efficiency models at the time of purchase of commercial- and industrial-sized gas heating equipment.
- Strengthen PGW's relationship with customers as a partner in energy efficiency.
- Encourage market actors throughout the supply chain to provide and promote high efficiency options.
- Aid in market transformation towards highest-efficiency options.

Eligible customers use certified contractors to install the premium efficiency equipment and receive cash rebates to offset most of the incremental cost of the higher efficiency equipment.

TABLE 14. COMMERCIAL EQUIPMENT REBATES RESULTS FOR FY 2019

	FY 2019		
	Actual	Goal	%
PARTICIPATION			
Completed Applications	49	144	34%
COSTS (Nominal)			
Non-Incentive Spending	\$64,163	\$83,000	77%
Contractor Costs	\$5,937		
Inspection and Verification	\$3,399		
Evaluation	\$54,827		
Customer Incentives	\$117,533	\$238,650	49%
Total Program Spending	\$181,696	\$321,650	56%
Participant Costs	\$68,659		
Total Costs	\$250,355		
SAVINGS			
First Year MMBtus	9,550	10,056	95%
Lifetime MMBtus	202,067	156,427	129%
First Year Water (Gallons)	785,785		
Lifetime Water (Gallons)	8,234,801		
Measures			
Commercial Boilers	11		
Commercial Cooking Equipment	24		
Commercial Water Heater	10		
Steam Traps	0		
Custom Projects	4		

TABLE 15. COST-EFFECTIVENESS RESULTS FOR COMMERCIAL EQUIPMENT REBATES FOR FY 2019 (2014\$)

Metric	Result
PV of Benefits	\$1,235,346
PV of Costs	\$201,686
PV of Net Benefits	\$1,033,660
BCR	6.13

4.1. Notable Program Activities in FY 2019

The Commercial Equipment Rebates program successfully issued 49 rebates in FY 2019, including 45 prescriptive rebates and 4 custom rebates. Spending for customer incentives totaled \$117,533. Although the program experienced a reduced level of participation compared to the previous year, it exceeded its lifetime savings goal due to the large proportion of commercial boilers that were incentivized.

5. Efficient Construction Grants

The Efficient Construction Grants program promotes natural gas energy efficiency in the construction and gut rehab markets, both for residential and non-residential construction projects. The program provides technical assistance and financial incentives for projects that exceed energy code design requirements. The program has the following objectives:

- Save natural gas through cost-effective energy efficiency new construction and gut rehabilitation projects.
- Promote a better understanding of energy efficiency options available in the new construction and gut rehabilitation markets.

TABLE 16. EFFICIENT CONSTRUCTION GRANTS PROGRAM RESULTS FOR FY 2019

	FY2019		
	Actual	Goal	%
PARTICIPATION			
Completed Projects	14	42	33%
Residential Single Family Buildings	11	30	
Multifamily and Mixed Use Buildings	3	10	
Non-residential buildings	0	2	
COSTS (Nominal)			
Non-Incentive Spending¹²	\$90,120	\$80,000	113%
Contractor Costs and Verifications	\$49,804		
Evaluation	\$40,316		
Customer Incentives	\$141,977	\$157,000	90%
Total Program Spending	\$232,097	\$237,000	98%
Participant Costs	\$1,895,393		
Total Costs	\$2,127,490		
SAVINGS			
First Year MMBtus	13,775	2,778	496%
Lifetime MMBtus	326,289	50,586	645%
First Year kWh	747		
Lifetime kWh	21,333		
Summer Peak Demand kW	0		
First Year Water (Gallons)	2,298,086		
Lifetime Water (Gallons)	24,016,452		

¹² Contractor costs were higher than expected for several reasons: 1) complex analysis was required for more projects than originally anticipated; 2) several projects reviewed did not qualify for an incentive after the analysis was complete; and 3) several projects reviewed were not completed by the customers.

TABLE 17. COST-EFFECTIVENESS RESULTS FOR EFFICIENT CONSTRUCTION GRANTS FOR FY 2019 (2014\$)

Metric	Result
PV of Benefits	\$57,456
PV of Costs	\$38,475
PV of Net Benefits	\$18,981
BCR	1.49

The Efficient Construction Grants program issued \$141,977 in grants for 14 projects during FY 2019, and spent 90% percent of the incentive budget goal. This year the program achieved participation from two very large multifamily projects which contributed significant savings to the program and resulted in the program significantly exceeding its savings goals.

PGW's marketing for the Efficient Constructions Grant program in FY 2019 also resulted in several projects that are projected to close in FY 2020, including a 60-townhouse development. PGW has also been successful at cultivating relationships with builders of single family or small multi-family properties, which require a shorter lead and completion time.

6. Appendix A. Cost Recovery Reconciliation

TABLE 18. Efficiency Cost Recovery Surcharge Residential and PHA GS Customers (September 2018 Through August 2019)

Residential & PHA GS

	Actual Sep-18	Actual Oct-18	Actual Nov-18	Actual Dec-18	Actual Jan-19	Actual Feb-19	Actual Mar-19	Actual Apr-19	Actual May-19	Actual Jun-19	Actual Jul-19	Estimated Aug-19	Total FY2019
RESIDENTIAL & PHA GS													
FY 2018 Over-Collection	\$ 402,658												
Volume Billed	692,388	935,081	3,022,500	5,368,067	6,553,283	7,023,713	5,699,061	3,093,560	1,355,688	885,146	685,707	601,436	35,915,830
ECR Surcharge	\$ 0.0189	\$ 0.0198	\$ 0.0198	\$ 0.0250	\$ 0.0301	\$ 0.0301	\$ 0.0260	\$ 0.0219	\$ 0.0219	\$ 0.0136	\$ 0.0053	\$ 0.0053	
Revenue Billed	\$ 13,052	\$ 18,515	\$ 59,846	\$ 133,933	\$ 197,254	\$ 211,414	\$ 148,178	\$ 67,749	\$ 29,690	\$ 12,038	\$ 3,634	\$ 3,188	\$ 898,488
RHER													
Expense	\$ 406	\$ 14,240	\$ 13,304	\$ 36,421	\$ 81,168	\$ 54,360	\$ 63,986	\$ 60,651	\$ (2,573)	\$ 25,904	\$ 49,100	\$ 49,100	\$ 448,088
Labor	\$ 1,451	\$ 1,153	\$ (1,465)	\$ 1,333	\$ 1,363	\$ 1,876	\$ 1,773	\$ 1,578	\$ 2,489	\$ 1,313	\$ 1,242	\$ 1,242	\$ 15,148
HECI													
Expense	\$ 82	\$ 1,656	\$ (1,738)	\$ 6,912	\$ 16,275	\$ (16,199)	\$ 2,135	\$ 3,101	\$ 83,598	\$ 426	\$ 960	\$ 960	\$ 98,168
HECI													
Labor	\$ 292	\$ 232	\$ (524)	\$ 268	\$ 274	\$ (350)	\$ 58	\$ 51	\$ 2,797	\$ 43	\$ 40	\$ 40	\$ 3,222
CRRI													
Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CRRI													
Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIRI													
Expense	\$ 60	\$ 116	\$ (122)	\$ 9,882	\$ 295	\$ (10,231)	\$ -	\$ -	\$ 126,767	\$ -	\$ -	\$ -	\$ 128,767
CIRI													
Labor	\$ 216	\$ 171	\$ (387)	\$ 198	\$ 203	\$ (401)	\$ -	\$ -	\$ 1,680	\$ -	\$ -	\$ -	\$ 1,680
CIER													
Expense	\$ 1	\$ 49	\$ (50)	\$ 43	\$ 455	\$ (498)	\$ -	\$ -	\$ 9,536	\$ -	\$ -	\$ -	\$ 9,538
CIER													
Labor	\$ 3	\$ 2	\$ (6)	\$ 3	\$ 3	\$ (6)	\$ -	\$ -	\$ 170	\$ -	\$ -	\$ -	\$ 170
Total	\$ 2,511	\$ 17,621	\$ 9,013	\$ 55,060	\$ 100,036	\$ 28,352	\$ 67,951	\$ 65,381	\$ 224,464	\$ 27,686	\$ 51,341	\$ 51,341	\$ 700,758
Monthly Over/(Under)	\$ 10,540	\$ 894	\$ 50,833	\$ 78,873	\$ 97,218	\$ 183,061	\$ 80,224	\$ 2,368	\$ (194,775)	\$ (15,648)	\$ (47,707)	\$ (48,154)	
Cumulative Over/(Under)	\$ 413,196	\$ 414,090	\$ 464,923	\$ 543,796	\$ 641,014	\$ 824,076	\$ 904,300	\$ 906,668	\$ 711,893	\$ 696,245	\$ 648,538	\$ 600,385	

TABLE 19. Efficiency Cost Recovery Surcharge Commercial and PHA Customers (September 2018 Through August 2019)
Commercial & PHA

		Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Estimated	Total
		Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	FY2019
COMMERCIAL & PHA														
FY 2018 Over-Collection	\$ 355,727													
Volume Billed		363,598	520,371	1,059,369	1,515,558	1,873,062	1,859,051	1,573,165	900,048	535,983	418,709	380,870	352,430	11,352,214
ECR Surcharge		\$ 0.0503	\$ 0.0529	\$ 0.0529	\$ 0.0470	\$ 0.0411	\$ 0.0411	\$ 0.0408	\$ 0.0405	\$ 0.0405	\$ 0.0524	\$ 0.0642	\$ 0.0642	
Revenue Billed		\$ 18,289	\$ 27,528	\$ 58,041	\$ 71,231	\$ 76,983	\$ 76,407	\$ 64,185	\$ 36,452	\$ 21,707	\$ 21,919	\$ 24,452	\$ 22,626	\$ 517,820
RHER	Expense	\$ 22	\$ 764	\$ (786)	\$ 1,955	\$ 4,356	\$ 465	\$ 2,169	\$ 2,056	\$ (2,382)	\$ 878	\$ 1,664	\$ 1,664	\$ 12,827
RHER	Labor	\$ 78	\$ 62	\$ (140)	\$ 72	\$ 73	\$ 42	\$ 60	\$ 53	\$ 3	\$ 45	\$ 42	\$ 42	\$ 433
CRRI	Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CRRI	Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIRI	Expense	\$ 99	\$ 189	\$ (199)	\$ 16,139	\$ 482	\$ 9,701	\$ 7,463	\$ 7,454	\$ (41,328)	\$ 197	\$ 5,372	\$ 5,372	\$ 10,941
CIRI	Labor	\$ 352	\$ 280	\$ (832)	\$ 324	\$ 331	\$ 74	\$ 680	\$ 605	\$ (2,013)	\$ 504	\$ 476	\$ 476	\$ 1,456
CIER	Expense	\$ 139	\$ 7,836	\$ 24,835	\$ 6,959	\$ 73,102	\$ 28,300	\$ 18,078	\$ 14,985	\$ 225,358	\$ 1,578	\$ 32,473	\$ 32,473	\$ 485,917
CIER	Labor	\$ 499	\$ 396	\$ 433	\$ 458	\$ 468	\$ 1,833	\$ 615	\$ 547	\$ 2,089	\$ 455	\$ 431	\$ 431	\$ 8,455
HECI	Expense	\$ 25	\$ 513	\$ 16,530	\$ 2,139	\$ 5,037	\$ 24,386	\$ 14,855	\$ 21,581	\$ (85,066)	\$ 2,967	\$ 6,678	\$ 6,678	\$ 16,323
HECI	Labor	\$ 90	\$ 72	\$ 537	\$ 83	\$ 85	\$ 474	\$ 400	\$ 358	\$ (2,097)	\$ 298	\$ 280	\$ 280	\$ 857
Total		\$ 1,304	\$ 10,112	\$ 40,378	\$ 28,128	\$ 83,935	\$ 65,076	\$ 44,319	\$ 47,638	\$ 94,565	\$ 6,922	\$ 47,416	\$ 47,416	\$ 517,209
Monthly Over/(Under)		\$ 16,985	\$ 17,416	\$ 15,662	\$ 43,103	\$ (6,952)	\$ 11,331	\$ 19,866	\$ (11,186)	\$ (72,858)	\$ 14,998	\$ (22,964)	\$ (24,790)	
Cumulative Over/(Under)		\$ 372,712	\$ 390,128	\$ 405,790	\$ 448,893	\$ 441,941	\$ 453,273	\$ 473,139	\$ 461,952	\$ 389,095	\$ 404,093	\$ 381,128	\$ 356,338	

TABLE 20. Efficiency Cost Recovery Surcharge Industrial Customers (September 2018 Through August 2019)

Industrial

INDUSTRIAL	Actual Sep-18	Actual Oct-18	Actual Nov-18	Actual Dec-18	Actual Jan-19	Actual Feb-19	Actual Mar-19	Actual Apr-19	Actual May-19	Actual Jun-19	Actual Jul-19	Estimated Aug-19	Total FY2019
FY 2018 Over-Collection \$ 77,349													
Volume Billed	30,295	43,389	89,550	119,894	153,457	142,280	117,521	67,107	42,946	30,361	29,935	30,883	897,618
ECR Surcharge	\$ 0.0531	\$ 0.0566	\$ 0.0566	\$ (0.0075)	\$ (0.0716)	\$ (0.0716)	\$ (0.0546)	\$ (0.0376)	\$ (0.0376)	\$ (0.0338)	\$ (0.0299)	\$ (0.0299)	
Revenue Billed	\$ 1,609	\$ 2,456	\$ 5,069	\$ (899)	\$ (10,988)	\$ (10,187)	\$ (6,417)	\$ (2,523)	\$ (1,615)	\$ (1,025)	\$ (895)	\$ (923)	\$ (26,339)
													\$
RHER Expense	\$ 0	\$ 17	\$ (17)	\$ 43	\$ 95	\$ (138)	\$ -	\$ -	\$ 1,724	\$ -	\$ -	\$ -	\$ 1,724
RHER Labor	\$ 2	\$ 1	\$ (3)	\$ 2	\$ 2	\$ (3)	\$ -	\$ -	\$ 61	\$ -	\$ -	\$ -	\$ 61
CIRI Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIRI Labor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIER Expense	\$ 3	\$ 187	\$ (190)	\$ 166	\$ 1,742	\$ (1,908)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIER Labor	\$ 12	\$ 9	\$ (21)	\$ 11	\$ 11	\$ (22)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 17	\$ 214	\$ (232)	\$ 221	\$ 1,850	\$ (2,071)	\$ -	\$ -	\$ 1,785	\$ -	\$ -	\$ -	\$ 1,785
Monthly Over/(Under)	\$ 1,591	\$ 2,242	\$ 5,300	\$ (1,120)	\$ (12,837)	\$ (8,116)	\$ (6,417)	\$ (2,523)	\$ (3,399)	\$ (1,025)	\$ (895)	\$ (923)	
Cumulative Over/(Under)	\$ 78,940	\$ 81,182	\$ 86,482	\$ 85,362	\$ 72,524	\$ 64,408	\$ 57,991	\$ 55,468	\$ 52,069	\$ 51,044	\$ 50,149	\$ 49,225	