Annual Report to the Pennsylvania Public Utility Commission

For the period
June 2010 to May 2011
Program Year 2

For Act 129 of 2008
Energy Efficiency and Conservation Program
of West Penn Power Company

Prepared by West Penn Power Company
July 15, 2011

Table of Contents

Abbreviations (see Glossary for definitions)

AYE	Allegheny Energy Corp.
CPITD	Cumulative Program/Portfolio Inception to Date
CSP	Conservation Service Provider
EDC	Electric Distribution Company
EE&C	Energy Efficiency and Conservation
EM&V	Evaluation Measurement and Verification
FE	FirstEnergy Corp.
IQ	Incremental Quarter
kW	Kilowatt
kWh	Kilowatt-hour
LDDA	Local Development District Associations
M&V	Measurement and Verification
MW	Megawatt
MWh	Megawatt-hour
NTG	Net-to-Gross
PY	Program Year
PYTD	Program/Portfolio Year to Date
SWE	Statewide Evaluator
TRC	Total Resource Cost
TRM	Technical Reference Manual
TWG	Technical Working Group
WPP	West Penn Power

1 Overview of Portfolio

Act 129 of 2008, 66 Pa. C.S. § 2806.1 *et seq.* ("Act 129"), signed into law on October 15, 2008, set forth energy efficiency ("EE") and peak demand reduction ("PDR") requirements for Pennsylvania's largest electric distribution companies (EDCs). Section 2806.1(c)(1) and (2) of Act 129 requires EDCs to reduce electric consumption by 1% and 3% of their annual weather-normalized energy requirements by May 31, 2011 and May 31, 2013, respectively. Section 2806.1(d)(1) further requires EDCs to reduce their PDR by 4.5% by May 31, 2013. Pursuant to these requirements, West Penn Power ("WPP" or "Company") submitted an energy efficiency and conservation (EE&C) plan ("EE&C Plan") on October 23, 2009 and an amendment on September 10, 2010, which explained how WPP intended to comply with these statutory requirements. The Commission approved this EE&C Plan through a series of Orders.[1]

In accordance with the Secretarial Letter issued on May 25, 2011[2], which requires the EDCs to submit a preliminary and final annual status report by July 15th and November 15th, respectively, WPP hereby submits this preliminary annual report documenting the progress towards compliance with the aforementioned requirements for the period June 1, 2010 through May 31, 2011 ("Reporting Period"). Because only 8 of the 16 programs included in the EE&C Plan have been evaluated for EM&V savings, the Company anticipates final results to be higher in the November 15, 2011 report.

Based on preliminary results as set forth below in more detail, the Company does not anticipate achieving its May 31, 2011 energy efficiency requirements, but fully expects to meet its post-2011 EE&C requirements. The 2011 shortfall occurred for several reasons, unique to WPP. First, the Company's parent, Allegheny Energy, Inc. (Allegheny") was in the process of merging with FirstEnergy Corp. ("FirstEnergy"). FirstEnergy owns three other EDCs in Pennsylvania – Metropolitan Edison Company, Pennsylvania Electric Company and Pennsylvania Power Company ("PA Companies"), all of which have approved and successful EE&C plans with programs that are uniform throughout the three PA Companies. With WPP joining the FirstEnergy family, time and resources were devoted to analyzing how best to fit the WPP EE&C Plan into the mix and looking for cost savings opportunities through synergies and increased buying power. This was critical, given the 2% spending cap imposed by Act 129.[3] This spending cap, combined with the fact that WPP had lower revenues in 2006, resulted in WPP having the smallest compliance budget among any of the Pennsylvania EDCs:

	FirstEnergy Companies				Duquesne	PECO	PPL
	West Penn Power	Met-Ed	Penelec	Penn Power			
Act 129 spending $/ targeted MWh	**$150**	**$223**	**$213**	**$187**	**$185**	**$289**	**$215**

(Based on a $/MWh saved (4-year) basis)

[1] *Energy Efficiency and Conservation Program,* Docket No. M-2008-2069887; Secretarial Letter (May 25, 2011), Docket No. M-2008-2069887. WPP notes that in its efforts to comply with Act 129, they followed their Commission-approved EE&C Plans, which were the result of collaboration between WPP and approximately 15 intervenors.

[2] *Energy Efficiency and Conservation Program,* Docket No. M-2008-2069887, Secretarial Letter (May 25, 2011). See Docket No. M-2008-2069887

[3] 66 Pa. C.S. § 2806.1(gB)(II).

Because of this funding limitation, the Company did not have extra funds to out-source the administration and implementation of most programs, instead trying to leverage internal resources.[4] This in-sourced model required a longer ramp-up time period than originally contemplated, as well as greater resource dedication than expected in order to try to meet the savings results in the required time period – the same resources that were also required to focus on the merger with FirstEnergy and to analyze the PA Companies' EE&C Plans.

Further, WPP has the lowest electric rates in the state. This created several obstacles unique to WPP. First, lower rates generally provide less incentive for customers to conserve energy. Therefore, WPP customers did not have the same incentives to participate in the programs as did customers of other Pennsylvania EDCs with higher rates. Given the budget constraints, WPP was not able to provide a higher incentive that would bring financial paybacks in line with those resulting in the territories of the other Pennsylvania EDC territories and which were apparently necessary to attract customers.[5] The Company remains committed to complying with Act 129, and is actively working to address the shortfall. At the same time, WPP wants all interested parties to have an explanation that puts this report in context.

In the future, WPP intends to leverage the benefits resulting from the merger between FirstEnergy and Allegheny, which was approved in February 2011. The merger created economies of scale and increased buying power for WPP, thus allowing it to move to an outsourced model.

Also, WPP is working with Commission Staff in addressing the shortfalls with compliance. In April, 2011, representatives from FirstEnergy met with Commission Staff to discuss the shortfalls anticipated during the Reporting Period, which are described later in this report, and to explain their strategy for making up this shortfall and meeting WPP's post-2011 EE&C requirements. This strategy includes: 1) leveraging the success of other cost-effective programs already in place at the other PA Companies; 2) transitioning program implementation and administration to experienced EE vendors; and 3) filing proposed changes to WPP's current EE&C Plan that reflect changes FirstEnergy believes are necessary in order to maximize opportunities in Plan Years 3 and 4.

This strategy has already been put in place and is already showing positive results. For example, an Opt-in CFL campaign similar to that of the other PA Companies was launched in May, 2011 under the Home Performance program and resulted in over 30,000 CFL kits being mailed to customers by the end of the Reporting Period for Program Year 2, Quarter 4 with a goal of distributing approximately 300,000 kits by the end of 2011. In addition, the transition to experienced EE vendors is in progress and nearing completion for several programs in the Residential and C&I Sectors. The new outsourced strategy leverages the buying power created by the economies of scale of the merged company as well as the best practices and FirstEnergy vendor expertise, thus reducing the overall costs of the outsourced model, and providing current WPP EE staff with more time to focus on issues that improve programs and customer participation. Budgets, contracts and targets are being finalized. Some of the contracts have already been submitted to and approved by the Commission, and the Company anticipates

[4] While WPP did not actually spend their entire budget, the dollars had already been earmarked for specific aspects of its plan, thus making it difficult to adjust or increase spending for specific areas. This is especially true given the previous limitations on shifting spending without prior Commission approval.

[5] Other EDCs with higher rates, have higher spending caps because the cap is tied to sales revenues. These EDCs have a bigger budget and require a lesser incentive amount to obtain similar pay back periods, thus providing them with greater opportunities for program participation.

submitting an amended plan filing within the next several weeks, hopefully obtaining expedited approval for many of the proposed changes that attempt to assimilate the WPP programs to the successful programs of the PA Companies. With these changes, WPP is optimistic about meeting its post-2011 EE&C requirements.

While the Company is aware that Act 129 requires each EDC to meet its individual EE&C requirements, the FirstEnergy family of Pennsylvania EDCs (WPP, and the PA Companies) met their aggregate May 31, 2011 energy efficiency requirements based on preliminary EE&C results, thus demonstrating FirstEnergy's commitment to providing cost effective EE&C programs to *all* of its customers throughout the Commonwealth of Pennsylvania.

As was contemplated by the Commission's directive, WPP will submit its final report by November 15, 2011, providing verified savings achieved during the Reporting Period, consistent with Act 129 and Commission requirements.

Compliance goal progress as of the end of the reporting period[6]:

Cumulative Portfolio Energy Impacts

- The CPITD reported gross energy savings is 96,261 MWh, of the 209,387 MWh May 31st, 2011 energy savings compliance target.
- The CPITD preliminary verified energy savings is 73,930 MWh based on preliminary Plan Year 2 results that incorporate 8 of 16 reported programs[7].
- Achieved 46.0% of the 209,387 MWh May 31, 2011 energy savings compliance target on a gross basis, and a 35.3% on a preliminary verified basis (8 of 16 reported programs verified).
- Achieved 15.3% of the 628,160 MWh May 31, 2013 energy savings compliance target on a gross basis, and 11.8% on a preliminary verified basis (8 of 16 reported programs verified).

Portfolio Demand Reduction[8]

- The CPITD reported gross demand reduction is 14.6 MW.
- The CPITD preliminary verified demand reduction is 11.3 MW based on preliminary Plan Year 2 results that incorporate 8 of 16 reported programs.
- Achieved 7.2% of the 157.3 MW May 31, 2013 demand reduction compliance target.

Low Income Sector

- There are 59,546 measures offered to the low-income sector, comprising 6% of the total measures offered.
- The CPITD reported gross energy savings for low-income sector programs is 7,456 MWh.
- The CPITD preliminary verified energy savings for low-income sector programs is 7,482 MWh.

[6] Percentage of compliance target achieved calculated using verified Cumulative Program/Portfolio Inception to Date values (or Preliminary verified value, if not available) divided by compliance target value.

[7] As discussed above, formal realization rates are not yet available for all programs in Plan Year 2.

[8] Demand reduction to include both the demand savings from the installation of energy efficiency measures and the demand reduction associated with demand response programs.

Government and Non-Profit Sector

- The CPITD reported gross energy savings for government and non-profit sector programs is 14,976 MWh.[9]
- The CPITD preliminary verified energy savings for government and non-profit sector programs is 11,849 MWh.
- Achieved 18.5% of the 63,997 MWh May 31, 2013 energy savings compliance target.[10]

Program Year portfolio highlights as of the end of the reporting period:

- The PYTD reported gross energy savings is 90,355 MWh.
- The PYTD preliminary verified energy savings is 70,978 MWh based on preliminary Plan Year 2 results that incorporate 8 of 16 reported programs.
- The PYTD reported gross demand reduction is 13.6 MW.
- The PYTD preliminary verified demand reduction 10.8 MW based on preliminary Plan Year 2 results that incorporate 8 of 16 reported programs.
- The PYTD reported participation is 239,998.[11]

Portfolio M&V Status

West Penn Power contracted with an independent Evaluation, Measurement and Verification Team (led by Tetra Tech and supported by SAIC and ADM Associates) to evaluate its energy efficiency and conservation (EE&C) programs portfolio. The Program Year 2010 (PY2) program evaluation efforts included process evaluations and impact evaluations for all programs.

The evaluation team completed the following activities in PY2:

- **Conducted Residential Trade Ally Interviews and Observation Visits:** Tetra Tech completed trade ally interviews and mystery shopping/observation visits for the CFL Rewards and Residential ENERGY STAR and High Efficiency Appliances programs. The purpose of these process evaluation activities were to gauge program awareness of market actors, energy efficient sales practices and provide recommendations to West Penn Power on how to increase market actor involvement with the programs.
- **Conducted Commercial Program Participant Surveys and Trade Ally Interviews:** Tetra Tech completed surveys of program participants for all commercial sector programs to support the process and impact evaluation. These included Government/Non-Profit Lighting, Commercial Lighting (now the Commercial Products Efficiency Program), Commercial HVAC, and Custom Applications programs. In addition, 34 trade ally interviews were completed for the Commercial and Government/Nonprofit Lighting programs and HVAC program.
- **Conducted Commercial Program Site Visits:** Tetra Tech's team conducted on-site verification of savings and calculated realization rates for all of the commercial sector programs.
- **Conducted Program Design and Delivery Staff Interviews:** The evaluation team conducted periodic interviews with West Penn Power Program Managers as well as with implementers when relevant for programs. The interviews updated the EM&V team's understanding of how

[9] This includes Government and Non-Profit Sector customer participation in all C&I and Government and Non-Profit Sector Programs.

[10] Reflects Government and Non-Profit Sector customer participation in Government and Non-Profit Sector Program only.

[11] CFL participants comprise 163,155 of the listed participant numbers. CFL participants are defined by the number of CFL packages purchased through WPP's Compact Fluorescent Lighting (CFL) Rewards Program.

programs are operating, identified future possible changes to the programs, and informed data collection activities with market actors and participants.

- **Verified Savings:** Tetra Tech has verified savings for all PY2 programs on a final or preliminary basis. Final Realization Rates and verified savings are included for the following programs as of this annual report: CFL Rewards, Residential ENERGY STAR and High Efficiency Appliances and Commercial HVAC efficient equipment. Preliminary Realization Rates and verified savings are included for Residential HVAC Efficiency, Home Performance, Low Income Home Check-up, Low Income JUUMP, Commercial Lighting, Government Non-Profit Lighting, Commercial Custom and Commercial Custom Technology Applications. All Preliminary Realization Rates and verified savings will be finalized for the final PY2 Annual report due November 15, 2011.

1.1 Summary of Portfolio Impacts[12]

A summary of the portfolio reported impacts is presented in Table 1-1.

Table 1-1: EDC Reported Portfolio Impacts through the Fourth Quarter, Program Year 2

Impact Type	Total Energy Savings (MWh)	Total Demand Reduction (MW)
Reported Gross Impact: Incremental Quarterly	40,379	5.2
Reported Gross Impact: Program Year to Date	90,355	13.6
Reported Gross Impact: Cumulative Portfolio Inception to Date	96,261	14.6
Unverified Ex Post Savings	0	0.0
Estimated Impact: Projects in Progress	21,809	4.6
Estimated Impact: PYTD Total Committed	112,164	18.2
Preliminary PYTD Verified Impact[a]	70,978	10.8
Preliminary PYTD Net Impact[b]	70,978	10.8

NOTES:
[a] Portfolio Verified Impact calculated by aggregating Program PYTD Verified Impacts. Program PYTD Verified Impacts are calculated by multiplying Program PYTD Reported Gross Impacts by program realization rates.
[b] Portfolio Net Impact calculated by aggregating Program Net Impacts. Program Net Impacts are calculated by multiplying Program PYTD Verified Impacts by program Net-to-Gross ratios.

A summary of total evaluation adjusted impacts for the portfolio is presented in Table 1-2.[13]

Table 1-2: Verified Preliminary Portfolio Total Evaluation Adjusted Impacts through the End of the Fourth Quarter, Program Year 2

TRC Category	IQ[a]	PYTD[b]	CPITD
TRC Benefits ($)	N/A	N/A	N/A
TRC Costs ($)	N/A	N/A	N/A
TRC Benefit-Cost Ratio			N/A

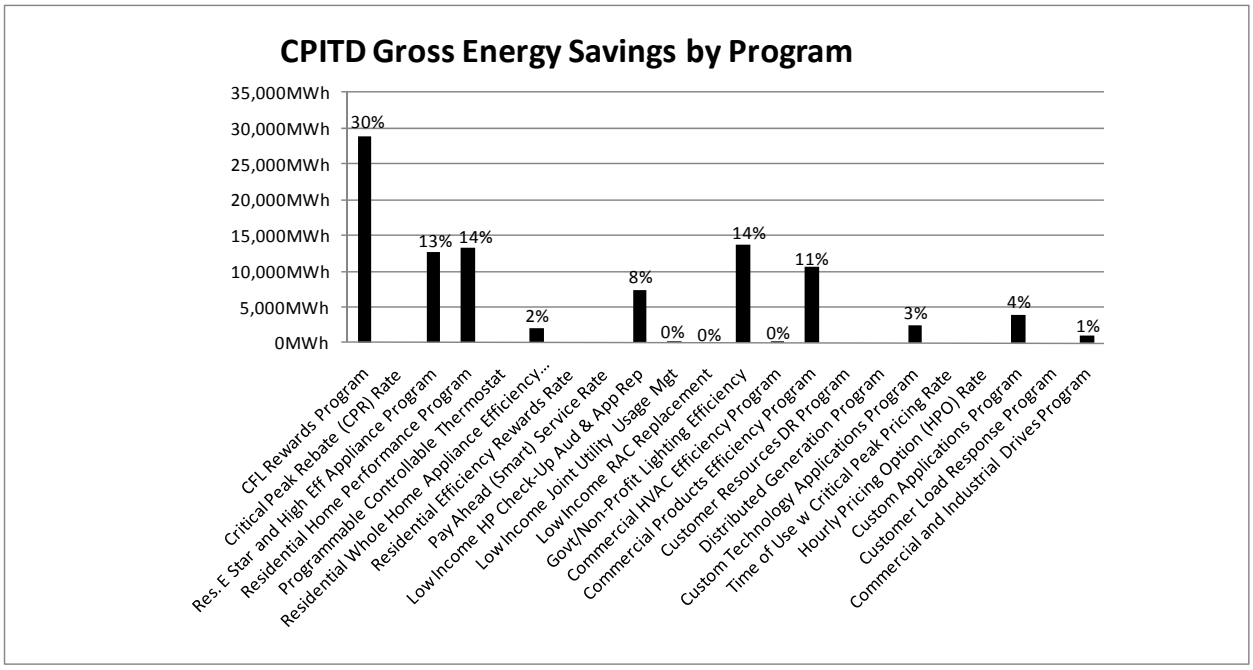
NOTES:
[a] Based on reported gross savings.
[b] Based on reported gross savings.

[12] The PY2 3rd Quarter report includes WPP's September 10, 2010 Revised Amended Plan approved January 13, 2011 in all tables and figures. Programs removed or changed are identified within each pertinent Table.
[13] Consistent with prior guidance from PUC Staff, this Report will not include information related to TRC Benefit-to-Cost Ratios.

1.2 Summary of Energy Impacts by Program

A summary of the reported energy savings by program is presented in Figure 1-1.

Figure 1-1: CPITD Reported Gross Energy Savings by Program through the Fourth Quarter, Program Year 2



A summary of energy impacts by program through the Fourth Quarter, Program Year 2 is presented in Table 1-3 and Table 1-4.

Table 1-3: EDC Reported Participation and Gross Energy Savings by Program through the Fourth Quarter, Program Year2

Program	Participants			Reported Gross Impact (MWh)		
	IQ	PYTD	CPITD	IQ	PYTD	CPITD
Compact Fluorescent Lighting (CFL) Rewards Program	47,561	163,155	163,415	10,100	28,849	28,931
Critical Peak Rebate (CPR) Rate						
Residential Energy Star and High Efficiency Appliance Program	7,686	26,116	28,623	3,096	11,584	12,637
Residential Home Performance Program	35,750	42,668	46,638	11,792	12,670	13,384
Programmable Controllable Thermostat (PCT) Program (removed from Plan)						
Residential Whole Home Appliance Efficiency Program (previously Residential HVAC Efficiency Program)	241	1,983	1,986	309	2,109	2,112
Residential Efficiency Rewards Rate (removed from Plan)						
Pay Ahead (Smart) Service Rate (removed from Plan)						
Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program	1,884	5,337	5,580	2,643	6,529	7,373
Residential Low Income Joint Utility Usage Management Program	49	120	120	43	83	83
Residential Low Income Room Air Conditioner Replacement Program (removed from Plan)						
Governmental/Non-Profit Lighting Efficiency Program	175	434	758	2,263	10,617	13,641
Commercial HVAC Efficiency Program	0	2	2	0	2	2
Commercial Products Efficiency Program (previously called Commercial Lighting Efficiency Program)	43	153	156	6,029	10,439	10,626
Customer Resources Demand Response Program						
Distributed Generation Program						
Custom Technology Applications Program	8	15	15	1,183	2,509	2,509
Time of Use (TOU) with Critical Peak Pricing Rate						
Hourly Pricing Option (HPO) Rate (removed from Plan)						
Custom Applications Program	5	9	9	2,815	3,990	3,990
Customer Load Response Program						
Commercial and Industrial Drives Program (added to Custom Technology Applications and Custom Applications Programs and removed as a stand-alone Program; however, will continue to report as a line item due to participation under stand-alone offering). Data reflects customer approved applications received prior to approval to decommission.	1	6	6	106	972	972
TOTAL PORTFOLIO	93,403	239,998	247,308	40,379	90,355	96,261

NOTES: (1) Absence of data indicates program has not been launched.

Table 1-4: EDC Reported Gross Energy Savings by Program through the Fourth Quarter, Program Year 2

Program	Projects In Progress (MWh)	Unverified Ex Post Savings (MWh)	PYTD Total Committed (MWh)	EE&C Plan Estimate for Program Year	Percent of Estimate Committed (%)
Compact Fluorescent Lighting (CFL) Rewards Program	1	0	28,850	21,674	133%
Critical Peak Rebate (CPR) Rate				0	
Residential Energy Star and High Efficiency Appliance Program	280	0	11,864	11,698	101%
Residential Home Performance Program	0	0	12,670	17,035	74%
Programmable Controllable Thermostat (PCT) Program (removed from Plan)					
Residential Whole Home Appliance Efficiency Program (previously Residential HVAC Efficiency Program)	36	0	2,145	1,458	147%
Residential Efficiency Rewards Rate (removed from Plan)					
Pay Ahead (Smart) Service Rate (removed from Plan)					
Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program	0	0	6,529	2,408	271%
Residential Low Income Joint Utility Usage Management Program	0	0	83	3,322	2%
Residential Low Income Room Air Conditioner Replacement Program (removed from Plan)					
Governmental/Non-Profit Lighting Efficiency Program	793	0	11,410	44,301	26%
Commercial HVAC Efficiency Program	1	0	3	238	1%
Commercial Products Efficiency Program (previously called Commercial Lighting Efficiency Program)	993	0	11,432	64,740	18%
Customer Resources Demand Response Program				0	
Distributed Generation Program				0	
Custom Technology Applications Program	4,476	0	6,985	5,826	120%
Time of Use (TOU) with Critical Peak Pricing Rate				0	
Hourly Pricing Option (HPO) Rate (removed from Plan)					
Custom Applications Program	13,565	0	17,555	29,635	59%
Customer Load Response Program				0	
Commercial and Industrial Drives Program (added to Custom Technology Applications and Custom Applications Programs and removed as a stand-alone Program; however, will continue to report as a line item due to participation under stand-alone offering). Data reflects customer approved applications received prior to approval to decommission.	1,664	0	2,636	0	
Total	21,809	0	112,164	202,335	55%

NOTES: (1) "Unverified Ex Post Savings" are unverified savings pending approval of TRM or Custom Measure Protocol by the Commission.

(2) Absence of data indicates that program has not been launched.

(3) EE&C Plan Estimate for Program Year reflects Plan approved on January 13, 2011.

(4) EE&C Plan Estimate for Program Year for Commercial & Industrial Drives Program is included in Custom Technology Applications Program and Custom Applications Program.

A summary of evaluation verified energy impacts by program is presented in Table 1-5.

Table 1-5: Preliminary Energy Savings by Program through the Fourth Quarter, Program Year 2

Program	PYTD Reported Gross Impact (MWh)	Preliminary Realization Rate	Preliminary PYTD Verified Impact (MWh)	Net-to-Gross Ratio	PYTD Net Impact (MWh)
Compact Fluorescent Lighting (CFL) Rewards Program	28,849	1.00	28,849	1	28,849
Critical Peak Rebate (CPR) Rate					
Residential Energy Star and High Efficiency Appliance Program: Dishwashers, Clothes Washers, Clother Dryers, RAC Rebate, RAC Recycling, Refrigerator Recycling, and Freezer Recycling *(Note 2, Note 3)*	5,223	1.00	4,705	1	4,705
Residential Energy Star and High Efficiency Appliance Program: Refrigerator Rebate with Recycling and Freezer Replacement with Recycling *(Note 2)*	6,361	1.16	7,379	1	7,379
Residential Home Performance Program: On-line Analyzer	727	0.92	669	1	669
Residential Home Performance Program: CFL Event Giveaway	1,907	0.94	1,793	1	1,793
Residential Home Performance Program: Other *(Note 4)*	10,036		0	1	0
Programmable Controllable Thermostat (PCT) Program (removed from Plan)					
Residential Whole Home Appliance Efficiency Program (previously Residential HVAC Efficiency Program)	2,109	1.00	2,109	1	2,109
Residential Efficiency Rewards Rate (removed from Plan)					
Pay Ahead (Smart) Service Rate (removed from Plan)					
Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program	6,529	1.13	7,378	1	7,378
Residential Low Income Joint Utility Usage Management Program	83	1.25	104	1	104
Residential Low Income Room Air Conditioner Replacement Program (removed from Plan)					
Governmental/Non-Profit Lighting Efficiency Program	10,617	0.78	8,282	1	8,282
Commercial HVAC Efficiency Program	2	1.21	3	1	3
Commercial Products Efficiency Program (previously called Commercial Lighting Efficiency Program)	10,439	0.93	9,708	1	9,708
Customer Resources Demand Response Program					
Distributed Generation Program					
Custom Technology Applications Program	2,509		0	1	0
Time of Use (TOU) with Critical Peak Pricing Rate					
Hourly Pricing Option (HPO) Rate (removed from Plan)					
Custom Applications Program	3,990		0	1	0
Customer Load Response Program	0		0	1	0
Commercial and Industrial Drives Program (added to Custom Technology Applications and Custom Applications Programs and removed as a stand-alone Program; however, will continue to report as a line item due to participation under stand-alone offering). Data reflects customer approved applications received prior to approval to decommission.	972		0	1	0
Total	**90,355**		**70,978**		**70,978**

NOTES: (1) Absence of data in PYTD Reported Gross Impact (MWh) column indicates program has not been launched.

(2) The Realization Rate for the Refrigerator Rebate with Recycling and Freezer Rebate with Recycling were calculated separately to capture the distinct difference between these measures and the other measures within the Appliance Program.

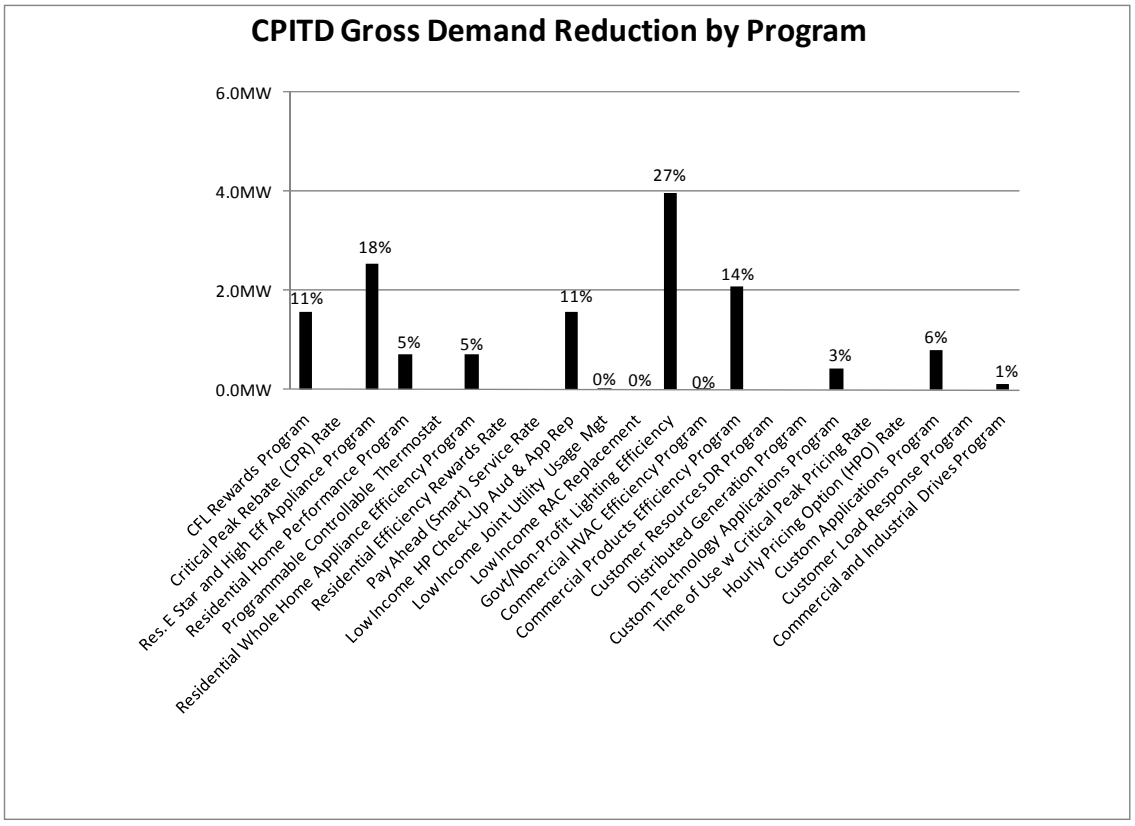
(3) The Programmable Thermostat measure did not have sufficient participation to warrant M&V through PY2 3Q; therefore, savings are excluded from the preliminary verified results.

(4) Home Performance Program: Other includes the following; CFL Opt-In, CFL School Kits, JACO bulb distribution and UPMC Kit Mailings (See Section 4.4 for descriptions)

1.3 Summary of Demand Impacts by Program

A summary of the reported demand reduction by program is presented in Figure 1-2. [14]

Figure 1-2: Reported Demand Reduction by Program through the Fourth Quarter, Program Year 2



A summary of demand reduction impacts by program through the Fourth Quarter, Program Year 2 is presented in Table 1-6 and Table 1-7.

[14] Absence of data indicates program has not been launched.

Table 1-6: Participation and Reported Gross Demand Reduction by Program through the Fourth Quarter, Program Year 2

Program	Participants			Reported Gross Impact (MW)		
	IQ	PYTD	CPITD	IQ	PYTD	CPITD
Compact Fluorescent Lighting (CFL) Rewards Program	47,561	163,155	163,415	0.5	1.6	1.6
Critical Peak Rebate (CPR) Rate						
Residential Energy Star and High Efficiency Appliance Program	7,686	26,116	28,623	0.6	2.3	2.6
Residential Home Performance Program	35,750	42,668	46,638	0.6	0.7	0.7
Programmable Controllable Thermostat (PCT) Program (removed from Plan)						
Residential Whole Home Appliance Efficiency Program (previously Residential HVAC Efficiency Program)	241	1,983	1,986	0.1	0.7	0.7
Residential Efficiency Rewards Rate (removed from Plan)						
Pay Ahead (Smart) Service Rate (removed from Plan)						
Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program	1,884	5,337	5,580	0.6	1.6	1.6
Residential Low Income Joint Utility Usage Management Program	49	120	120	0.007	0.011	0.011
Residential Low Income Room Air Conditioner Replacement Program (removed from Plan)	0	0	0	0.0	0.0	0.0
Governmental/Non-Profit Lighting Efficiency Program	175	434	758	0.7	3.3	4.0
Commercial HVAC Efficiency Program	0	2	2	0.0	0.0	0.0
Commercial Products Efficiency Program (previously called Commercial Lighting Efficiency Program)	43	153	156	1.2	2.1	2.1
Customer Resources Demand Response Program						
Distributed Generation Program						
Custom Technology Applications Program	8	15	15	0.2	0.4	0.4
Time of Use (TOU) with Critical Peak Pricing Rate						
Hourly Pricing Option (HPO) Rate (removed from Plan)						
Custom Applications Program	5	9	9	0.6	0.8	0.8
Customer Load Response Program						
Commercial and Industrial Drives Program (added to Custom Technology Applications and Custom Applications Programs and removed as a stand-alone Program; however, will continue to report as a line item due to participation under stand-alone offering). Data reflects customer approved applications received prior to approval to decommission.	1	6	6	0.0	0.1	0.1
TOTAL PORTFOLIO	93,403	239,998	247,308	5.2	13.6	14.6

NOTES: (1) Absence of data indicates program has not been launched.
(2) MW total may differ from sum of individual components due to rounding.

Table 1-7: Reported Gross Demand Reduction by Program through the Fourth Quarter, Program Year 2

Program	Projects In Progress (MW)	Unverified Ex Post Savings (MW)	PYTD Total Committed (MW)	EE&C Plan Estimate for Program Year	Percent of Estimate Committed (%)
Compact Fluorescent Lighting (CFL) Rewards Program	0.0	0.0	1.6	1.2	131%
Critical Peak Rebate (CPR) Rate				0.0	
Residential Energy Star and High Efficiency Appliance Program	0.1	0.0	2.5	2.9	85%
Residential Home Performance Program	0.0	0.0	0.69	1.7	41%
Programmable Controllable Thermostat (PCT) Program (removed from Plan)					
Residential Whole Home Appliance Efficiency Program (previously Residential HVAC Efficiency Program)	0.0	0.0	0.7	0.5	145%
Residential Efficiency Rewards Rate (removed from Plan)					
Pay Ahead (Smart) Service Rate (removed from Plan)					
Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program	0.0	0.0	1.6	0.7	223%
Residential Low Income Joint Utility Usage Management Program	0.0	0.0	0.011	0.6	2%
Residential Low Income Room Air Conditioner Replacement Program (removed from Plan)					
Governmental/Non-Profit Lighting Efficiency Program	0.3	0.0	3.6	10.6	34%
Commercial HVAC Efficiency Program	0.00	0.0	0.00	0.2	1%
Commercial Products Efficiency Program (previously called Commercial Lighting Efficiency Program)	0.2	0.0	2.3	13.2	17%
Customer Resources Demand Response Program				0.0	
Distributed Generation Program				0.0	
Custom Technology Applications Program	1.4	0.0	1.9	1.0	188%
Time of Use (TOU) with Critical Peak Pricing Rate				0.0	
Hourly Pricing Option (HPO) Rate (removed from Plan)					
Custom Applications Program	2.3	0.0	3.1	5.8	54%
Customer Load Response Program				0.0	
Commercial and Industrial Drives Program (added to Custom Technology Applications and Custom Applications Programs and removed as a stand-alone Program; however, will continue to report as a line item due to participation under stand-alone offering). Data reflects customer approved applications received prior to approval to decommission.	0.2	0.0	0.3		
Total	**4.6**	**0.0**	**18.2**	**38.4**	**47%**

NOTES: (1) "Unverified Ex Post Savings" are unverified savings pending approval of TRM or Custom Measure Protocol by the Commission.

(2) Absence of data indicates that program has not been launched.
(3) MW total may differ from sum of individual components due to rounding.
(4) EE&C Plan Estimate for Program Year for Commercial & Industrial Drives Program is included in Custom Technology Applications Program and Custom Applications Program.

A summary of evaluation adjusted demand impacts by program is presented in Table 1-8.

Table 1-8: Verified Demand Reduction by Program through the Fourth Quarter, Program Year 2

Program	PYTD Reported Gross Impact (MW)	Preliminary Realization Rate	Preliminary PYTD Verified Impact (MW)	Net-to-Gross Ratio	PYTD Net Impact (MW)
Compact Fluorescent Lighting (CFL) Rewards Program	1.6	1.00	1.6	1	1.6
Critical Peak Rebate (CPR) Rate					
Residential Energy Star and High Efficiency Appliance Program: Dishwashers, Clothes Washers, Clother Dryers, RAC Rebate, RAC Recycling, Refrigerator Recycling, and Freezer Recycling *(Note 2, Note 3)*	1.5	1.00	1.5	1	1.5
Residential Energy Star and High Efficiency Appliance Program: Refrigerator Rebate with Recycling and Freezer Replacement with Recycling *(Note 2)*	0.8	1.16	1.0	1	1.0
Residential Home Performance Program: On-line Analyzer	0.040	0.92	0.0	1	0.0
Residential Home Performance Program: CFL Event Giveaway	0.10	0.94	0.1	1	0.1
Residential Home Performance Program: Other *(Note 4)*	0.546		0.0	1	0.0
Programmable Controllable Thermostat (PCT) Program (removed from Plan)					
Residential Whole Home Appliance Efficiency Program (previously Residential HVAC Efficiency Program)	0.7	1.00	0.7	1	0.7
Residential Efficiency Rewards Rate (removed from Plan)					
Pay Ahead (Smart) Service Rate (removed from Plan)					
Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program	1.6	0.8	1.2	1	1.2
Residential Low Income Joint Utility Usage Management Program	0.011	1.1	0.0	1	0.0
Residential Low Income Room Air Conditioner Replacement Program (removed from Plan)					
Governmental/Non-Profit Lighting Efficiency Program	3.3	0.79	2.6	1	2.6
Commercial HVAC Efficiency Program	0.001	1.19	0.0	1	0.0
Commercial Products Efficiency Program (previously called Commercial Lighting Efficiency Program)	2.1	0.97	2.0	1	2.0
Customer Resources Demand Response Program					
Distributed Generation Program					
Custom Technology Applications Program	0.4		0.0	1	0.0
Time of Use (TOU) with Critical Peak Pricing Rate					
Hourly Pricing Option (HPO) Rate (removed from Plan)					
Custom Applications Program	0.8		0.0	1	0.0
Customer Load Response Program					
Commercial and Industrial Drives Program (added to Custom Technology Applications and Custom Applications Programs and removed as a stand-alone Program; however, will continue to report as a line item due to participation under stand-alone offering). Data reflects customer approved applications received prior to approval to decommission.	0.1		0.0	1	0.0
Total	**13.6**		**10.8**		**10.8**

NOTES: (1) Absence of data in PYTD Reported Gross Impact (MW) column indicates program has not been launched.

(2) The Realization Rate for the Refrigerator Rebate with Recycling and Freezer Rebate with Recycling were calculated separately to capture the distinct difference between these measures and the other measures within the Appliance Program.

(3) The Programmable Thermostat measure did not have sufficient participation to warrant M&V through PY2 3Q; therefore, savings are excluded from the preliminary verified results.

(4) Home Performance Program: Other includes the following; CFL Opt-In, CFL School Kits, JACO bulb distribution and UPMC Kit Mailings (See Section 4.4 for descriptions)

1.4 Summary of Evaluation

Realization rates are calculated to adjust reported savings based on statistically significant verified savings measured by the EM&V team. The realization rate is defined as the percentage of reported savings that is achieved, as determined through the independent evaluation review. A realization rate of 1 or 100% indicates no difference between the reported and achieved savings. Realization rates are determined by certain attributes relative to one of three protocol types. Fully deemed TRM measure realization rates are driven by differences in the number of installed measures. Partially deemed TRM measure[15] realization rates are driven by (1) differences in the number of installed measures and (2) differences in the variables. Custom measure realization rates are driven by differences in the energy savings determined by approved EM&V protocols. The protocol type determines the data type that is sampled. The EM&V team calculated realization rates based on the best engineering estimate for each program savings as identified through the EM&V effort. The methodology used to calculate the program realization rate based on the best engineering estimate varied by program as described in detail in West Penn Power's PY2 evaluation plan.

PY2 Evaluation activities completed to-date include:

- Finalized PY2 Evaluation Plan.
- Pulled participant site visit sample for the programs requiring on-site verifications for PY1 and for the first, second and third quarters of PY2. On-site data collection was completed for 39 projects for the commercial/industrial sector programs.
- Conducted 59 trade ally interviews and 11 mystery shopping/observation visits for the CFL Rewards and Residential ENERGY STAR and High Efficiency Appliances programs. Trade ally interviews completed to-date include: 15 lighting/appliance retailers, 20 lighting contractors and distributors, 10 HVAC contractors, 4 Local Development District Association (LDDA) representatives, and 10 Community Action Agencies.
- Conducted periodic program design and delivery staff interviews**.** The interviews updated the EM&V team's understanding of how programs are operating, discussed future possible changes to the programs, and collected information to inform research with participants and market actors.
- Updated Program Logic Models to reflect current program designs.
- Developed C&I EM&V process flow maps detailing information flows and responsibilities among West Penn Power, the third-party implementation M&V contractor, the EM&V contractor, the SWE, and the customer.
- Participated in Technical Working Group sessions, biweekly SWE calls, and on-site visits.
- Completed participation surveys for all programs.
- Reviewed the West Penn Power Energy Savings Calculator (ESC). This review compared the input assumptions to the TRM and related supporting documentation, including white papers to help ensure calculations were done correctly. WPP made corrections and adjustments to

[15] TRM measures with stipulated values and variables.

energy savings and demand reductions as needed. The ESC used for reported savings for the annual report are in accordance with the 2010 TRM or Interim Protocols.

- Determined Final Realization Rates and Verified Savings for PY2 for:
  - CFL Rewards;
  - Residential ENERGY STAR and High Efficiency Appliances;
  - Commercial HVAC (for equipment rebates component); and
- Determined Preliminary Realization Rates and Verified Savings for PY2 for:
  - Low income Home Check-up
  - Low income JUUMP
  - Home Performance
  - Residential HVAC Efficiency;
  - Commercial Lighting; and
  - Government/Schools/Non-Profit Portfolio.
- Final realization rates including Custom Applications and Custom Technology Applications programs will be reported in the November 15, 2011 report.

WPP load forecasting group completed a commercial baseline survey effort. The primary objective of the 2010 Commercial End Use Buildings Saturation survey was to determine what types of electrical equipment are being used in different types of commercial buildings in Pennsylvania. In addition to the primary use of the study results to inform the forecast for energy usage, the study will secondarily support baseline estimation in Pennsylvania and be used to develop and deploy energy efficiency programs. The results of this survey have been provided to the SWE.

1.4.1 Impact Evaluation

The impact evaluation is an organized and prioritized process to evaluating electric energy savings and kW impacts within the SWE guidelines. Preliminary realization rates and verified savings are presented in Tables 1-5 and 1-8. Final realization rates and verified savings for all programs will be included in the November 15, 2011 report.

The realization rates for programs verified in PY2 are presented in Table 1-9.

Table 1-9: Summary of Realization Rates and Confidence Intervals (CI) for kWh

Program	PYTD Sample Participants	Program Year Sample Participant Target	Preliminary Realization Rate for kWh	Confidence and Precision For kWh	Preliminary Realization Rate for kW	Confidence and Precision for kW
Compact Fluorescent Lighting (CFL) Rewards Program	1,675	122	1.00	N/A	1.00	N/A
Critical Peak Rebate (CPR) Rate						
Residential Energy Star and High Efficiency Appliance Program: Dishwashers, Clothes Washers, Clother Dryers, RAC Rebate, RAC Recycling, Refrigerator Recycling, and Freezer Recycling (Note 2, Note 3)	10,687	501	1.00	N/A	1.00	N/A
Residential Energy Star and High Efficiency Appliance Program: Refrigerator Rebate with Recycling and Freezer Replacement with Recycling (Note 2)	1,556	186	1.16	N/A	1.16	N/A
Residential Home Performance Program: On-line Analyzer	2,630	61	0.92	90%/±5.7%	0.92	90%/±5.7%
Residential Home Performance Program: CFL Event Giveaway	5,816	111	0.94	90%/±3.7%	0.94	90%/±3.7%
Residential Home Performance Program: Other *(Note 5)*						
Programmable Controllable Thermostat (PCT) Program (removed from Plan)						
Residential Whole Home Appliance Efficiency Program (previously Residential HVAC Efficiency Program)	1,043	216	1.00	N/A	1.00	N/A
Residential Efficiency Rewards Rate (removed from Plan)						
Pay Ahead (Smart) Service Rate (removed from Plan)						
Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program	2,093	78	1.13	N/A	0.80	N/A
Residential Low Income Joint Utility Usage Management Program	71	30	1.25	N/A	1.1	N/A
Residential Low Income Room Air Conditioner Replacement Program (removed from Plan)						
Governmental/Non-Profit Lighting Efficiency Program	557	124	0.78	90%/±6.2%	0.79	90%/±6.1%
Commercial HVAC Efficiency Program	2	3	1.21	N/A	1.19	N/A
Commercial Products Efficiency Program (previously called Commercial Lighting Efficiency Program)	112	26	0.93	90%/±8.4%	0.97	90%/±5.3%
Customer Resources Demand Response Program						
Distributed Generation Program						
Custom Technology Applications Program						
Time of Use (TOU) with Critical Peak Pricing Rate						
Hourly Pricing Option (HPO) Rate (removed from Plan)						
Custom Applications Program						
Customer Load Response Program						
Commercial and Industrial Drives Program (added to Custom Technology Applications and Custom Applications Programs and removed as a stand-alone Program; however, will continue to report as a line item due to participation under stand-alone offering). Data reflects customer approved applications received prior to approval to decommission.						
Total	**26,242**	**1,458**				

NOTES: (1) The Compact Fluorescent Lighting (CFL) Rewards Program: reflects results of mail-in rebate participants, not those receiving point of sale (POS) instant rebates.
(2) The Residential ENERGY STAR and High Efficiency Appliance Program (room AC, dishwasher, clothes washer, and clothes dryer) includes 2,078 recycle without replacement sample participants, and 97 additional program year sample participants.
(3) The Residential ENERGY STAR and High Efficiency Appliance Program realization rate of 1.00 takes into account rebated air conditioners that
(4) Commercial HVAC Efficiency Program realization rate based on desk audit of single project completed PY2 2Q CPITD.
(5) Home Performance Program: Other includes the following; CFL Opt-In, CFL School Kits, JACO bulb distribution and UPMC Kit Mailings (See Section 4.4 for descriptions)

1.4.2 Process Evaluation

The process evaluation activities are designed to provide a comprehensive and systematic assessment of program operations from the planning background to implementation to participant experiences. As stated in the Audit Plan, the process evaluation's primary objective is to help program designers and managers structure their programs to achieve cost-effective savings while maintaining high levels of market penetration, customer satisfaction and program efficiency and effectiveness. A well-designed and implemented process evaluation serves as a basis for recommendations to West Penn Power and program managers involved in program design and implementation. The process evaluation will also identify best practices that West Penn Power may choose to implement going forward.

PY2 process evaluation activity results are presented in program sections below. Overall findings from the process evaluation were summarized in PowerPoint form and presented on May 23, 2011 in Harrisburg, PA to the SWE and TWG group.

1.5 Summary of Finances

The TRC test demonstrates the cost-effectiveness of a program by comparing the total economic benefits to the total costs. A breakdown of the portfolio finances is presented in Table 1-10.

Table 1-10: Summary of Portfolio Finances: TRC Test[16]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ 3,166,616	$ 7,173,029	$ 7,308,422
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ 3,166,616	$ 7,173,029	$ 7,308,422
B.1	Design & Development[1]	$ 21,824	$ 157,726	$ 1,708,613
B.2	Administration[2]	$ 339,802	$ 1,700,877	$ 2,426,640
B.3	Management[3]	$ -	$ -	$ -
B.4	Marketing[4]	$ 439,530	$ 2,315,795	$ 3,198,283
B.5	Technical Assistance[5]	$ 586,911	$ 1,641,232	$ 2,897,992
B	**Subtotal EDC Implementation Costs**	$ 1,388,067	$ 5,815,630	$ 10,231,528
C	**EDC Evaluation Costs**	$ 342,322	$ 825,560	$ 963,616
D	**SWE Audit Costs**	$ 250,208	$ 750,208	$ 1,044,242
E	**Participant Costs**			
	Total Costs	$ 5,147,213	$ 14,564,427	$ 19,547,808
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output (this includes items E, F, and G, as well as, the Portfolio Benefit-to-Cost Ratio).

[1] Internal labor related to design, development and modeling EE programs.

[2] Internal Labor for EE program implementation and call center representatives, employee expenses, and common costs.

[3] N/A

[4] Costs incurred for CSP provider.

[5] Outside Services for CSP's related to program management.

[16] Definitions for terms in following table are subject to TRC Order. Various cost and benefit categories are subject to change pending the outcome of TRC Technical Working Group discussions.

The TRC for each program is presented in Table 1-11.

Table 1-11: Summary of Portfolio Budget by Program

Program	TRC Benefits ($)	TRC Costs ($)	TRC Benefit-Cost Ratio 3
Compact Fluorescent Lighting (CFL) Rewards Program	$ 59,843,634	$ 5,605,151	10.7
Critical Peak Rebate (CPR) Rate 2	$ 581,585	$ 361,780	1.6
Residential Energy Star and High Efficiency Appliance Program	$ 47,928,030	$ 15,638,302	3.1
Residential Home Performance Program	$ 48,465,639	$ 20,624,013	2.3
Programmable Controllable Thermostat (PCT) Program 2	$ 581,585	$ 755,302	0.8
Residential Whole Home Appliance Efficiency Program	$ 8,360,467	$ 5,137,000	1.6
Residential Efficiency Rewards Rate 2	$ 580,026	$ 253,246	2.3
Pay Ahead (Smart) Service Rate 2	$ 248,583	$ 108,534	2.3
Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program	$ 3,582,852	$ 1,026,504	3.5
Residential Low Income Joint Utility Usage Management Program	$ 10,494,152	$ 6,362,561	1.6
Residential Low Income Room Air Conditioner Replacement Program	$ 478,050	$ 580,312	0.8
Governmental/Non-Profit Lighting Efficiency Program	$ 114,497,301	$ 9,362,393	12.2
Commercial HVAC Efficiency Program	$ 5,833,129	$ 3,359,649	1.7
Commercial Products Efficiency Program	$ 634,666,350	$ 60,073,127	10.6
Customer Resources Demand Response Program	$ 4,551,628	$ 2,812,693	1.6
Distributed Generation Program	$ 757,680	$ 909,963	0.8
Custom Technology Applications Program 1	$ 11,422,726	$ 1,355,898	8.4
Time of Use (TOU) with Critical Peak Pricing Rate 2	$ 1,150,179	$ 437,898	2.6
Hourly Pricing Option (HPO) Rate 2	$ 202,973	$ 77,276	2.6
Custom Applications Program 1	$ 67,814,602	$ 1,030,660	65.8
Customer Load Response Program	$ 3,072,351	$ 2,506,831	1.2
Commercial and Industrial Drives Program	$ 14,571,794	$ 8,362,762	1.7
Total for Plan	**$ 1,039,685,316**	**$ 146,741,855**	**7.1**

NOTES:

1. Excludes customer costs due to variability of eligible customer projects. Customer costs are evaluated during project selection process.
2. Dynamic rate offerings are enabled by Smart Metering Infrastructure
3. Represents total benefits to total costs ratio over lifetime of all measures installed in the 2009-2012 Plan years.

2 Portfolio Results by Sector

The EE&C Implementation Order issued on January 15, 2009 states requirements for specific sectors on page 11. In order to comply with these requirements, each program has been categorized into one of the following sectors:

1. Residential EE (excluding Low-Income)
2. Residential Low-Income EE
3. Small Commercial & Industrial EE
4. Large Commercial & Industrial EE
5. Government & Non-Profit EE

A summary of portfolio gross energy savings and gross demand reduction by sector is presented in Figure 2-1 and Figure 2-2.

Figure 2-1: PYTD Reported Gross Energy Savings by Sector

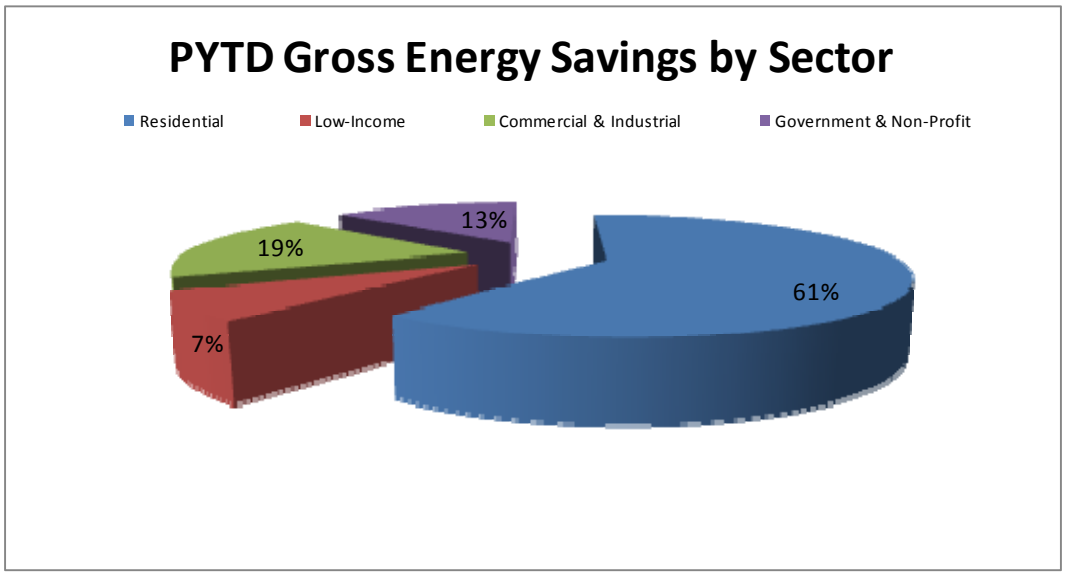
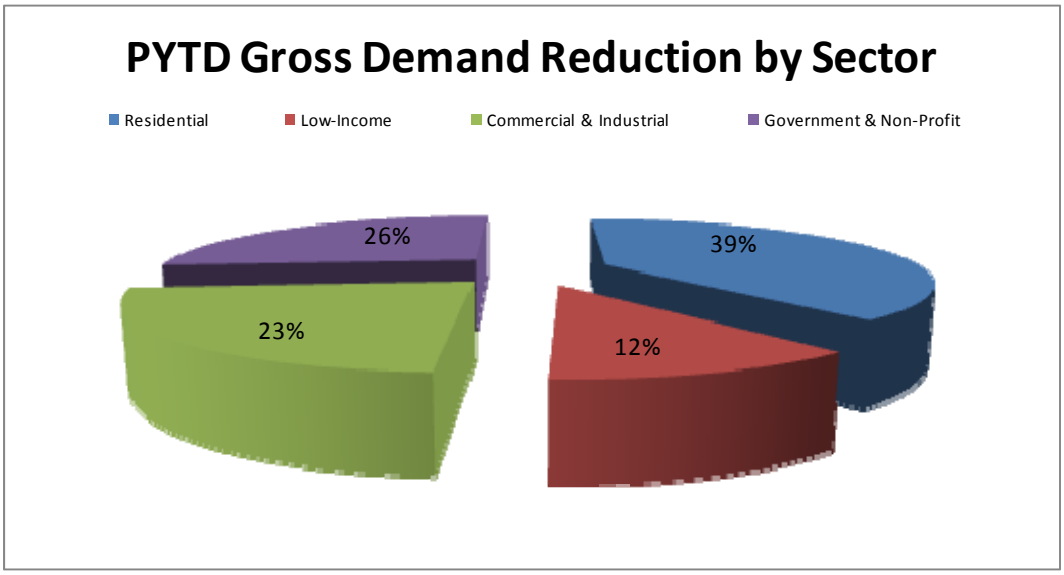


Figure 2-2: PYTD Reported Gross Demand Reduction by Sector



A portfolio summary of results by sector is presented in Table 2-1 and Table 2-2.

Table 2-1: Reported Gross Energy Savings by Sector through the Fourth Quarter, Program Year 2

Market Sector	Reported Gross Impact (MWh)			Projects in Progress	Total Committed	Unverified Ex Post Savings
	IQ	PYTD	CPITD			
Residential EE	25,298	55,213	57,065	317	55,530	0
Residential Low-Income EE	2,686	6,612	7,456	0	6,612	0
Small Commercial & Industrial EE	6,800	12,097	12,285	5,470	17,567	0
Large Commercial & Industrial EE	2,786	4,480	4,480	15,229	19,709	0
Government & Non-Profit EE	2,811	11,953	14,976	793	12,746	0
TOTAL PORTFOLIO	40,379	90,355	96,261	21,809	112,164	0

NOTES: (1) "Unverified Ex Post Savings" are unverified savings pending approval of TRM or Custom Measure Protocol by the Commission.
(2) MWh total may differ from sum of individual components due to rounding.

Table 2-2: Reported Gross Demand Reduction by Sector through the Fourth Quarter, Program Year 2

Market Sector	Reported Gross Impact (MW)			Projects in Progress	Total Committed	Unverified Ex Post Savings
	IQ	PYTD	CPITD			
Residential EE	1.9	5.3	5.6	0.1	5.5	0.0
Residential Low-Income EE	0.6	1.6	1.6	0.0	1.6	0.0
Small Commercial & Industrial EE	1.3	2.3	2.3	1.7	3.9	0.0
Large Commercial & Industrial EE	0.6	0.8	0.8	2.5	3.4	0.0
Government & Non-Profit EE	0.8	3.6	4.3	0.3	3.9	0.0
TOTAL PORTFOLIO	5.2	13.6	14.6	4.6	18.2	0.0

NOTES: (1) "Unverified Ex Post Savings" are unverified savings pending approval of TRM or Custom Measure Protocol by the Commission.
(2) IQ reflects negative value due to adoption of TRM 2011 per unit savings values for showerheads and faucet aerators. CPITD and PYTD values also reflect this adjustment.
(3) MW total may differ from sum of individual components due to rounding.

2.1 Residential EE Sector

The sector target for annual energy savings is 51,865 MWh and the sector target for annual peak demand reduction is 6.3 MW.

A sector summary of results by program is presented in Table 2-3 and Table 2-4.

Table 2-3: Summary of Residential EE Sector Incremental Impacts by Program through the Fourth Quarter, Program Year 2

Residential EE Sector	IQ Participants	IQ Reported Gross Energy Savings (MWh)	IQ Reported Gross Demand Reduction (MW)
Compact Fluorescent Lighting (CFL) Rewards Program	47,561	10,100	0.5
Critical Peak Rebate (CPR) Rate			
Residential Energy Star and High Efficiency Appliance Program	7,686	3,096	0.6
Residential Home Performance Program	35,750	11,792	0.6
Programmable Controllable Thermostat (PCT) Program (Removed from Plan)			
Residential Whole Home Appliance Efficiency Program	241	309	0.1
Residential Efficiency Rewards Rate (Removed from Plan)			
Pay Ahead (Smart) Service Rate (Removed from Plan)			
Total for Residential Programs	91,238	25,298	1.9

NOTES: (1) Absence of data indicates program has not been launched.
(2) MW total may differ from sum of individual components due to rounding.

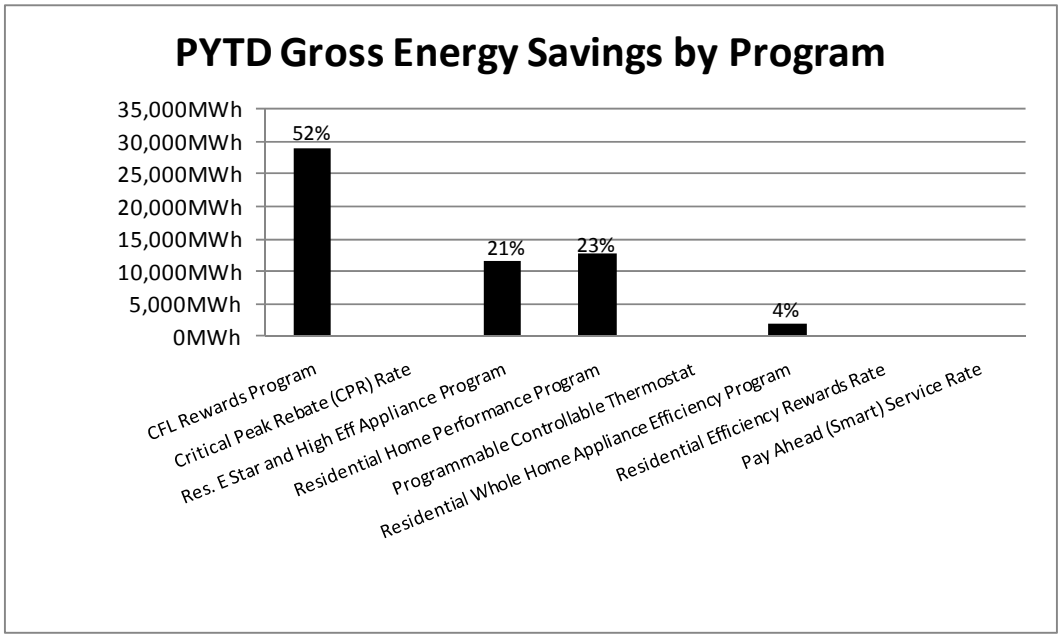
Table 2-4: Summary of Residential EE Sector PYTD Impacts by Program through the Fourth Quarter, Program Year 2

Residential EE Sector	PYTD Participants	PYTD Reported Gross Energy Savings (MWh)	PYTD Reported Gross Demand Reduction (MW)
Compact Fluorescent Lighting (CFL) Rewards Program	163,155	28,849	1.6
Critical Peak Rebate (CPR) Rate			
Residential Energy Star and High Efficiency Appliance Program	26,116	11,584	2.3
Residential Home Performance Program	42,668	12,670	0.69
Programmable Controllable Thermostat (PCT) Program (Removed from Plan)			
Residential Whole Home Appliance Efficiency Program	1,983	2,109	0.7
Residential Efficiency Rewards Rate (Removed from Plan)			
Pay Ahead (Smart) Service Rate (Removed from Plan)			
Total for Residential Programs	233,922	55,213	5.3

NOTES: (1) Absence of data indicates program has not been launched.
(2) MW total may differ from sum of individual components due to rounding.

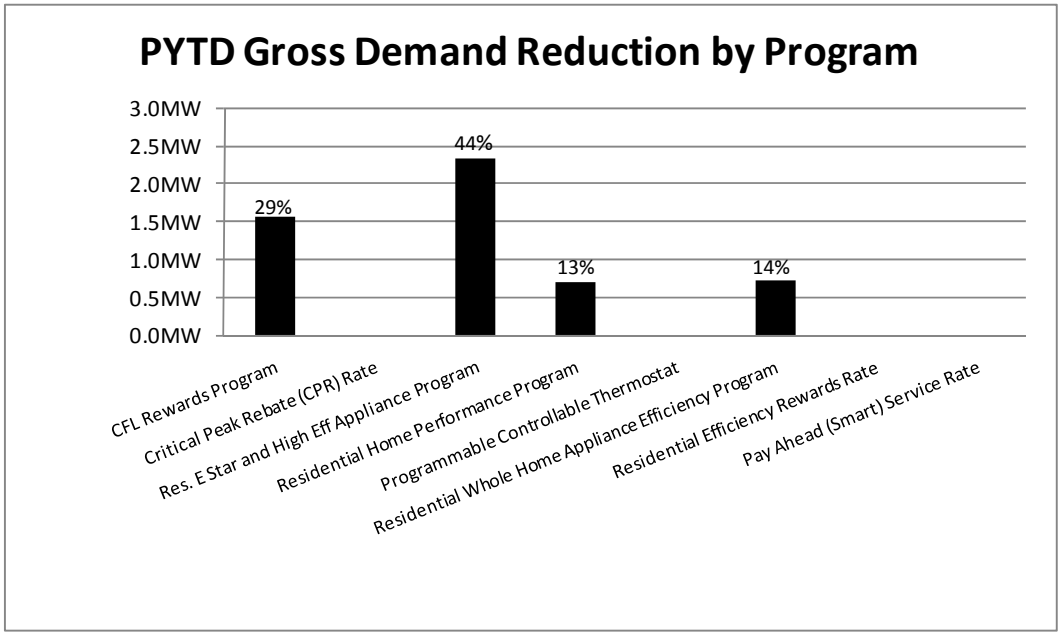
A summary of the sector energy savings by program is presented in Figure 2-3. [17]

Figure 2-3: Summary of Residential EE Sector PYTD Reported Gross Energy Savings by Program



A summary of the sector demand reduction by program is presented in Figure 2-4. [18]

Figure 2-4: Summary of Residential EE Sector PYTD Reported Demand Reduction by Program



[17] Absence of data indicates program has not been launched.
[18] Absence of data indicates program has not been launched.

2.2 Residential Low-Income EE Sector

The sector target for annual energy savings is 3,928 MWh and the sector target for annual peak demand reduction is 1.3 MW.

A sector summary of results by program is presented in Table 2-5 and Table 2-6.

Table 2-5: Summary of Residential Low-Income EE Sector Incremental Impacts by Program through the Fourth Quarter, Program Year 2

Residential Low Income EE Sector	IQ Participants	IQ Reported Gross Energy Savings (MWh)	IQ Reported Gross Demand Reduction (MW)
Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program	1,884	2,643	0.6
Residential Low Income Joint Utility Usage Management Program	49	43	0.007
Residential Low Income Room Air Conditioner Replacement Measure (Removed from Plan)			
Total for Low Income Sector	1,933	2,686	0.6

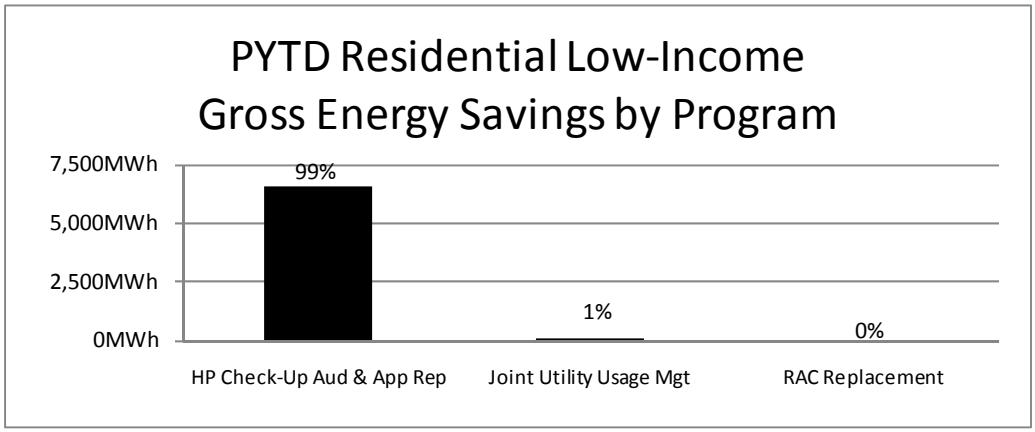
NOTES: (1) MW total may differ from sum of individual components due to rounding.
(2) IQ reflects negative value due to adoption of TRM 2011 per unit savings values for showerheads and faucet aerators. CPITD and PYTD values also reflect this adjustment.

Table 2-6: Summary of Residential Low-Income EE Sector PYTD Impacts by Program through the Fourth Quarter, Program Year2

Residential Low Income EE Sector	PYTD Participants	PYTD Reported Gross Energy Savings (MWh)	PYTD Reported Gross Demand Reduction (MW)
Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program	5,337	6,529	1.6
Residential Low Income Joint Utility Usage Management Program	120	83	0.011
Residential Low Income Room Air Conditioner Replacement Measure (Removed from Plan)			
Total for Low Income Sector	5,457	6,612	1.6

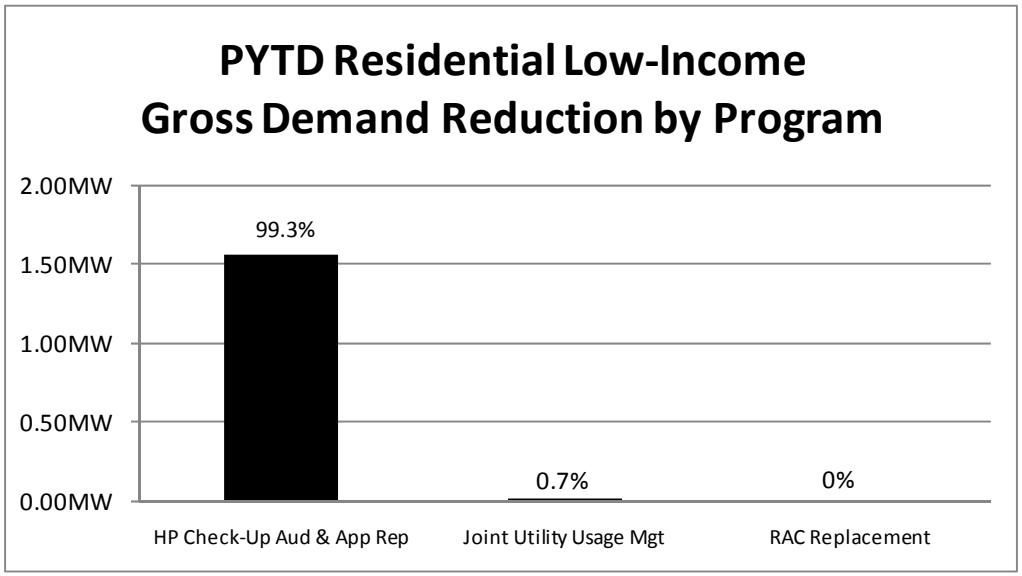
A summary of the sector energy savings by program is presented in Figure 2-5.

Figure 2-5: Summary of Residential Low-Income EE Sector PYTD Reported Gross Energy Savings by Program



A summary of the sector demand reduction by program is presented in Figure 2-6.

Figure 2-6: Summary of Residential Low-Income EE Sector PYTD Reported Demand Reduction by Program



2.3 Small Commercial & Industrial EE Sector

The sector target for annual energy savings is 70,804 MWh and the sector target for annual peak demand reduction is 14.4 MW.

A sector summary of results by program is presented in Table 2-7 and Table 2-8.

Table 2-7: Summary of Small Commercial & Industrial EE Sector Incremental Impacts by Program through the Fourth Quarter, Program Year 2[19]

Small Commercial & Industrial EE Sector	IQ Participants	IQ Reported Gross Energy Savings (MWh)	IQ Reported Gross Demand Reduction (MW)
Commercial HVAC Efficiency Program	0	0	0.0
Commercial Products Efficiency Program	34	5,804	1.2
Customer Resources Demand Response Program			
Custom Technology Applications Program	7	996	0.1
Time of Use (TOU) with Critical Peak Pricing Rate			
Hourly Pricing Option (HPO) Rate (Removed from Plan)			
Total for Small Commercial & Industrial	41	6,800	1.3
NOTES: Absence of data indicates program has not been launched.			

Table 2-8: Summary of Small Commercial & Industrial EE Sector PYTD Impacts by Program through the Fourth Quarter, Program Year 2[20]

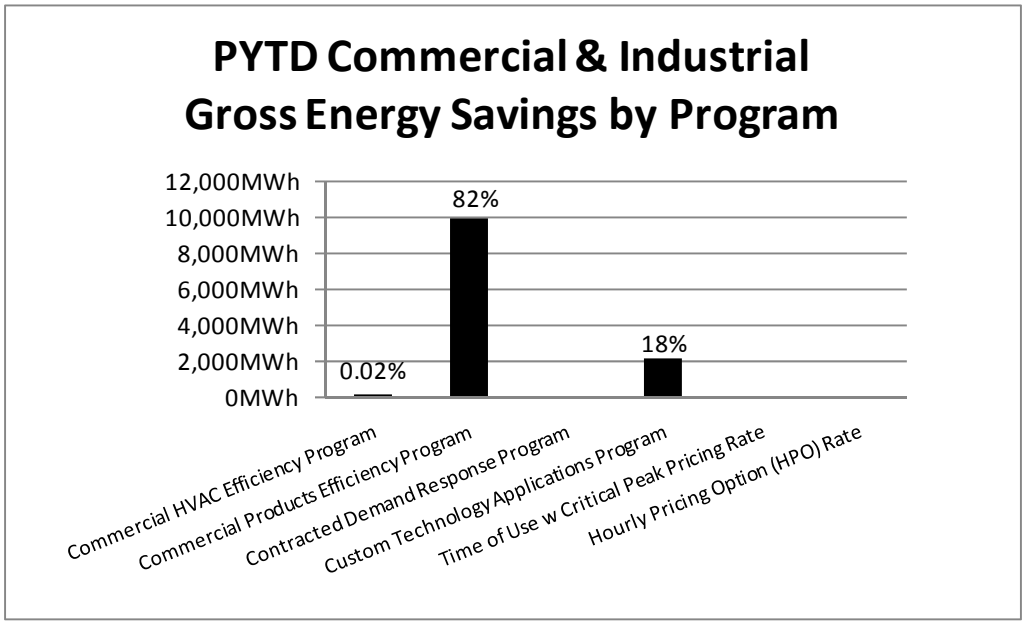
Small Commercial & Industrial EE Sector	PYTD Participants	PYTD Reported Gross Energy Savings (MWh)	PYTD Reported Gross Demand Reduction (MW)
Commercial HVAC Efficiency Program	2	2	0.001
Commercial Products Efficiency Program	131	9,928	1.9
Customer Resources Demand Response Program			
Custom Technology Applications Program	12	2,166	0.3
Time of Use (TOU) with Critical Peak Pricing Rate			
Hourly Pricing Option (HPO) Rate (Removed from Plan)			
Total for Small Commercial & Industrial	145	12,097	2.3
NOTES: Absence of data indicates program has not been launched.			

[19] Table 2-7 reflects an adjustment for Government and non-Profit Sector participation in the Commercial Products Efficiency and Custom Technology Applications Programs.

[20] Table 2-8 reflects an adjustment for Government and non-Profit Sector participation in the Commercial Products Efficiency and Custom Technology Applications Programs.

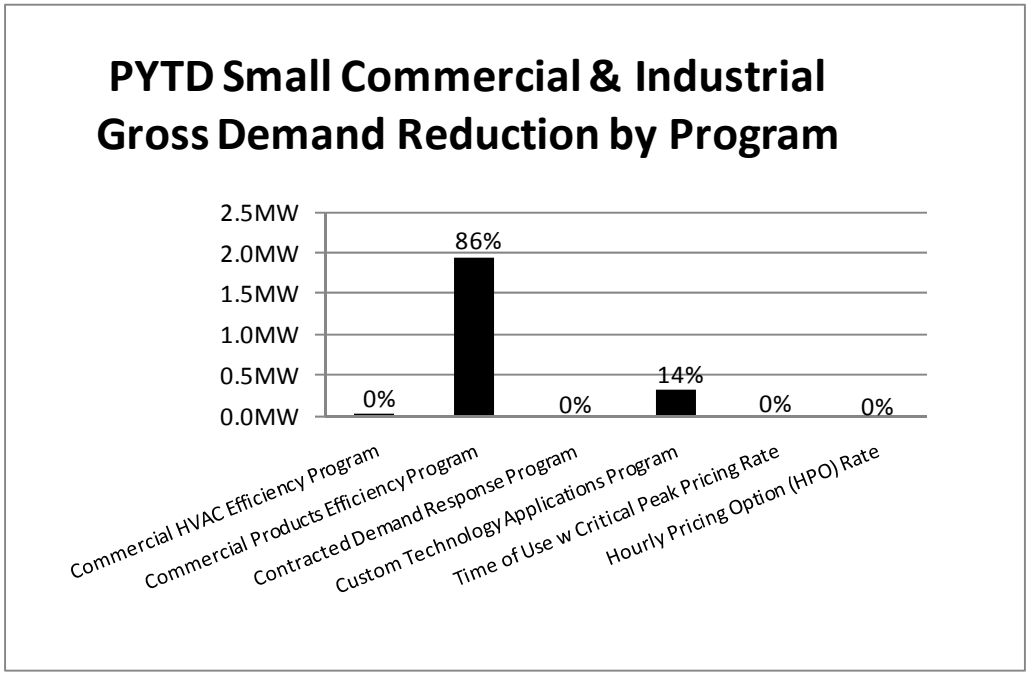
A summary of the sector energy savings by program is presented in Figure 2-7. [21]

Figure 2-7: Summary of Small Commercial & Industrial EE Sector PYTD Reported Gross Energy Savings by Program



A summary of the sector demand reduction by program is presented in Figure 2-8. [22]

Figure 2-8: Summary of Small Commercial & Industrial EE Sector PYTD Reported Demand Reduction by Program



[21] Absence of data indicates program has not been launched.
[22] Absence of data indicates program has not been launched.

2.4 Large Commercial & Industrial EE Sector

The sector target for annual energy savings is 29,635 MWh and the sector target for annual peak demand reduction 5.8 MW.

A sector summary of results by program is presented in Table 2-9 and Table 2-10.

Table 2-9: Summary of Large Commercial & Industrial EE Sector Incremental Impacts by Program through the Fourth Quarter, Program Year 2[23]

Large Commercial & Industrial EE Sector	IQ Participants	IQ Reported Gross Energy Savings (MWh)	IQ Reported Gross Demand Reduction (MW)
Custom Applications Program	4	2,786	0.6
Customer Load Response Program			
Distributed Generation Program			
Commercial and Industrial Drives Program	0	0	0.0
Total for Large Commercial & Industrial Sector	4	2786	0.6
NOTES: Absence of data indicates program has not been launched.			

Table 2-10: Summary of Large Commercial & Industrial EE Sector PYTD Impacts by Program through the Fourth Quarter, Program Year 2[24]

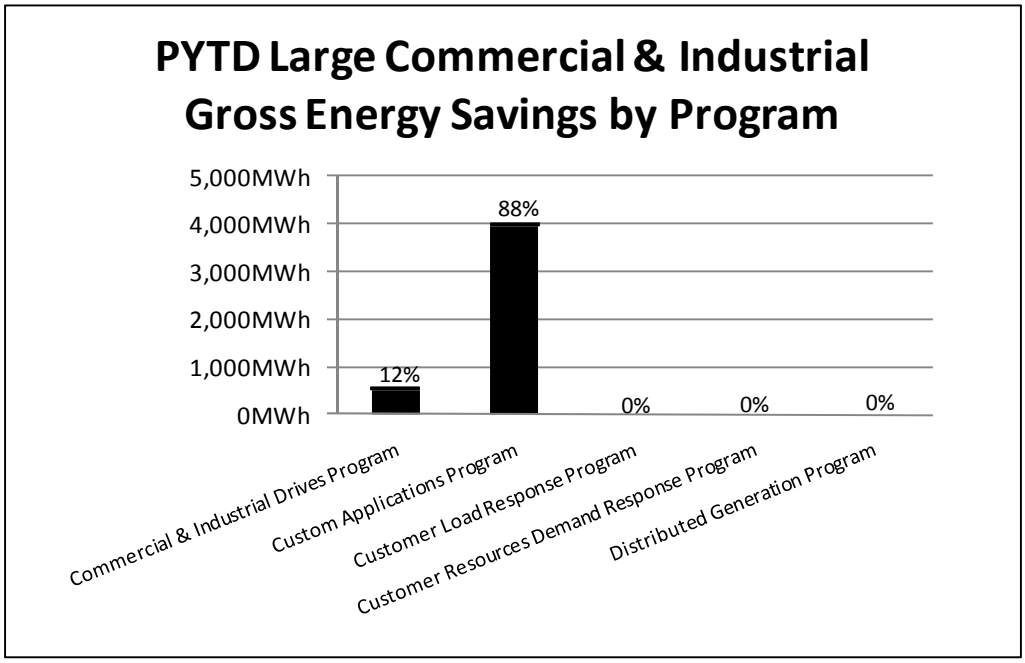
Large Commercial & Industrial EE Sector	PYTD Participants	PYTD Reported Gross Energy Savings (MWh)	PYTD Reported Gross Demand Reduction (MW)
Custom Applications Program	8	3,961	0.8
Customer Load Response Program			
Distributed Generation Program			
Commercial and Industrial Drives Program	2	519	0.05
Total for Large Commercial & Industrial Sector	10	4,480	0.8
NOTES: (1) Absence of data indicates program has not been launched. (2) MW total may differ from sum of individual components due to rounding.			

[23] Table 2-9 reflects an adjustment for Government and non-Profit Sector participation in the Commercial and Industrial Drives Program.

[24] Table 2-10 reflects an adjustment for Government and non-Profit Sector participation in the Commercial and Industrial Drives Program.

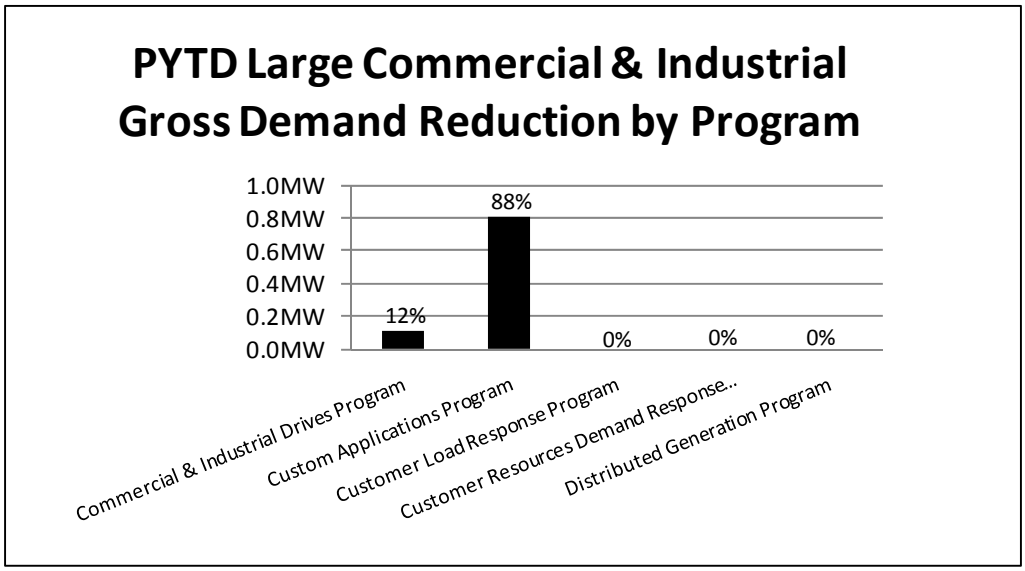
A summary of the sector energy savings by program is presented in Figure 2-9. [25]

Figure 2-9: Summary of Large Commercial & Industrial EE Sector PYTD Reported Gross Energy Savings by Program



A summary of the sector demand reduction by program is presented in Figure 2-10. [26]

Figure 2-10: Summary of Large Commercial & Industrial EE Sector PYTD Reported Demand Reduction by Program



[25] Absence of data indicates program has not been launched.
[26] Absence of data indicates program has not been launched.

2.5 Government & Non-Profit EE Sector

The sector target for annual energy savings is 44,301 MWh and the sector target for annual peak demand reduction is 10.6 MW.

A sector summary of results by program is presented in Table 2-11 and Table 2-12.

Table 2-11: Summary of Government & Non-Profit EE Sector Incremental Impacts by Program through the Fourth Quarter, Program Year 2[27]

Gov't. & Non-Profit EE Sector	IQ Participants	IQ Reported Gross Energy Savings (MWh)	IQ Reported Gross Demand Reduction (MW)
Governmental/ Non-Profit Lighting Efficiency Program	175	2,263	0.7
Commercial Products Efficiency Program	9	226	0.1
Custom Technology Applications Program	1	187	0.1
Custom Applications Program	1	29	0.0
Commercial and Industrial Drives Program	1	106	0.0
Total for Gov't and Non-Profit EE Sector	187	2,811	0.8
NOTES: (1) MWh/MW total may differ from sum of individual components due to rounding.			

Table 2-12: Summary of Government & Non-Profit EE Sector PYTD Impacts by Program through the Fourth Quarter, Program Year 2[28]

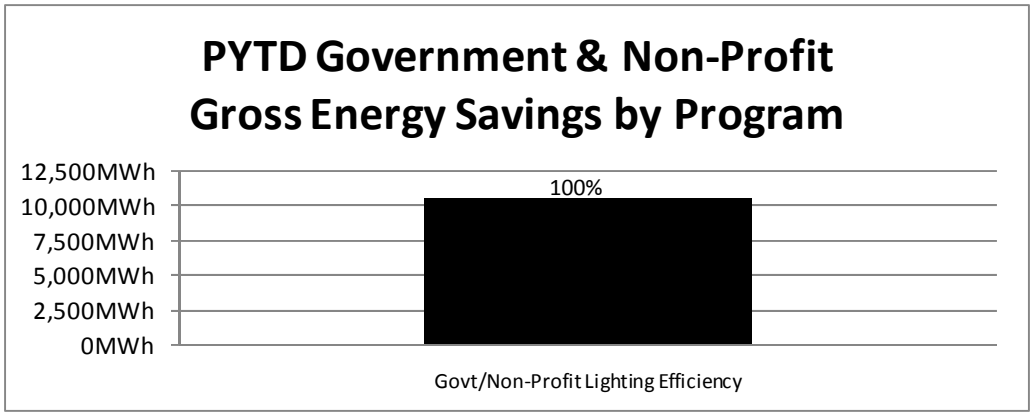
Gov't. & Non-Profit EE Sector	PYTD Participants	PYTD Reported Gross Energy Savings (MWh)	PYTD Reported Gross Demand Reduction (MW)
Governmental/ Non-Profit Portfolio Program	434	10,617	3.3
Commercial Products Efficiency Program	22	510	0.1
Custom Technology Applications Program	3	343	0.1
Custom Applications Program	1	29	0.0
Commercial and Industrial Drives Program	4	453	0.1
Total for Gov't and Non-Profit EE Sector	464	11,953	3.6

[27] Table 2-12 reflects an adjustment for Government and non-Profit Sector participation in the Commercial Products Efficiency, Custom Technology Applications, and Commercial and Industrial Drives Programs.

[28] Table 2-13 reflects an adjustment for Government and non-Profit Sector participation in the Commercial Products Efficiency, Custom Technology Applications, and Commercial and Industrial Drives Programs.

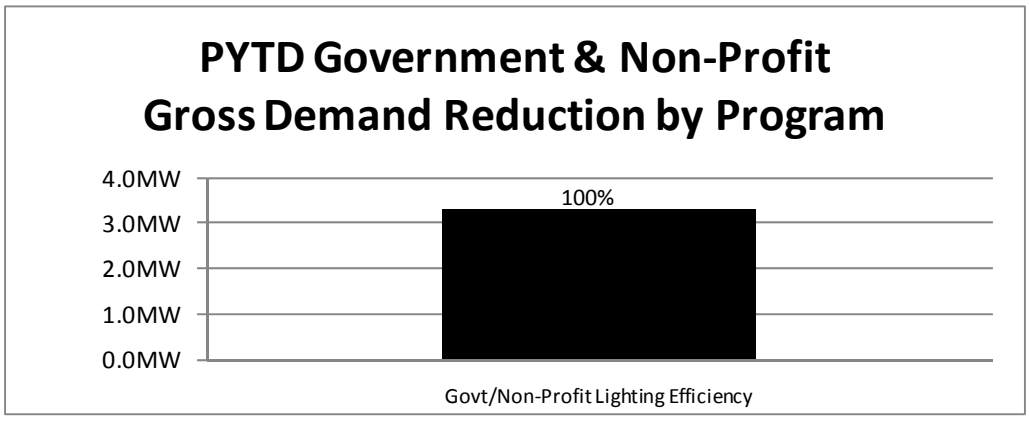
A summary of the sector energy savings by program is presented

Figure 2-11: Summary of Government & Non-Profit EE Sector PYTD Reported Gross Energy Savings by Program



A summary of the sector demand reduction by program is presented in Figure 2-12.

Figure 2-12: Summary of Government & Non-Profit EE Sector PYTD Reported Demand Reduction by Program



3 Demand Response

Demand response programs specifically target the reduction of peak demand through various demand-side management strategies. Demand Response programs will be piloted in the summer of 2011. Refer to Section 4 for program specific information.

WPP currently does not have any demand response program results to report in its 100 peak hours as interpreted by the PUC under Act 129.

4 Portfolio Results by Program

4.1 Compact Fluorescent Lighting (CFL) Rewards Program

The CFL Rebate Program encourages customers to purchase CFLs instead of incandescent bulbs. To encourage participation and to overcome cost barriers, this program provides mail-in and retailer point-of-sale (POS) rebates.

The CFL rebate design launched in January 2010 and the POS launched in August 2010. West Penn Power partnered with several manufacturers and negotiated buy downs of bulk CFLs which in turn, reduces the purchase price at the retail store, and negates the need for customers to follow through the mail-in rebate process. Participating retail stores include Home Depot, Walmart, Sam's Club, and Lowe's.

4.1.1 Program Logic

A program logic model is a visual representation of the program's theory that illustrates a set of interrelated program activities that combine to produce a variety of outputs that lead to key short-, mid- and long-term outcomes. Below is the PY2 Program Logic Model. Tetra Tech updates logic models annually to capture changes in the programs as they develop.

Residential Compact Fluorescent Lighting Rewards Program Logic Model

Inputs/ Resources	Sufficient budget is allocated to cover rebate and administration costs	Retailer marketing materials, Point of Sale (POS) partners, and mail-in rebate coupon retailers	Marketing collateral, program website	Appliance mail-in rebate coupons
	West Penn Power program staff	West Penn Power program outreach staff	West Penn Power program staff	West Penn Power program management and rebate processing staff
	Outside technical resources	Advertising contractor, Garrison Hughes	Advertising (Garrison Hughes), rebate processing contractors, and POS partners	
Activities	**Develop Program Infrastructure**	**Communicate with Trade Allies**	**Communicate with Customers**	**CFL Purchase**
Outputs	The Compact Flourescent Lighting (CFL) Rewards Program launched Jan 1, 2010.	Implement POS instant rebates at retail stores	Purchase of efficient lighting	Purchase of CFLs
	Program measures, forms, rebate and marketing strategy, Technical Resource Manual developed, refined and documented.	Understand and incorporate retail sales reports for POS rebates	Dissemination of messages about the benefits of energy savings through purchase of CFLs	Processing of mail-in rebates including validation, approval, and rejection
	Program website and tracking system developed (appropriate information is requested, captured and entered into the system)	Identify and partner with key CFL retailers in service territory	POS partner employee training and marketing of CFL instant rebates (no rebate form required)	Incorporation of retail sales reports from POS rebates into program tracking system
		Provide marketing materials and mail-in rebate coupons; educate and train retail staff	Mail-in rebate forms available from non-POS retailers	Payment of mail-in rebate incentives
		Routine visits and interaction with retailers; review for adequate marketing		
Short to medium term outcomes	Tracking system supports evaluation	CFL customers at partnering retailers are aware of West Penn Power POS or mail-in rebate coupons	Customers are aware of CFL rebates	Enroll 169,376 program participants and 804,536 CFLs installed by the end of 2012
	Program administrative functions ready for launch		Customers are aware of benefits of energy savings through purchase of CFLs	87,958 MWh and 4.8 MW savings by the end of 2012
	West Penn Power staff knowledgeable about the program and its resources		Customers purchase CFLs submit rebate forms	Summary reports for West Penn Power program staff
Long term outcomes	Energy saving goals of the Compact Flourescent Lighting (CFL) Rewards program are achieved within budgetary constraints	Customers review and consider CFLs for lighting purchases	Energy efficiency becomes a consideration in all lighting purchases	Increased penetration of energy efficient lighting among West Penn Power's residential customers
				Increased customer satisfaction because of energy savings

4.1.2 Program M&V Methodology and Program Sampling

The table below summarizes the PY2 completed EM&V activities

Summary of Evaluation Activities for the Residential Compact Fluorescent Lighting Rewards Program

Action	Impact	Process	Details
Management and implementation staff interviews		√	Gathered insight into program design, delivery, and interactions with other stakeholders.
Vendor interviews and mystery shopping		√	Gathered qualitative information from participating POS retail stores to assess the levels of program marketing and employee knowledge
Participant surveys	√	√	Collected process information from a sample of program mail-in rebate participants, and estimated the program realization rate
Engineering Review	√		Reviewed engineering assumptions, calculations, models used to estimate TRM Deemed Savings (2010-2012).

4.1.3 Program Sampling

Refer to Section 4.1.2 above.

4.1.4 Process Evaluation

The evaluation research indicates that the PY2 program design changes are actively addressing participation barriers found in PY1. The CFL program strategies are focusing on POS CFL instant rebates. The POS strategy has proven to be a viable, strategic option to reduce the barriers to customer participation for the mail-in rebate program design.

Participants were largely satisfied with the program. When asked to rate their satisfaction with the program overall on a 1 to 10 scale (with 10 being “very satisfied”), 84 percent of participants rated the program as an 8 or above.

4.1.5 Program Partners and Trade Allies

Customers benefit from a POS instant rebate when they purchase a single or multi pack of CFL light bulbs at various retailers associated with the WPP POS agreements. The partnerships are with the CFL manufacturers which supply retail stores. See below for a summary of partnerships:

- WPP has a POS Partnership with GE Lighting. The retailers associated with this partnership at this time are Wal-Mart and Sam’s Club.
- WPP has a partnership agreement with Philips Lighting. The retailer associated with this partnership is Home Depot.
- WPP also has an agreement with Lowe’s which will include multiple manufacturers.

- WPP is securing additional agreements with GE and Osram/Sylvania. The GE agreements will include True Value, Ace Hardware, CVS, and Rite Aid.

4.1.6 Program Finances

A summary of the project finances are presented in Table 4-1.

Table 4-1: Summary of Compact Fluorescent Lighting (CFL) Rewards Program Finances: TRC Test[29]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ 224,444	$ 489,629	$ 489,629
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ 224,444	$ 489,629	$ 489,629
B.1	Design & Development	$ 1,364	$ 4,704	$ 119,465
B.2	Administration	$ 13,712	$ 79,305	$ 116,357
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 5,204	$ 159,937	$ 220,450
B.5	Technical Assistance	$ 51,659	$ 84,269	$ 176,857
B	**Subtotal EDC Implementation Costs**	$ 71,939	$ 328,215	$ 633,129
C	**EDC Evaluation Costs**	$ 17,772	$ 50,788	$ 55,640
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 314,155	$ 868,632	$ 1,178,398
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[29] Definitions for terms in following table are subject to TRC Order.

4.2 Critical Peak Rebate Program

The Critical Peak Rebate Program (CPR) demand response program encourages residential customers to lower their demand during peak load hours by offering a rate discount/rebate based on actual demand reduction. The load reduction must occur during notified peak hours. CPR relies on the installation of a smart meter to measure the customer's demand during peak hours.

A limited deployment is planned for the 3rd quarter 2011 with full rollout starting in the 4th quarter of 2011.

4.2.1 Program Logic

Program Logic will be provided in PY3.

4.2.2 Program M&V Methodology

Program M&V Methodology will be determined in PY3.

4.2.3 Program Sampling

Program Sampling will be determined in PY3.

4.2.4 Process Evaluation

Process Evaluation will be determined in PY3.

4.2.5 Program Partners and Trade Allies

Program Partners and Trade Allies are to be determined.

4.2.6 Program Finances

A summary of the project finances are presented in Table 4-2.

Table 4-2: Summary of Critical Peak Rebate Program Finances: TRC Test[30]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ -	$ -	$ -
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ -	$ -	$ -
B.1	Design & Development	$ 1,364	$ 2,760	$ 2,760
B.2	Administration	$ 14,331	$ 28,142	$ 28,142
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 49,654	$ 52,882	$ 52,882
B.5	Technical Assistance	$ 14,923	$ 20,856	$ 20,856
B	**Subtotal EDC Implementation Costs**	$ 80,272	$ 104,640	$ 104,640
C	**EDC Evaluation Costs**	$ 3,370	$ 7,017	$ 7,017
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 83,642	$ 111,657	$ 111,657
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[30] Definitions for terms in following table are subject to TRC Order.

4.3 Residential ENERGY STAR and High Efficiency Appliance Program

The ENERGY STAR and High Efficiency Appliance Program encourages customers to purchase the most energy-efficient appliances available. To promote participation and to overcome first cost barriers, this program provides rebates (equal to about 50 percent of the appliance's incremental cost in most cases) for the purchase of appliances that meet or exceed ENERGY STAR or other energy efficiency ratings.

Mail-in rebates are offered for clothes washers, clothes dryers, dishwashers, refrigerators, freezers, programmable thermostats, and room air conditioners. Appliance turn-in rebates are also available through the program for refrigerators, freezers, and room air conditioners. Rebates for high efficiency refrigerators and freezers require turn in of the older replaced appliance.

This Program launched in January 2010

4.3.1 Program Logic

A program logic model is a visual representation of the program's theory that illustrates a set of interrelated program activities that combine to produce a variety of outputs that lead to key short-, mid- and long-term outcomes. Below is the PY2 Program Logic Model. Tetra Tech updates logic models annually to capture changes in the programs as they develop.

Residential ENERGY STAR and High Efficiency Appliance Program Logic Model

Inputs/ Resources	Sufficient budget is allocated to cover rebate and administration costs	Point of sale partners and marketing materials, including mail-in rebate coupons	Marketing collateral, program website	Appliance mail-in rebate and recycling coupons	West Penn Power program staff
	West Penn Power program staff	West Penn Power program outreach staff	West Penn Power program staff	Rebate processor and recycling contractor (JACO)	Evaluation reports
	Outside technical resources	Appliance recycler, JACO	Advertising contractor (Garrison Hughes) and JACO for recycling	West Penn Power program staff	Appliance efficiency standards
Activities	**Develop Program Infrastructure** →	**Communicate with Trade Allies** →	**Communicate with Customers** →	**Appliance Purchase/Recycling** →	**Adjust Rebates as Appliance Efficiency Levels Change**
Outputs	The ENERGY STAR and High Efficiency Appliances Program launched Jan 1, 2010.	Identify and partner with key appliance retailers in service territory	Coupon distribution in print media and on website	Purchase of qualified efficient appliances	New list of rebated appliances
	Program measures, forms, rebate and marketing strategy, Technical Resource Manual developed, refined and documented.	Provide marketing materials and mail-in rebate coupons; educate and train retail staff	Dissemination of TV, Internet, and newspaper messages about the benefits of energy savings through purchase of efficient appliances	Processing of mail-in rebate forms including validation, approval, and rejection	New marketing collateral
	Program website and tracking system developed (appropriate information is requested, captured and entered into the system)	Retailer aware and promotes additional customer rebates for recycling refrigerators, freezers, and room air conditioners by	The Home Performance program will inform portential customers	Recycling of old refrigerator, freezer, and room air conditioner	
		Routine visits and interaction with retailers; review for adequate marketing		Timely payment of program incentives by West Penn Power for appliance rebates, and JACO for recylcing rebates	
Short to medium term outcomes	Tracking system supports evaluation	Appliance customers at partnering retailers are aware of both West Penn Power purchase and recycling mail-in rebates	Customers are aware of appliance rebates	Enroll 57,344 program participants by the end of Program Year 2012	New energy savings goals
	Program administrative functions ready for launch		Customers are aware of benefits of energy savings through purchase of efficient appliances	51,233 MWh and 12.7 MW savings by the end of 2012	Customers aware of exact rebate amount before installation
	West Penn Power staff knowledgeable about the program and its resources		Customers purchase efficient appliances and submit rebate forms	Summary reports for West Penn Power program staff	
Long term outcomes	Energy saving goals of the ENERGY STAR and High Efficiency Appliances program are achieved within budgetary constraints	Customers review and consider ENERGY STAR rated appliances for all purchases	Energy efficiency becomes a consideration in all appliance purchases	Increased penetration of energy efficient equipment among West Penn Power's residential customers	Saturation of efficient technology is avoided because standards are updated.
				Increased customer satisfaction because of energy savings	

4.3.2 Program M&V Methodology and Program Sampling

The below table summarizes the PY2 EM&V activities.

Summary of Evaluation Activities for the Residential ENERGY STAR and High Efficiency Appliance Program

Action	Impact	Process	Details
Management and implementation staff interviews		√	Gathered insight into program design, delivery, and interactions with other stakeholders.
Vendor interviews and mystery shopping	√	√	Gathered qualitative information from participating appliance retail stores to assess the levels of program marketing and employees knowledge
Participant surveys	√	√	Collected process information from a sample of program participants and estimated realization rates for each of the appliance types
Engineering Review	√		Reviewed WPP claimed savings and savings calculator

4.3.3 Program Sampling

Refer to Section 4.3.2 above.

4.3.4 Process Evaluation

The program uses general advertising campaigns, the Watt Watchers website, and targeted in-store materials to market the program. To date, clothes washers, electric clothes dryers, and refrigerators are doing well, while freezer rebates are lagging.

A key program improvement in PY2 was the addition of promotional partnerships with retailers to promote appliances eligible for the Program. Another notable change is the addition of program qualified recyclers to provide customers with more convenient retailer recycling options.

In February 2011, the evaluator's mystery shopping activities in and around Greensburg, PA assessed the level of marketing and employee program knowledge at participating appliance stores. In general, evaluators found that West Penn Power signage at participating stores is limited. Appliance sales staff were not actively promoting energy efficiency or program rebates. Evaluators did find that store staff are fairly knowledgeable when prompted. Appliance store sales staff did not use energy savings or cost savings as a technique to promote and sell appliances. They possessed a good understanding of energy savings and available rebates, but discussed only when prompted. The recycling rebate and requirement, however, was not as commonly discussed.

Participants reported they are most likely to hear of the program from a retail store, contractor, or newspaper. This finding reflects the importance of the outreach efforts that West Penn Power has

undertaken with retail stores. It also confirms that any additional marketing, including newspaper advertisements, bill inserts, and the West Penn Power Watt Watchers website are encouraging greater participation. Participants are largely satisfied with the program. When asked to rate their satisfaction with the program overall on a 1 to 10 scale (with 10 being "very satisfied"), 85 percent of participants rated the ENERGY STAR and High Efficiency program overall as an 8 or above. In addition, 74 percent of the participants did not have any suggestion for improving the way the program currently operates. In addition, the program rebated appliances are meeting the majority of participants' energy savings expectations. Sixty-two percent of participants reported that they were satisfied with the energy savings from the new equipment.

Participant surveys were also completed with appliance recycling participants. For this program, participants are most likely to hear of the program from West Penn Power bill inserts followed by newspapers. Participants are also largely satisfied with the recycling program. When asked to rate their satisfaction with West Penn Power's implementer (JACO) on a 1 to 10 scale (with 10 being "very satisfied"), 92 percent of participants rated the professionalism of JACO staff highly (8 or above). In addition, the time it took to recycle their appliance and the rebate application process were also rated high (by 86 percent of participants). Both the available appliance pickup service and rebate were influential in customer's decision to participate.

4.3.5 Program Partners and Trade Allies

WPP identified and worked with key market actors, specifically local appliance retailers and big box retail stores, to market and promote high efficiency appliance options. These marketing efforts are positively affecting program participation. Program marketing begins with identifying and teaming with key market actors; in this case, appliance retailers and big box retail stores. Program marketing and rebate materials are placed with the appliances, with program eligibility decals placed directly on qualifying appliances in some instances. West Penn Power staff educates and trains store management and employees about the program's offerings. West Penn Power would like to expand the program aggressively by incorporating additional local retail stores.

West Penn Power has expanded the purchase rebate eligibility for customers using recycler's other than the Company recycling CSP (JACO) to provide customers with more convenient retailer recycling options by adding "program qualified recyclers" to the Program.

The Company is also working with Lowe's on a pilot initiative to print rebate forms at the time of purchase.

4.3.6 Program Finances

A summary of the project finances are presented in Table 4-3.

Table 4-3: Summary of Residential ENERGY STAR and High Efficiency Appliance Program Finances: TRC Test[31]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ 500,032	$ 1,397,051	$ 1,421,186
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ 500,032	$ 1,397,051	$ 1,421,186
B.1	Design & Development	$ 1,364	$ 20,746	$ 135,507
B.2	Administration	$ 23,355	$ 121,421	$ 192,742
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 193,443	$ 1,500,416	$ 1,848,725
B.5	Technical Assistance	$ 93,654	$ 508,366	$ 614,911
B	**Subtotal EDC Implementation Costs**	$ 311,816	$ 2,150,949	$ 2,791,885
C	**EDC Evaluation Costs**	$ 79,764	$ 161,817	$ 203,769
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 891,612	$ 3,709,817	$ 4,416,840
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[31] Definitions for terms in following table are subject to TRC Order.

4.4 Residential Home Performance Program

The Residential Home Performance Program provides a holistic approach to educating customers on energy efficiency and conservation, and to improve overall home performance, by providing customers with a choice of two energy audit measures including an On-line Audit and an In-Home Audit. WPP is offering a $50 incentive for an In-Home Audit. The customer will be eligible to receive an additional incentive for the installation of measures recommended by the audit up to the balance of the audit cost. The Consumer Efficiency measure will study customer demographic and perform a bill analysis. The customer will be presented a report containing EE&C efficiency education and opportunities to reduce consumption based on the demographic and bill analysis. The Consumer Efficiency measure will also provide EE&C educational materials for schools.

The measures directly available through this program for electric heat customers are attic insulation and home sealing via qualified In-home Audits.

The On-line Audit and Consumer Efficiency measures have been launched.

Customers participating in the On-line Audit receive eight CFLs (four CFLs were provided prior to March 2011).

The Consumer Efficiency measure includes:

- CFL Event Giveaways: up to 8 bulbs are given to customers attending events held within the WPP service territory;
- CFL School Kits: customers send in post card to receive 4-60W incandescent equivalent CFL bulbs by mail;
- CFL Opt-In Program: customers go on-line or speak to a representative to order a CFL kit that includes 4-60W and 2-100W incandescent equivalent CFL bulbs by mail;
- JACO bulb distribution: JACO provides customers with 4-60W, 2-75W, and 2-100W incandescent equivalent CFL bulbs; and,
- UPMC Kit Mailings (one time): partnered with Duquesne Light to provide employees in WPP service territory with receive 2-60W, 1-75W, and 1-100W incandescent equivalent CFL bulbs, 2 lime lights, and 1 Smart Strip.

The In-Home Audit component has not yet been launched.

4.4.1 Program Logic

A program logic model is a visual representation of the program's theory that illustrates a set of interrelated program activities that combine to produce a variety of outputs that lead to key short-, mid- and long-term outcomes. Below is the PY2 Program Logic Model, which currently includes the On-line Audit portion of the Home Performance Program.

Residential On-line Audit Home Performance Program Logic Model

Inputs/ Resources	Sufficient budget is allocated Program Team	Marketing materials Program website	Online analyzer web tool
Activities	**Develop Program Infrastructure** →	**Direct marketing** →	**Perform On-line Audits**
Outputs	The online audit portion of the program is made available to customers in 2010 Program measures, marketing strategy and technical assumptions developed, refined and documented Tracking system developed and appropriate information is requested, captured and entered	Target direct communications to residential customers and other outreach such as bill inserts, direct mail, radio, and inbound call center General Awareness Campaign Snippets from Energy At Home DVD on AP website	Target 19,000 online audit participants in 2010 Participants receive four free CFLs (8 Bulbs effective 3/2011) Customers are referred to other West Penn Power programs through the online analyzer
Short to medium term outcomes	Improved energy efficiency program awareness and participation Resources are available to provide services to customers	Customer interest is stimulated by marketing the availability and benefits of audit options AP Call center receives program inquiries	Customer interest in additional energy saving measures is generated by audit recommendations kW, kWh and therm savings are identified
Long term outcomes	Energy saving goals of the program are achieved within budgetary constraints	Residential customers' awareness of and participation in the program increases	Customer interest in additional energy saving measures is generated by audit recommendations

4.4.2 Program M&V Methodology and Program Sampling

Tetra Tech conducted a PY2 survey that included participants from the On-line Audit and CFL event giveaway portions of the Home Performance program. The survey was similar to the one used in PY1 for the first wave of the On-line Audit to (1) verify customer receipt of the CFLs; and (2) evaluate program processes by review of customer experience with energy saving outcomes.

The table below summarizes PY2 EM&V completed activities.

Action	Impact	Process	Details
Management and implementation staff interviews		√	Gathered insight into program design, delivery, and interactions with other stakeholders.
Participant surveys	√	√	Collected information from a random sample of On-line Audit program participants and CFL event giveaway program participants each.
Engineering Review	√		Reviewed engineering assumptions, calculations, models used to estimate equipment/measure savings (2010-2012).

4.4.3 Program Sampling

Refer to Section 4.4.2 above.

4.4.4 Process Evaluation

Evaluators conducted a second round of residential program manager (PM) interviews in October and Participant survey findings show that the On-line Audit tool has been an effective tool for referring customers to other Watt Watchers programs, with almost half of participants mentioning that they learned of other programs through the On-line Audit. The most common programs customers participated in as a result of completing the On-line Audit were the ES Appliances and CFL Rewards programs. In addition to participating in other Watt Watchers programs, over 75 percent of On-line Audit participants reported taking energy savings actions as a result of the recommendations.

General awareness of the Watt Watchers programs was prevalent amongst the CFL event giveaway participants as well. The ENERGY STAR and High Efficiency Appliance program was the most widely mentioned by participants, followed by the CFL Rewards program and the Whole Home Appliance program.

4.4.5 Program Partners and Trade Allies

Aclara provides the on-line audit tool. Power Direct is administering the CFL Opt-in initiative.

4.4.6 Program Finances

A summary of the project finances are presented in Table 4-4.

Table 4-4: Summary of Residential Home Performance Program Finances: TRC Test[32]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ 561,856	$ 632,622	$ 669,923
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ 561,856	$ 632,622	$ 669,923
B.1	Design & Development	$ 1,364	$ 12,008	$ 126,769
B.2	Administration	$ 13,923	$ 74,006	$ 116,825
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 3,879	$ 320,197	$ 721,798
B.5	Technical Assistance	$ 85,169	$ 113,499	$ 206,082
B	**Subtotal EDC Implementation Costs**	$ 104,335	$ 519,710	$ 1,171,474
C	**EDC Evaluation Costs**	$ 19,534	$ 60,837	$ 82,309
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 685,725	$ 1,213,169	$ 1,923,706
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[32] Definitions for terms in following table are subject to TRC Order.

4.5 Programmable Controllable Thermostat (PCT) Program

The Company's amended September 10, 2010 EE&C/DR Plan removed this program from the WPP EE&C Plan.

4.5.1 Program Logic

Not applicable.

4.5.2 Program M&V Methodology

Not applicable.

4.5.3 Program Sampling

Not applicable.

4.5.4 Process Evaluation

Not applicable.

4.5.5 Program Partners and Trade Allies

Not applicable.

4.5.6 Program Finances

A summary of the project finances are presented in Table 4-5. Not applicable.

Table 4-5: Summary of Programmable Controllable Thermostat (PCT) Program Finances: TRC Test

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants			
A.2	EDC Incentives to Trade Allies			
A	**Subtotal EDC Incentive Costs**			
B.1	Design & Development			
B.2	Administration			
B.3	Management			
B.4	Marketing			
B.5	Technical Assistance			
B	**Subtotal EDC Implementation Costs**			
C	**EDC Evaluation Costs**			
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs			
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			
NOTES: Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.				

4.6 Residential Whole Home Appliance Efficiency Program[33]

The Residential Whole Home Appliance Efficiency Program encourages customers to purchase a high efficiency central air conditioner or heat pump (SEER ratings of 14.5 or greater). To encourage participation and to overcome cost barriers, this program provides rebates ($100 for SEER of 14.5, $150 for SEER of 15, and $200 for SEER of 16 and above) for the purchase of units that exceed the federal energy efficient standard (SEER ratings of 13). To qualify for these rebates under this program, the work must be completed by a certified contractor and a programmable thermostat must be installed. These measures launched in January 2010.

The September 10, 2010 amended EE&C/DR Plan added measures to encourage customers to perform maintenance on existing central air conditioner (CAC) or heat pump (HP) systems. The program also encourages customers to replace electric hot water heaters with new Energy Star domestic hot water storage type units. These additional residential rebate measures were launched in April 2011.

4.6.1 Program Logic

A program logic model is a visual representation of the program's theory that illustrates a set of interrelated program activities that combine to produce a variety of outputs that lead to key short-, mid- and long-term outcomes. Below is the PY2 Program Logic Model. Tetra Tech updates logic models annually to capture changes in the programs as they develop.

[33] This Program was formally called the Residential ENERGY STAR and High Efficiency Appliance Program.

Residential Whole Home Appliance Efficiency Program Logic Model

Inputs/ Resources	Sufficient budget is allocated West Penn Power program staff Outside technical resources	Marketing collateral, program website West Penn Power program staff Technical Resource Manual	Marketing materials, program website Rebate coupon packet	West Penn Power program staff Rebate contractor (PFC) Program infrastructure	Project invoices and documentation Rebates Program infrastructure
Activities	**Develop Program Infrastructure** →	**Outreach to Trade Allies** →	**Customer Communications** →	**Rebate Application approval** →	**Rebate Measures**
Outputs	Program website and West Penn Power tracking system developed (appropriate information is requested, captured and entered into the system) Program measures, forms, rebates and marketing strategy, Technical Resource Manual developed, refined and documented. Changes to the Residential Whole Home Appliance Efficiency Program launched March 15, 2011.	Coordinate with HVAC and hot water heating distributors to obtain contact information for potential trade allies Provide program information, sales training, and marketing support to contractors via direct marketing Participate in energy efficiency fairs and events held by local chapters of HVAC and plumbing associations Involve trade ally feedback to refine program offerings	TV, radio, and print marketing of Residential Whole Home Appliance Efficiency Program on a rotating basis with other efficiency programs Trade allies market program to customers	PFC enters customer application into system PFC validates customer applications, and alerts customer if rebate is rejected	Customers participate in program PFC mails rebate check within six weeks of receipt Quality control conducted, West Penn Power or contractor conducts quality assurance
Short to medium term outcomes	West Penn Power tracking system supports evaluation Program administrative functions ready for launch West Penn Power staff knowledgeable about the program and its resources	Contractors and distributors are knowledgeable about the rebate structure and program guidelines Trade allies provide necessary rebate information to customers and assist with the completion of the application Trade allies regularly communicate the program to customers and include rebate with bids	Program offering is meaningful, clear, and valuable to customers Residential customer's awareness of and participation in the program increases significantly	Customers replace heat pump, central AC, and electric hot water heating equipment with equipment that is higher efficiency than federal standards require Customers conduct maintenance that improves the efficiency of existing HVAC equipment Customers aware of exact rebate amount before installation	12,641 MWh and 4.0 MW savings by the end of 2012 Enroll 6,397 participants by the end of 2012 Summary reports for West Penn Power program staff
Long term outcomes	Energy saving goals of the Residential Whole Home Appliance Efficiency Program are achieved within budgetary constraints	Increased trade ally stocking and sales of HVAC and water heating equipment with higher efficiency than required by federal standard HVAC contractors more likely to carry equipment necessary for enhanced HVAC tune-up The majority of trade ally population participate and/or recommend energy efficient equipment and services Increased participation of customers in the program	Increased residential customer awareness of, and demand for energy efficiency equipment and services	Ensure that all rebated equipment meets program requirements Increased customer satisfaction with rebate completion process	Increased penetration of energy efficient HVAC and hot water heating equipment among West Penn Power's residential customers Increased frequency of efficiency maintenance on existing HVAC equipment among West Penn Power's residential customers

4.6.2 Program M&V Methodology and Program Sampling

The Residential Whole Home Appliance Efficiency Program was evaluated in PY2. The table below summarizes completed EM&V activities.

Evaluation Tasks

Action	Impact	Process	Details
Program Staff Interviews		√	Provided insight into program design and delivery.
Trade Ally Interviews	√	√	Reviewed process-related issues, including program awareness and customers' adoption level of program-qualifying HVAC equipment. Inform the impact evaluation by identifying changes in the HVAC market resulting from program offerings.
Participant Survey (216 customers)	√	√	Gathered process-related data, including program awareness, utility and program satisfaction, and initial barriers to technology adoption. Included a free-ridership and spillover battery.
Engineering Review	√		Reviewed engineering assumptions, calculations, models used to estimate measure claimed savings.

4.6.3 Program Sampling

Refer to Section 4.6.2 above.

4.6.4 Process Evaluation

Key PY2 program improvements included simplifying the HVAC rebate application form and the implementation of an aggressive outreach effort to engage HVAC contractors and allow them to help complete the rebate application.

The program gained momentum in PY2. While the program has made a decisive departure from an early customer-focused marketing approach (which is now limited to rotating program-specific TV, radio, and print awareness campaigns) to recruitment and participation of trade ally contractors, the evaluation research shows the need for a 'push-pull' marketing effort to continue. Both the trade ally interviews and participant surveys indicate that contractors are influential in the customer decision-making process. Interviews with trade allies show that trade allies who are aware of the residential program are effectively marketing the rebates to customers. Most of the trade allies interviewed indicated that they included the rebates from the utilities as part of their standard sales presentation, which usually included information on paybacks for high efficiency equipment. However, trade allies feel that the program would benefit from utility-specific material that explained the rebates and benefits of high efficiency equipment and also recommended more direct marketing of the program by West Penn

Power. Participants reported they were most likely to hear of the program from the contractor that installed the equipment or a West Penn Power utility bill insert.

Participants are largely satisfied with the program. When asked to rate their satisfaction with the program overall on a 1 to 10 scale (with 10 being "very satisfied"), 83 percent of the heat pump participants and 89 percent of central air conditioner participants rated the HVAC Efficiency program overall as an 8 or above. In addition, 81 percent of the participants would not make any changes to the way the program currently operates.

4.6.5 Program Partners and Trade Allies

Trade ally contractors have been educated over the past several months on the WPP Whole Home Appliance Efficiency Program. This contractor-based strategy centers on outreach with distributors to help identify potential contractors. WPP then implements targeted contractor mailings. Contractors knowledgeable about the program rebates leverage the program rebate to up-sell their customers. In addition, contractors reduce a key customer participation barrier by aiding in the completion of the rebate application form. The form has also been revised since the program's inception to increase application efficiency, with contractor feedback acknowledging its ease of completion as compared to prior form versions.

The company also partners with Columbia Gas and UGI Utilities to promote the ENERGY STAR Domestic Water Heating measure.

Trade allies interviewed for the evaluation feel that the market for high efficiency equipment is strong in Pennsylvania. Most trade allies stated that demand for high efficiency equipment, including heat pumps and air conditioners with a SEER rating above 14, is strong in Pennsylvania. All reported that they actively promote high efficiency equipment to their customers and many noted that customers have become more informed about the benefits of high efficiency equipment over the course of the last ten to fifteen years. As a whole, the trade allies feel that high efficiency equipment makes sense in Pennsylvania; the climate makes high efficiency equipment practical and cost effective, especially for heat pumps.

Interviewed trade allies also reported that there is a strong correlation between demand for high efficiency HVAC equipment and rebate levels. Nearly all of the trade allies interviewed indicated that 2010 was a good year in the HVAC business in Pennsylvania despite the economic downturn. Most attributed this directly to the federal tax credits and rebates offered by the utilities

4.6.6 Program Finances

A summary of the project finances are presented in Table 4-6.

Table 4-6: Summary of Residential Whole Home Appliance Efficiency Program Finances: TRC Test[34]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ 73,650	$ 354,700	$ 354,700
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ 73,650	$ 354,700	$ 354,700
B.1	Design & Development	$ 1,364	$ 4,209	$ 118,970
B.2	Administration	$ 14,275	$ 78,183	$ 115,297
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 167,939	$ 196,269	$ 202,377
B.5	Technical Assistance	$ 17,063	$ 46,477	$ 139,253
B	**Subtotal EDC Implementation Costs**	$ 200,641	$ 325,138	$ 575,897
C	**EDC Evaluation Costs**	$ 30,777	$ 60,123	$ 74,910
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 305,068	$ 739,961	$ 1,005,507
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[34] Definitions for terms in following table are subject to TRC Order.

4.7 Residential Efficiency Rewards Rate

The Company's amended September 10, 2010 EE&C/DR Plan removed this Smart Meter enabled program to reduce reliance of the Plan on the rapid deployment of Smart Meters.

4.7.1 Program Logic

Not applicable.

4.7.2 Program M&V Methodology

Not applicable.

4.7.3 Program Sampling

Not applicable.

4.7.4 Process Evaluation

Not applicable.

4.7.5 Program Partners and Trade Allies

Not applicable.

4.7.6 Program Finances

A summary of the project finances are presented in Table 4-7. *Not applicable.*

Table 4-7: Summary of Residential Efficiency Rewards Rate Program Finances: TRC Test

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants			
A.2	EDC Incentives to Trade Allies			
A	**Subtotal EDC Incentive Costs**			
B.1	Design & Development			
B.2	Administration			
B.3	Management			
B.4	Marketing			
B.5	Technical Assistance			
B	**Subtotal EDC Implementation Costs**			
C	**EDC Evaluation Costs**			
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs			
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

4.8 Pay Ahead (Smart) Service Rate

The Company's amended September 10, 2010 EE&C/DR Plan removed this Smart Meter enabled program to reduce reliance of the Plan on the rapid deployment of Smart Meters.

4.8.1 Program Logic

Not applicable.

4.8.2 Program M&V Methodology

Not applicable.

4.8.3 Program Sampling

Not applicable.

4.8.4 Process Evaluation

Not applicable.

4.8.5 Program Partners and Trade Allies

Not applicable.

4.8.6 Program Finances

A summary of the project finances are presented in Table 4-8. *Not applicable.*

Table 4-8: Summary of Pay Ahead (Smart) Service Rate Program Finances: TRC Test

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants			
A.2	EDC Incentives to Trade Allies			
A	**Subtotal EDC Incentive Costs**			
B.1	Design & Development			
B.2	Administration			
B.3	Management			
B.4	Marketing			
B.5	Technical Assistance			
B	**Subtotal EDC Implementation Costs**			
C	**EDC Evaluation Costs**			
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs			
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

4.9 Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program

The Program consists of a Home Check-Up Audit along with standard installed measures. The auditors will provide and install standard EE&C measures, with the customer's consent. The installed measures are as follows:

- Non Electric Hot Water heating customers – up to 6 CFLs and energy education.
- Electric Hot Water heating customers – 6 CFLs, up to 3 Faucet Aerators, 1 Low Flow Shower Head, and energy education.

Under the Appliance Replacement component, the refrigerator and/or room air conditioner may qualify for replacement.

- Refrigerator – The auditor will determine if the customer's existing refrigerator is eligible for replacement based on the age and operational effectiveness. If eligible, the refrigerator will be replaced with a like-size ENERGY STAR model. In addition, should the customer also have an older, inefficient freezer in use, the customer will be provided the opportunity to replace both the refrigerator and freezer with a larger, more efficient refrigerator, so that the freezer may be removed.
- Room Air Conditioner - The auditor will determine if the customer's existing room air conditioner is eligible for replacement based on the age and operational effectiveness. Up to two existing room air conditioners can be replaced.

This Program launched in January 2010.

4.9.1 Program Logic

A program logic model is a visual representation of the program's theory that illustrates a set of interrelated program activities that combine to produce a variety of outputs that lead to key short-, mid- and long-term outcomes. Below is the PY2 Program Logic Model. Tetra Tech updates logic models annually to capture changes in the programs as they develop.

Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program Logic Model

Inputs/ Resources	Sufficient budget is allocated West Penn Power program staff Dollar Energy (PA)	West Penn Power / Dollar Energy Thirteen community action agencies and Dollar Energy	Community action agencies (contractors) Lowes	West Penn Power Dollar Energy / community action agencies
Activities	**Develop Program Infrastructure**	**Refer and Enroll Customers**	**Perform Home Performance Check-up**	**Process Invoices**
Outputs	The Low Income Home Performance Check-up Audit and Appliance Replacement Program launched January 1, 2010. Program measures, forms, marketing strategy, Technical Resource Manual developed, refined and documented. Inform contractors and West Penn Power of program requirements and procedures. Centralized on-line tracking system developed and available by program launch date (Dollar Energy)	Identify potentially eligible customers via West Penn Power call center. Customers referred to partnering community action agencies associated with customers' location (by county). Collect household data to confirm eligibility (e.g., rental status, household income at or below 150% FPL) Identify renters in need and obtain approval from landlords. Collect any qualifying information from renters. West Penn Power develops the "Governor's List" of LIHEAP recipients to identify potential LIURP participants based on usage (high is priority). Dolllar Energy conducts outbound outreach calls.	Contractor direct installs up to 6 CFLs, 3 faucet aerators, and 1 low flow showerhead. Prioritize high usage faucets/sockets. Identify equipment and service needs in the home that can be funded through LIURP and/or DOE funds. Complete 30 minute walk-through interactive education with customer. Provide and discuss energy usage analysis. Work orders created, documenting measures to be installed and services to be provided through Dollar Energy's online system by contractors. Specifically identify the need for refrigerator replacement (up to 1) and/or room air conditioning replacement (up to 2).	Process invoices for direct installation measures, refrigerators and room air conditioners, and audit services. Receive documentation for all measures that are installed in the home and source of funding for the installation regardless of funding Enter recipient and measure information into Dollar Energy's program database. Date of weatherization is entered into West Penn Power's CIS system for the premise. SAP may in the future include fields for reporting and tracking.
Short to medium term outcomes	Program serves low income customers within annual budget not to exceed $5.381M through 2012. Program administrative functions ready for launch West Penn Power staff knowledgeable about the program and its resources	Up to 5,085 customers that are in financial need are identified and served through the program through program year 2012 Strong communication and referral mechanisms are maintained between West Penn Power and the community action agencies. The program serves multi-family buildings not served through the comprehensive LIURP program.	West Penn Power claims the savings resulting from the audit and direct installation Room air conditioners and refrigerators are property recycled (West Penn Power contracting with Lowes) Capture energy savings from the multi-unit sector.	6,071 MWh and 1.2 MW savings by the end of 2012 LIURP and/or the federal program are able to serve a greater number of households.
Long term outcomes	Energy saving goals of the program are achieved within budgetary constraints	The program serves a higher percentage of low income customers through active identification and enrollment.	Ensure that as many customers as possible receive comprehensive weatherization services. Reduce energy usage and improve customer bill payment behaviors. Customers make behavioral changes based on education provided and reinforced by savings.	Increased penetration of energy efficiency equipment among West Penn Power's low income residential customers

4.9.2 Program M&V Methodology and Program Sampling

The Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program was evaluated in PY2. The table below summarizes completed EM&V activities and sample sizes. For the participant survey effort, households were randomly sampled from participants from PY1 through PY2 Q2.

Summary of Evaluation Activities for Residential Low Income Home Performance Check-up and Appliance Replacement Program

Action	Impact	Process	Details
Program manager and implementation staff interviews (3-5)		√	Gathered insight into program design, delivery, and interactions with other stakeholders.
Community action agency (CAA) interviews		√	Gathered process-related data from participating community action agencies. These interviews will address all three low-income programs offered by WPP.
Participant surveys (78)	√	√	Collected information from a random sample of program participants stratified by services received (audit only and direct install only, audit and refrigerator replacement, audit and room air conditioner replacement, audit, refrigerator and room air conditioner replacement).
Engineering Review	√		Reviewed engineering assumptions, calculations used to estimate equipment/measure savings in PY2.

4.9.3 Program Sampling

Refer to Section 4.9.2 above.

4.9.4 Process Evaluation

In PY2, the Low Income Home Performance Check-up Program met program staff expectations; the Low Income Home Performance Check-up Program is increasingly serving multi-family buildings; and outreach and marketing needs for this program is minimized by the synergies between this and other low-income programs offered by West Penn Power (e.g. Low Income Usage Reduction Program).

Evaluators conducted participating customer surveys in April and May 2011. They also spoke with 10 CAAs in May and June 2011. The surveys revealed relatively high satisfaction with the program and West Penn Power. The participant surveys revealed that auditors were providing information as

intended and designed by the program. However, the program would benefit from more consistent direct installation of kit materials.

4.9.5 Program Partners and Trade Allies

Lowe's and Sears provide replacement and recycling of the Refrigerator and Room Air Conditioner component for this program. Dollar Energy Fund staff, private contractors and community action agencies perform in-home energy audits.

4.9.6 Program Finances

A summary of the project finances are presented in Table 4-9.

Table 4-9: Summary of Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program Finances: TRC Test[35]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ 1,146,684	$ 2,846,559	$ 2,869,359
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ 1,146,684	$ 2,846,559	$ 2,869,359
B.1	Design & Development	$ 1,364	$ 13,959	$ 24,392
B.2	Administration	$ 12,601	$ 70,482	$ 112,804
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 680	$ 4,921	$ 8,814
B.5	Technical Assistance	$ 76,820	$ 239,456	$ 288,993
B	**Subtotal EDC Implementation Costs**	$ 91,465	$ 328,818	$ 435,003
C	**EDC Evaluation Costs**	$ 19,782	$ 21,604	$ 27,501
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 1,257,931	$ 3,196,981	$ 3,331,863
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[35] Definitions for terms in following table are subject to TRC Order.

4.10 Residential Low Income Joint Utility Usage Management Program

The program consists of a Home Check-Up Audit with Appliance Replacement and/or LIURP Program measures for gas and electric customers in conjunction with partnering gas utilities.

The program consists of a Home Check-Up Audit along with standard installed measures. The auditors provide and install standard EE&C measures, with the customer's consent. The installed measures are as follows:

- Non Electric Hot Water heating customers – up to 6 CFLs and energy education.
- Electric Hot Water heating customers – 6 CFLs, up to 3 Faucet Aerators, 1 Low Flow Shower Head, and energy education.

Under the Appliance Replacement component, the refrigerator and/or room air conditioner may qualify for replacement.

- Refrigerator – The auditor will determine if the customer's existing refrigerator is eligible for replacement based on the age and operational effectiveness. If eligible, the refrigerator will be replaced with a like-size ENERGY STAR model. In addition, should the customer also have an older, inefficient freezer in use, the customer will be provided the opportunity to replace both the refrigerator and freezer with a larger, more efficient refrigerator, so that the second freezer may be removed.
- Room Air Conditioner - The auditor will determine if the customer's existing room air conditioner is eligible for replacement based on the age and operational effectiveness.

The program may also fund additional measures, such as electric water heaters. This Program launched in January 2010.

4.10.1 Program Logic

A program logic model is a visual representation of the program's theory that illustrates a set of interrelated program activities that combine to produce a variety of outputs that lead to key short-, mid- and long-term outcomes. Below is the PY2 Program Logic Model. Tetra Tech updates logic models annually to capture changes in the programs as they develop.

Residential Low Income Joint Utility Usage Management Program Logic Model

Inputs/ Resources	Sufficient budget is allocated West Penn Power and gas utility program staff Dollar Energy (PA)	West Penn Power / gas utility Thirteen community action agencies and Dollar Energy	Community action agencies (contractors) Lowes	West Penn Power, gas utility, and DCED funds Community action agencies	West Penn Power, gas utility, and community action agencies Dollar Energy / community action agencies
Activities	**Develop Program Infrastructure** →	**Refer and Enroll Customers** →	**Perform Home Performance Check-up** →	**Weatherize Homes** →	**Process Invoices**
Outputs	The Low Income Joint Utility Usage Mangement Program launched January 1, 2010. Establish relationship and procedures with gas utility (e.g., Columbia Gas) and other interested utilities. Understand utility program requirements. Establish income requirements consistent with gas utility's program eligibility (up to 200% FPL) Inform contractors, West Penn Power staff, and gas utility staff of program requirements and procedures. Centralized on-line tracking system developed and available by program launch date (Dollar Energy)	Potentially eligible customers are identified via West Penn Power or gas utility call center. Customers referred to partnering community action agencies or utility. Household data is collected and documented confirming eligibility (e.g., household income at or below 150% FPL, between 150% to 200% FPL, gas heating customer) Referrals are communicated between gas utility, West Penn Power, Dollar Energy, and participating Community Action agency West Penn Power develops the "Governor's List" of their LIHEAP recipients to identify potential LIURP participants based on usage (high is priority). Dolllar Energy conducts outbound outreach calls.	Contractor direct installs up to 6 CFLs, 3 faucet aerators, and 1 low flow showerhead Identify equipment and service needs in the home including refrigerators and room air conditioners. Identify both gas and electric opportunities. Specifically identify the need for refrigerator replacement and/or room air conditioning replacement. Complete 30 minute walk-through interactive education with customer. Provide and discuss energy usage analysis. Work orders created, documenting measures to be installed and services to be provided through Dollar Energy's online system by contractors.	Contractors follow work orders developed through the check-up and holistically weatherize home, addressing both cost-effective gas and electric measures DCED, ARRA, and LIURP (gas and electric utility) funding is leveraged where necessary to ensure holistic weatherization Seamless services are provided to customer; customer time is minimized by coordinating services.	Process invoices for electric measures and audit services funded through West Penn Power's JUUMP program. Receive documentation for all measures that are installed in the home and source of funding for the installation regardless of funding Enter recipient and measure information into program database. Savings resulting from households with incomes between 150%-200% FPL are not counted toward low income portfolio goals but contribute to program goals Date of weatherization is entered into West Penn Power's CIS system for the premise. SAP may in the future include fields for reporting and tracking.
Short to medium term outcomes	Program serves low income customers within annual budget not to exceed $6.363M through 2012. Program administrative functions ready for launch West Penn Power and gas utility staff establish procedures for processing invoices and serving participants	Up to 11,937 customers that are in financial need are identified and served through the program through program year 2012 Strong communication and referral mechanisms are maintained between West Penn Power, gas utility, and the community action agencies. Households with higher income levels not eligible for West Penn Power's low income programs (between 150% to 200% FPL) are served.	West Penn Power claims the savings resulting from the audit and direct installation of electric measures Room air conditioners and refrigerators are property recycled (West Penn Power contracting with Lowes) Appropriate measures and services are identified (cost-effective, health and safety, etc.)	Services address the house as a system, improving overall household conditions Participants maintain high satisfaction in both gas utility and West Penn Power through the program's streamlined services Participant experiences non-energy benefits (e.g., improved comfort, home appearance).	11,319 MWh and 1.2 MW savings by the end of 2012 LIURP and/or the federal program are able to serve a greater number of households. West Penn Power identifies the effectiveness of this program model and whether other partnerships should be formed
Long term outcomes	Energy saving goals are achieved within budgetary constraints Procedures are transferrable to other gas utilities with whom West Penn Power partners	The program serves a higher percentage of low income customers through active identification and enrollment. The enrollment and referral mechanisms are effective, efficient, and transferrable should other partnerships be formed.	Ensure that as many customers as possible receive comprehensive weatherization services. Customers make behavioral changes based on education provided and reinforced by savings.	Holistic services provide sustainable saving and reduce households' overall energy burden Participants have an increased energy usage awareness and reduce energy use through behavioral changes	Increased penetration of energy efficiency equipment among West Penn Power's and gas utility low income residential customers The programs, working in cohert with each other, provide comprehensive services to a high percentage of eligible low to modeate income customers

4.10.2 Program M&V Methodology and Program Sampling

The Residential Low Income Joint Utility Usage Management Program was evaluated in PY2.

The table below summarizes completed PY2 EM&V activities. For the participant survey effort, households were randomly sampled from participants from PY1 through PY2 Q3.

Summary of Evaluation Activities for Residential Low Income Joint Utility Usage Management (JUUMP) Program

Action	Impact	Process	Details
Program manager and implementation staff interviews (4)		√	Gathered insight into program design, delivery, and interactions with other stakeholders. Gathered process-related data from participating community action agencies. These interviews will address all three low-income programs offered by WPP.
Participant surveys (30 based on a census)	√	√	Collected information from a random sample of program participants.
Engineering Review	√		Reviewed engineering assumptions, calculations used to estimate equipment/measure savings in PY2. Due to the low activity, a billing analysis is not feasible for this program.

4.10.3 Program Sampling

Refer to Section 4.10.2 above.

4.10.4 Process Evaluation

Evaluators conducted a second round of residential program manager (PM) and program implementation contractor interviews in November and December 2010 and updated the program logic model first developed in PY 2. A key finding is that the JUUMP Program is experiencing institutional barriers to delivery - in large part inhibited by requirements Columbia Gas must adhere to in their program delivery; however, the program is slowly gaining momentum.

The majority of participants recalled receiving the check-up audit, as well as the refrigerator testing and CFLs. Nearly a third reported receiving a refrigerator. Surprisingly few participants recalled receiving low-flow showerheads and faucet aerators (23 percent and 13 percent, respectively).

Also, the check-up component of the program could provide an opportunity for the program to influence energy conservation behaviors or further energy efficiency purchases. As with the Low-

income Home Performance Check-up Audit and Appliance Recycling Program, evaluators found that participants received energy conservation and efficiency information through the audit provided by the program. Audit documentation may provide non-tracked savings that, in time (and if added to the TRM) may be able to be claimed by the program based on auditor information and recommendations.

Participants, for the most part, were very satisfied with the services they received through this program.

4.10.5 Program Partners and Trade Allies

WPP is partnering with Columbia Gas Company for the completion of the Home Check-Up Audit and the installation of full program measures. Lowe's and Sears provide replacement and recycling of the Refrigerator and Room Air Conditioner component for this program. Dollar Energy Fund staff, private contractors, and community action agencies perform in-home energy audits.

4.10.6 Program Finances

A summary of the project finances are presented in Table 4-10.

Table 4-10: Summary of Residential Low Income Joint Utility Usage Management Program Finances: TRC Test[36]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ 26,015	$ 175,794	$ 175,794
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ 26,015	$ 175,794	$ 175,794
B.1	Design & Development	$ 1,364	$ 9,797	$ 20,230
B.2	Administration	$ 12,601	$ 73,243	$ 113,936
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 680	$ 4,231	$ 8,124
B.5	Technical Assistance	$ 51,036	$ 97,938	$ 106,075
B	**Subtotal EDC Implementation Costs**	$ 65,681	$ 185,209	$ 248,365
C	**EDC Evaluation Costs**	$ 24,600	$ 25,855	$ 32,834
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 116,296	$ 386,858	$ 456,993
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[36] Definitions for terms in following table are subject to TRC Order.

4.11 Residential Low Income Room Air Conditioner Replacement Measure

The Company's amended September 10, 2010 EE&C/DR Plan removed this program.

4.11.1 Program Logic

Not applicable.

4.11.2 Program M&V Methodology and Program Sampling

Not applicable.

4.11.3 Program Sampling

Not applicable.

4.11.4 Process Evaluation

Not applicable.

4.11.5 Program Partners and Trade Allies

Not applicable.

4.11.6 Program Finances

A summary of the project finances are presented in Table 4-11. Expenses incurred reflect costs charged prior to decommissioning.

Table 4-11: Summary of Residential Low Income Room Air Conditioner Replacement Program Finances: TRC Test

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ -	$ -	$ -
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ -	$ -	$ -
B.1	Design & Development	$ -	$ -	$ 10,433
B.2	Administration	$ -	$ 66,054	$ 104,377
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ -	$ (2,011)	$ 2,007
B.5	Technical Assistance	$ -	$ 46,396	$ 54,533
B	**Subtotal EDC Implementation Costs**	$ -	$ 110,439	$ 171,350
C	**EDC Evaluation Costs**	$ -	$ 993	$ 7,111
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ -	$ 111,432	$ 178,461
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

4.12 Governmental/School/Non-Profit Portfolio Program

The program encourages government, school, and non-profit customers in WPP's Pennsylvania service territory to upgrade to state-of-the-art energy efficient lighting technologies. The program provides increased incentives and equipment to these customer classes for installing:

- T8 lamps: Replacing T12 lamps;
- LED Exit Signs: Replacing or retrofitting existing incandescent exist signs w/LED (provided to the customer at no upfront cost except shipping cost);
- LED Traffic Signals: Retrofit LED packs into existing incandescent units; and,
- CFLs: Supply CFLs to this customer class via customer application (Provided to the customer at no upfront cost).

This Program launched in April 2010. Changes per the September 10, 2010 filing were launched in the 3rd and 4th quarters of PY2.

4.12.1 Program Logic

A program logic model is a visual representation of the program's theory that illustrates a set of interrelated program activities that combine to produce a variety of outputs that lead to key short-, mid- and long-term outcomes. Below is the PY2 Program Logic Model. Tetra Tech updates logic models annually to capture changes in the programs as they develop.

Government/Non-profit Lighting Efficiency Program Logic Model

Inputs/ Resources	Sufficient budget is allocated West Penn Power program staff Statewide Technical Resource Manual (TRM)	Marketing plan and collateral, program website West Penn Power program staff	Marketing materials and campaign, program website Lighting installation contractors Marketing to LDDA's and other local organizations	West Penn Power program staff; Rebate processor Submitted (mail-in) rebate forms	Program rebate processing (vendor) Incentives budget; possible tax credits; other funding Sales receipt (UPC label)
Activities	**Develop Program Infrastructure** →	**Outreach to Trade Allies** →	**Customer Communications** →	**Rebate Application approval** →	**Rebate Measures**
Outputs	The Govt/Schools/Non-profit Lighting Program launched 4th quarter of 2009 Program measures defined, forms, rebates and marketing strategy developed, refined and documented Program website and tracking system developed	Work with the Local Development District Associations (LDDA) and other local organizations to market program to Govt/Non-profits Provide information to lighting contractors for leveraging federal/state funding (stimulus dollars, tax incentives, grants) Work with Facilities Engineering Institute (FEI) to promote programs to State Agencies.	Key account managers and trade allies refer eligible customers to the program Targeted direct communications to Govt/Non-profit customers such as direct mailings and bill inserts Mass marketing activities, including AP website, business customer newsletter, print and radio mass advertising	Program staff validates customer eligibility Monthly review of participation rates by program manager Project data entered into program tracking database	West Penn Power validates customer rebate form and all checklist items completed; payment initiated Data tracking "opportunity" status to "complete," phase to "paid"; Participants receive rebates in timely manner Necessary EM&V data collected
Short to medium term outcomes	Program Administrative functions can handle expected application numbers Tracking system supports program processes, reporting requirements, and evaluation efforts West Penn Power staff knowledgeable about the program and its resources	Trade allies are knowledgeable about the rebate structure and program guidelines Trade allies regularly communicate the program to customers and include rebate with lighting installation bids Increase participation of customers in the program	Program offering is meaningful and customers understand benefits/value Govt/Non-profit customers' awareness of and participation in the program increases Customers plan for future program participation in their equipment purchase budget cycles	Customers install lighting equipment that has a higher efficiency than federal standards require Customers aware of exact rebate amount before installation Minimize customer dis-satisfaction with program by managing customer expectations	59,091 MWh and 13.5 MW savings by the end of 2012 for Govt/Non-profit Lighting Achieve cumulative TRC of 9.6 Summary reports for West Penn Power program staff
Long term outcomes	Energy saving goals of the Watt Watchers program are achieved within budgetary constraints	Increased trade allies' stocking and sales of lighting equipment with higher efficiency than required by federal standard The majority of trade allies participate and/or recommend energy efficient equipment	Increased awareness of and demand for energy efficiency lighting in all eligible Govt/Non-profit segments	Monitor participation and modify if necessary marketing, incentive levels, lighting measures offered Increased satisfaction with pre-approval process	Increased penetration of energy efficiency lighting in all targeted Govt/Non-profit businesses

4.12.2 Program M&V Methodology and Program Sampling

The table below summarizes completed and in-progress PY2 activities.

Summary of Evaluation Activities for Government/Non-profit Lighting Efficiency Program

Action	Impact	Process	Details
Program Staff Interviews		√	Provided insight into program design and delivery with opportunities for program improvement and updates to the program logic model. Completed annually and when the program is changed.
Market Channel Actor Interviews	√	√	Examined process-related issues, including program awareness and customers' adoption level of program-qualifying lighting equipment. Conducted 20 in-depth interviews with participating lighting vendors of West Penn Power's nonresidential lighting programs and Local Development District Associations (LDDAs) working with the program.
Participant Survey (136 surveys)	√	√	Gathered process-related data, including program awareness, program satisfaction, and initial barriers to technology adoption. Included a free-ridership and spillover battery to understand program-associated free-ridership and spillover. Sampled a census of PY2 program participants through the second quarter of PY2.
Baseline Non-participant Survey	√	√	Established baseline conditions for customers regarding lighting equipment saturation, age, and other metrics. Examined reasons for not participating in the program
Engineering Model and Deemed Savings Reviews (on-going)	√		Reviewed engineering assumptions, calculations, inventory forms, models used to estimate equipment/measure savings (2010-2012) for all site visit sample. Reviewed the Energy Savings Calculator used to estimate savings.
Site Visits (in progress; 13 site visits completed)	√		An estimated 15 sites will be visited for PY2 with short-term metering (lighting loggers) at a few sites. Sites over 50 KW or with space types outside the TRM are included in Custom Program.
Program Database/Tracking Review (on-going)	√		Ensured appropriate data collected to inform the evaluation. Completed early on and have completed two reviews of the Energy Savings Calculator, which tracks savings for each program.

4.12.3 Program Sampling

Refer to Section 4.12.2 above.

4.12.4 Process Evaluation

Evaluators completed several primary data collection efforts in PY2, including in-depth interviews with program staff, 20 in-depth interviews with trade allies including 16 participating lighting installation contractors and distributers (jointly with the Government/Schools/Nonprofit program) as well as four Local Development District Associations (LDDA) working with the Government/Schools/Nonprofit Lighting program and 136 quantitative surveys with customers participating in the program from the start of PY2 thru PY2 Q2.

In PY2, the program has successfully built relationships with lighting trade allies, which should continue and expand in PY3. Trades reported very positive interactions with West Penn Power program staff, with emphasis on their knowledge base and responsiveness to questions and concerns. The program has been particularly successful in engaging LDDAs to help promote program offerings, especially the initial CFL and LED exit sign campaign. LDDAs in particular expressed interest in becoming more involved with the program, and felt that the program could more fully leverage their relationships with institutional customers to promote rebated measures. In PY2 the program primarily focused its outreach efforts to the lighting trade on major distributers, and did not widely engaged installation contractors. Expanding outreach to installation contractors is one area for growth, as several installation contractors called for increased communications from the program.

Feedback from all trade allies suggested that budget constraints and the struggling economy remain among the most pressing barriers to participating. In addition, several trades reported that while many institutional customers were aware that the West Penn Power rebate programs exist, a general lack of knowledge of program requirements is a barrier to participation. Finally, trades discussed specific barriers that may be more pressing among institutional customers than commercial customers, including lower prioritization of energy use due to low energy bills, the timing of budget cycles, and reaching decision-makers. Customers' budget constraints and internal decision-making processes were also two of the most common barriers to participation mentioned by participating customers.

Participating customers and trade allies expressed high satisfaction overall, especially regarding their interactions with program staff. Participating customers were also highly satisfied with the performance of program equipment. All participants who purchased rebated measures reported that the equipment is currently installed and operating. In addition, the participant survey identified some evidence of spillover, with several customers reporting the program having influenced their decision to install additional energy efficient equipment. Feedback from trade ally interviewees suggested that the program's rebate requirements are reasonable and in-line with other utility programs.

4.12.5 Program Partners and Trade Allies

WPP is leveraging the Local Development District Associations (LDDA) of Pennsylvania to market this program to this customer sector. These associations have established relationships with this target market. The Company is also working with the Facilities Engineering Institute (FEI) to market to PA State entities such as PennDOT, LCB, etc., as they are the contracted energy consultants for these entities by the State of PA.

4.12.6 Program Finances

A summary of the project finances are presented in Table 4-12.

Table 4-12: Summary of Government/School/Non-Profit Measure Portfolio Program Finances: TRC Test[37]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ 131,081	$ 356,223	$ 407,380
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ 131,081	$ 356,223	$ 407,380
B.1	Design & Development	$ 1,364	$ 13,095	$ 105,500
B.2	Administration	$ 39,103	$ 215,245	$ 299,330
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 518	$ 11,629	$ 17,595
B.5	Technical Assistance	$ 15,096	$ 45,216	$ 119,508
B	**Subtotal EDC Implementation Costs**	$ 56,081	$ 285,185	$ 541,933
C	**EDC Evaluation Costs**	$ 74,757	$ 155,001	$ 172,151
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 261,919	$ 796,409	$ 1,121,464
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[37] Definitions for terms in following table are subject to TRC Order.

4.13 Commercial HVAC Efficiency Program

The September 10, 2010 Amended EE&C/DR Plan replaces the incentive for the commercial installation of new energy efficient HVAC units with a $25 rebate per unit incentive for the annual maintenance of existing HVAC units.

The revised Program was soft launched in June 2011.

4.13.1 Program Logic

A program logic model is a visual representation of the program's theory that illustrates a set of interrelated program activities that combine to produce a variety of outputs that lead to key short-, mid- and long-term outcomes. Below is the PY2 Program Logic Model capturing approved changes. Tetra Tech updates logic models annually to capture changes in the programs as they develop.

Commercial HVAC Efficiency Program Logic Model

Inputs/ Resources	Sufficient budget is allocated	Program website	Program website	Program infrastructure
	West Penn Power program staff	West Penn Power program staff	Key account managers and trade allies	Incentives budget; possible tax credits; other funding
	Statewide Technical Resource Manual	Presentation materials	Direct mail campaign materials	Project invoices, receipts, and documentation
Activities	**Develop Program Infrastructure** →	**Outreach to Trade Allies** →	**Customer Communications** →	**Rebate Measures**
Outputs	The Commercial HVAC Efficiency Program launches March 18, 2011 (all receipts dated after Jan 13, 2011 will be accepted).	Participate in events sponsored by local HVAC association chapters and attend energy efficiency fairs	Conduct a direct mailing campaign to Large Industrial customers who perform annual HVAC Maintenance with on-staff HVAC personnel	West Penn Power validates customer project and initiates payment
	Program measures defined, forms, rebates and marketing strategy developed, refined and documented.		Account managers and trade allies refer customers to the program	Participants receive rebates in timely manner
	Program website and tracking system developed		Targeted direct communications to business customers and other outreach such as newsletters, energy efficiency fairs	Necessary EM&V data collected
Short to medium term outcomes	Program administrative functions ready for launch	Trade allies are knowledgeable about the rebate structure and program guidelines	Program offering is meaningful and customers understand benefits/value	3,665 MWh and 1.8 MW savings by the end of 2012
	Tracking system supports program processes, reporting requirements, and evaluation efforts	Trade allies regularly communicate the program to customers and include rebate with maintenance contracts	Business customers' awareness of and participation in the program increases	Provide rebates for 57,344 participants by the end of 2012
	West Penn Power staff knowledgeable about the program and its resources	Increase participation of customers in the program	Educate customers on the availability of incentives from other sources	Summary reports for West Penn Power program staff
Long term outcomes	Energy saving goals of the Commercial HVAC program are achieved within budgetary constraints	The majority of trade allies participate and/or recommend efficiency maintenance	Increased awareness of and demand for efficiency maintenance in all business segments	Increased frequency of efficiency maintenance on HVAC equipment in all business segments

4.13.2 Program M&V Methodology and Program Sampling

The Commercial HVAC Efficiency Program was evaluated in PY2. Currently, there is very limited participation in the Program – only two projects were completed through the third quarter of PY2, at which time the equipment portion of the program was discontinued. A desk review of the calculated savings was conducted for both projects. The table below summarizes completed activities.

Summary of Evaluation Activities for Commercial HVAC Program

Action	Impact	Process	Details
Program Staff Interviews		√	Provided insight into program design and delivery and opportunities for improvement.
Trade Ally Interviews	√	√	Uncovered process-related issues, including program awareness and customers' adoption level of program-qualifying HVAC equipment. Informed the impact evaluation by identifying any changes in the HVAC market resulting from program offerings.
Participant Survey	√	√	Gathered process-related data, including program awareness, program satisfaction, and initial barriers to technology adoption. Included a free-ridership and spillover battery to understand program-associated free-ridership and spillover. Completed survey with the only program participant through the second quarter of PY2.
Baseline Non-participant Survey	√	√	Established baseline conditions for customers regarding HVAC equipment saturation, age, and other metrics, as well as barriers to participation.
Site Visits	√		Only two HVAC projects were reported for PY2, through the third quarter, so site-visits were not conducted. Instead, a thorough desk review of the savings inputs and calculations was conducted.
Program Database Review	√	√	Ensured appropriate data collected to inform the evaluation, conducted a review of the Energy Savings Calculator (ESC).
Engineering Model and Deemed Savings Reviews	√		Reviewed engineering assumptions, calculations, models used to estimate equipment/measure savings. Only two projects were completed for energy efficient HVAC equipment. A desk review of the savings calculations was conducted for both projects.

4.13.3 Program Sampling

Refer to Section 4.13.2 above.

4.13.4 Process Evaluation

Interviews with HVAC trade allies indicate the need for program outreach to support the PY3 HVAC program offering. Interviewed trade allies were not aware of West Penn Power HVAC commercial offerings.

4.13.5 Program Partners and Trade Allies

WPP is jointly working with Westmoreland County and ALL Facilities Inc to provide Energy Efficiency & Conservation seminars to all classes of commercial and industrial customers in the county. We have started working on a similar partnership with Fayette County and PennTAP to promote the Act 129 Programs to all commercial and industrial customers in the county. In addition, we are providing Act 129 presentations to local Chambers of Commerce throughout our service territory.

The Company is developing a network of HVAC distributors/dealers through the Residential Programs that will also be used to promote/implement the Commercial HVAC Maintenance Program as well.

4.13.6 Program Finances

A summary of the project finances are presented in Table 4-13.

Table 4-13: Summary of Commercial HVAC Efficiency Program Finances: TRC Test[38]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ -	$ 225	$ 225
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ -	$ 225	$ 225
B.1	Design & Development	$ 1,364	$ 2,740	$ 89,680
B.2	Administration	$ 12,719	$ 111,894	$ 173,682
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 991	$ 8,024	$ 29,334
B.5	Technical Assistance	$ 15,096	$ 45,216	$ 115,085
B	**Subtotal EDC Implementation Costs**	$ 30,170	$ 167,874	$ 407,781
C	**EDC Evaluation Costs**	$ (4,064)	$ 20,010	$ 27,188
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 26,106	$ 188,109	$ 435,194
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[38] Definitions for terms in following table are subject to TRC Order.

4.14 Commercial Products Efficiency Program[39]

The Commercial Products Efficiency Program encourages small and large, commercial, and industrial customers to upgrade to state-of-the-art energy efficient lighting technologies. The Company's September 10, 2010 amended EE&C/DR Plan revised the Commercial Lighting Efficiency Program, and renamed Commercial Products Efficiency Program to expand the eligible lighting measures, including CFLs , by leveraging the June 2010 Technical Reference Manual update. This provides the opportunity for more customers to participate in the program and for additional energy and demand savings due to the addition of different lighting types and sizes that are contained in Appendix C of the Technical Reference Manual.

The program provides rebates to Commercial & Industrial customers for installing:

- T8 lamps: Replacing T12 lamps and other efficiency lighting
- T5 lights: Replacing high-intensity discharge high bay style lights
- Occupancy Sensors (wall-plate style sensors to replace conventional switches)
- Power Strips (controlling lights and appliances)
- LED Exit Signs: Replacing incandescent exit signs
- CFLs: Replacing incandescent bulbs and/or fixtures

The Program launched in February 2010. Program changes were implemented in PY2 Q4

4.14.1 Logic

A program logic model is a visual representation of the program's theory that illustrates a set of interrelated program activities that combine to produce a variety of outputs that lead to key short-, mid- and long-term outcomes. Below is the PY2 Program Logic Model capturing approved changes. Tetra Tech updates logic models annually to capture changes in the programs as they develop.

[39] This Program was previously called the Commercial Lighting Efficiency Program.

Commercial Products Efficiency Program Logic Model

Inputs/ Resources	Sufficient budget is allocated West Penn Power program staff Statewide Technical Resoure Manual (TRM)	Marketing plan and collateral, program website West Penn Power program staff	Marketing materials and campaign, program website Lighting installation contractors POS Rebate packet	West Penn Power program staff; Rebate processor Submitted (mail-in) rebate forms	Program rebate processing (vendor) Incentives budget; possible tax credits; other funding Sales receipt (UPC label)
Activities	**Develop Program Infrastructure** →	**Outreach to Trade Allies** →	**Customer Communications** →	**Rebate Application approval** →	**Rebate Measures**
	The Commercial Lighting Efficiency Program was launched 1st quarter of 2010. Smart Strips and CFL components will be launched on March 18, 2011 (rebates will be retroactive back to Jan 13, 2011)	Key account managers work with lighting installers to market program to eligible customers	Key account managers and trade allies refer customers to the program	Program staff validates customer eligibility	West Penn Power validates customer rebate form and all checklist items completed; payment initiated
Outputs	Program measures defined, forms, rebates and marketing strategy developed, refined and documented. Program website and tracking system developed	Information to lighting contractors for leveraging federal/state funding (stimulus dollars, tax incentives, grants)	Targeted direct communications to business customers such as seminars, workshops, bill inserts, and direct mailings Mass marketing activities, including AP website, business customer newsletter, print and radio mass advertising	Monthly review of participation rates by program manager Project data entered into program tracking database	Data tracking "opportunity" status to "complete," phase to "paid"; Participants receive rebates in timely manner Necessary EM&V data collected
Short to medium term outcomes	Program Administrative functions can handle expected application numbers Tracking system supports program processes, reporting requirements, and evaluation efforts West Penn Power staff knowledgeable about the program and its resources	Trade allies are knowledgeable about the rebate structure and program guidelines Trade allies regularly communicate the program to customers and include rebate with lighting installation bids Increase participation of customers in the program	Program offering is meaningful and customers understand benefits/value Business customers' awareness of and participation in the program increases Customers plan for future program participation in their equipment purchase budget cycles	Customers install equipment that has a higher efficiency than federal standards require Customers aware of exact rebate amount before installation Minimize customer dis-satisfaction with program by managing customer expectations	256,837 MWh and 51.6 MW savings by the end of 2012 for Commercial Lighting Achieve cumulative TRC of 6.2 Summary reports for West Penn Power program staff
Long term outcomes	Energy saving goals of the program are achieved within budgetary constraints	Increased trade allies' stocking and sales of lighting equipment with higher efficiency than required by federal standard The majority of trade allies participate and/or recommend energy efficient equipment	Increased awareness of and demand for energy efficiency lighting in all eligible business segments	Monitor participation and modify if necessary marketing, incentive levels, measures offered Increased satisfaction with pre-approval process	Increased penetration of energy efficient lighting and power management in all targeted business

4.14.2 Program M&V Methodology and Program Sampling

The Commercial Products Efficiency Program was evaluated in PY2. The table below summarizes completed PY2 EM&V activities and program sampling.

Summary of Evaluation Activities for Commercial Products Program

Action	Impact	Process	Details
Program Staff Interviews		√	Provided insight into program design and delivery, including opportunities for program improvement and development of the program logic model. Completed annually and when the program is changed.
Market Channel Actor Interviews (20 survey completed)	√	√	Examined process-related issues, including program awareness and customers' adoption level of program-qualifying lighting equipment. Conducted in-depth interviews with participating lighting vendors..
Participant Survey	√	√	Gathered process-related data, including program awareness, program satisfaction, and initial barriers to technology adoption. Included a free-ridership and spillover battery to understand program-associated free-ridership and spillover. Sampled a census of PY2 program participants through the second quarter of PY2. Conducted 34 surveys with program participants.
Baseline Non-participant Survey	√	√	Established baseline conditions for customers regarding lighting equipment saturation, age, and other metrics, as well as barriers to participation.
Inventory Forms and Deemed Savings Reviews	√		Reviewed engineering assumptions, inventory forms (when required), calculations, models used to estimate equipment/measure savings (2010-2012) for all projects in the site visit sample.
Site Visits (in progress; 26 sites completed)	√		Approximately 68 projects were to be visited each year with short-term metering at approximately 20 sites, depending on the number required to obtain hours of use information. Based on the number of projects through PY2 third quarter, a total of 45 site visits are expected for the year..
Program Database/Tracking Review	√		Ensured that appropriate data collected to inform the evaluation. Conducted two reviews of the Energy Savings Calculator (ESC), which tracks project savings for the programs

4.14.3 Program Sampling

Refer to Section 4.14.2 above.

4.14.4 Process Evaluation

Evaluators completed several primary data collection efforts in PY2, including in-depth interviews with program staff, 16 in-depth interviews with trade allies including participating lighting installation contractors (jointly with the Government/Schools/Nonprofit program), and 34 quantitative surveys with customers participating in the program from the start of PY2 thru PY2 Q2.

In PY2 the program has successfully built relationships with major lighting distributers, but there remain opportunities for the program to expand outreach to trade allies in PY3, especially to lighting installation contractors. Trades reported very positive interactions with West Penn Power program staff, with emphasis on their knowledge base and responsiveness to questions and concerns. In PY2 the program primarily focused its outreach efforts to the lighting trade on major distributers, and did not widely engaged installation contractors. Expanding outreach to installation contractors is one area for growth, as several installation contractors called for increased communications from the program. Also, several participating customers reported first hearing about the program from a contractor and participants were highly satisfied with their interactions with lighting vendors. These findings emphasize the importance of engaging contractors as valuable trade partners.

Feedback from all trade allies suggests that budget constraints and the struggling economy remain amount the most pressing barriers to participating. In addition, several trades reported that while many commercial customers are aware that the West Penn Power rebate programs exist, a general lack of knowledge of program requirements is a barrier to participation. Finally, trades generally agree that West Penn Power's Commercial Lighting rebate levels, specifically for linear fluorescents and occupancy sensors were too low when compared to other Pennsylvania EDCs. It should be noted that the program has since restructured how rebates are calculated for linear fluorescents.

Participating customers and trade allies expressed high satisfaction overall, especially regarding their interactions with program staff. Participating customers were also highly satisfied with the performance of program equipment. Almost all participants who purchased rebated measures reported that the equipment is currently installed and operating. In addition, the participant survey identified some evidence of spillover, with several customers reporting the program having influenced their decision to install additional energy efficient equipment. Feedback from interviewees suggests that the program's rebate requirements are reasonable and in-line with other utility programs.

4.14.5 Program Partners and Trade Allies

WPP has established partnerships with Fayette County, PennTAP, ALL Facilities, and the Hite Company to promote the Act 129 Programs to commercial and industrial customers. In addition, the Company is providing Act 129 presentations to local Chambers of Commerce throughout its service territory.

4.14.6 Program Finances

A summary of the project finances are presented in Table 4-14.

Table 4-14: Summary of Commercial Products Efficiency Program Finances: TRC Test[40]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ 186,949	$ 342,933	$ 342,933
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ 186,949	$ 342,933	$ 342,933
B.1	Design & Development	$ 1,364	$ 19,076	$ 106,016
B.2	Administration	$ 42,650	$ 225,139	$ 300,017
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 937	$ 7,619	$ 14,893
B.5	Technical Assistance	$ 15,476	$ 45,653	$ 115,522
B	**Subtotal EDC Implementation Costs**	$ 60,427	$ 297,487	$ 536,448
C	**EDC Evaluation Costs**	$ 63,934	$ 172,065	$ 181,069
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 311,310	$ 812,485	$ 1,060,450
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[40] Definitions for terms in following table are subject to TRC Order.

4.15 Custom Technology Applications Program

This program is targeted to improve the efficiency of customer operations through the application of custom measures that will result in energy usage reduction and improved operating efficiency identified and verified through an onsite energy audit. The program also encourages government customers to pursue whole facility energy savings opportunities by providing an incentive for the completion of a qualified energy audit and an increased incentive to the selected projects under the program for the governmental customers to be eligible to participate in the Guaranteed Energy Savings Agreements ("GESA") and other funding sources for whole facility projects.

The program focuses on improving the energy efficiency for specific processes and applications such as: lighting systems, compressed air, chillers, refrigeration, variable speed drives, motors, energy management systems, fan and pump systems, renewable energy, LED, and combined heat-power systems, for which there are no current prescriptive measures offered.

The Custom Technology Applications Program is focused on reducing energy use and demand in the small and large, commercial and industrial and governmental/non-profit customers with usage of 1 million to 2.5 million kWh / year. Customers are eligible for up to 25% of the capital investment, and up to $100,000 of the project cost to obtain the energy and demand savings.

This program along with the Custom Applications Program absorbed the Commercial and Industrial Drives Program effective January 2011 for all new approved customer applications.

This program launched in March 2010.

4.15.1 Program Logic

A program logic model is a visual representation of the program's theory that illustrates a set of interrelated program activities that combine to produce a variety of outputs that lead to key short-, mid- and long-term outcomes. Below is the PY2 Program Logic Model capturing approved changes. Tetra Tech updates logic models annually to capture changes in the programs as they develop.

Custom Technology Applications Program Logic Model

Inputs/ Resources	Sufficient budget is allocated. West Penn Power program staff. Statewide Technical Resource Manual.	Marketing materials and campaign, program website. Key account managers. Rebate packet.	West Penn Power program staff. Submitted pre-qualification form.	Program infrastructure. Incentives budget; possible tax credits; other funding. Project invoices, receipts, and documentation.
Activities	**Develop Program Infrastructure** →	**Customer Communications** →	**Rebate Application Pre-approval** →	**Rebate Measures**
Outputs	The Custom Technology Apps Program launched March 1, 2010. Program measures defined, forms, rebates and marketing strategy developed, refined and documented. Rebate levels developed (25% of capital investment not to exceed $100,000). Program website and tracking system developed.	Account managers identify customers for the program and solicit applications.	West Penn Power approves customer applications with dollar limit. Site visits at Program Manager's direction. Project data entered into program tracking database.	West Penn Power validates customer project and initiates payment. Participants receive rebates in timely manner. Necessary EM&V data collected.
Short to medium term outcomes	Program administrative functions ready for launch. Tracking system supports program processes, reporting requirements, and evaluation efforts. West Penn Power staff knowledgeable about the program and its resources.	Program offering is meaningful and customers understand benefits/value. Business customers' awareness of and participation in the program increases. Customers decides to participate and submits pre-qualification forms for approval. Educate customers on the availability of incentives from other sources.	Customer installs measures outlined in application. Customers aware of exact rebate amount before installation. Minimize customer dissatisfaction with program by managing customer expectations.	19,910 MWh and 3.5 MW savings by the end of 2012. Provide rebates for 57 participants by the end of 2012. Rebate reduces the payback period for customers. Summary reports for West Penn Power program staff.
Long term outcomes	Energy saving goals of the Custom Tech Apps program are achieved within budgetary constraints.	Increased awareness of and demand for energy efficiency equipment in all business segments.	Insure that incentivized equipment meets program requirements.	Increased penetration of energy efficiency equipment in all business segments.

4.15.2 Program M&V Methodology and Program Sampling

The Custom Technology Applications Program was evaluated in PY2. Commercial and government/not-for-profit lighting projects over 50 kW are included in this program by WPP. The M&V and on-site data collection identified in this section apply to the non-TRM projects that were intended for a census of data collection. The table below summarizes completed and planned activities and program sampling.

Summary of Evaluation Activities for Custom Technology Applications Program

Action	Impact	Process	Details
Market Channel Actor Surveys (including Design Team Members)		√	Gathered process-related data from participating and nonparticipating market actors and identify spillover. Will be implemented once sufficient participation warrants.
Participant Interviews (census of non-TRM sites)	√	√	Collected information from a census of program participants through the second quarter of PY2 for process, free ridership and spillover. Completed survey with the only participant through the second quarter of PY2.
Engineering Review (census)	√		Review engineering assumptions, calculations, models used to estimate equipment/measure savings for an estimated 15 sites in 2010, and an estimated 21 sites annually in 2011-2012. Seven projects have been completed through the program through the third quarter of PY2. SAIC has worked closely with the program manager in reviewing Site Specific M&V protocols for custom projects.
On-site Verification (census)	√		Three of the seven projects completed through the third quarter of PY2 will be scheduled for a site visit.
On-site Data Collection and/or Metering (census)	√		Metering will be installed on an as needed basis. Ideally, data will be available from the energy management systems and/or advanced power meters in use at the sites.

4.15.3 Program Sampling

Refer to Section 4.15.2 above.

4.15.4 Process Evaluation

Commercial program process evaluation activities have largely focused on program documentation review and program manager interviews to understand the program's design and implementation, several tracking system review sessions to ensure the correct data is tracked for EM&V efforts and interviews to coordinate the EM&V process to ensure a robust impact evaluation effort in PY2.

The evaluation team conducted interviews with West Penn Power staff involved in planning and developing, implementing, tracking, and overseeing the evaluation of C&I programs.

The Custom Technologies Applications Program is picking up a number of the large commercial lighting projects that were expected to be covered under the Commercial Products Efficiency Program. The decision was made to include them as Custom Programs due to M&V requirements of the SWE. In general, the requirement to not shift funds between programs has caused issues for Program Managers and for evaluation budgets that were based on a much smaller number of Custom projects.

Finally, the biggest issue has been the SWE requirements for on-site data collection. A third-party M&V contractor is used by the program manager to conduct any on-site data collection to meet SWE requirements. These have typically only included pre-installation, particularly for larger commercial projects. Given that all of these projects are included in the Custom Program category because of the use of the M&V contractor, there is additional burden on the program budget.

4.15.5 Program Partners and Trade Allies

WPP has joined the Pennsylvania Rural Water Association and Pennsylvania Municipal Authority Association to help promote and advertise this program.

4.15.6 Program Finances

A summary of the project finances are presented in Table 4-15.

Table 4-15: Summary of Custom Technology Applications Program Finances: TRC Test[41]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ 47,610	$ 154,010	$ 154,010
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ 47,610	$ 154,010	$ 154,010
B.1	Design & Development	$ 1,364	$ 9,917	$ 96,857
B.2	Administration	$ 19,608	$ 119,482	$ 184,494
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 558	$ 16,841	$ 23,671
B.5	Technical Assistance	$ 18,847	$ 48,967	$ 118,836
B	**Subtotal EDC Implementation Costs**	$ 40,377	$ 195,207	$ 423,858
C	**EDC Evaluation Costs**	$ 1,044	$ 25,376	$ 26,441
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 89,031	$ 374,593	$ 604,309
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[41] Definitions for terms in following table are subject to TRC Order.

4.16 Time of Use (TOU) with Critical Peak Pricing Rate

TOU encourages commercial, industrial, government, school, and non-profit customers under 500 kW to lower their demand and energy consumption during on-peak periods by charging a higher price that reflects the higher cost of serving customers, and charging lower prices during off-peak periods that reflects the lower cost of serving customers. TOU also includes critical peak pricing that is designed to address the short-term need to reduce demand at the time of the system peak by charging prices significantly higher than on-peak periods. Critical peak pricing periods will vary in frequency and duration using predefined or notified peak hours, but will balance the need to keep the period as short as possible to effectively allow customers to reduce demand or shift usage to lower cost periods. TOU is voluntary and is only available to customers that are receiving utility-provided default service. TOU relies on a smart meter to measure the customer's demand and energy usage during the various TOU periods.

A limited deployment is planned for the 3rd quarter 2011 with full rollout starting in the 4th quarter of 2011.

4.16.1 Program Logic

Program Logic will be determined in PY3.

4.16.2 Program M&V Methodology

Program M&V Methodology will be determined in PY3.

4.16.3 Program Sampling

Program Sampling will be determined in PY3.

4.16.4 Process Evaluation

Process Evaluation will be determined in PY3.

4.16.5 Program Partners and Trade Allies

Program Partners and Trade Allies are to be determined.

4.16.6 Program Finances

A summary of the project finances are presented in Table 4-16.

Costs associated with this program in CPITD reflect initial administrative cost.

Table 4-16: Summary of Time of Use (TOU) with Critical Peak Pricing Rate Program Finances: TRC Test[42]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ -	$ -	$ -
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ -	$ -	$ -
B.1	Design & Development	$ 1,364	$ 2,299	$ 2,572
B.2	Administration	$ 14,940	$ 28,171	$ 28,171
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 10,397	$ 13,752	$ 13,752
B.5	Technical Assistance	$ 15,096	$ 21,741	$ 21,741
B	**Subtotal EDC Implementation Costs**	$ 41,797	$ 65,963	$ 66,236
C	**EDC Evaluation Costs**	$ 1,300	$ 4,946	$ 4,946
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 43,097	$ 70,909	$ 71,182
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[42] Definitions for terms in following table are subject to TRC Order.

4.17 Hourly Pricing Option (HPO) Rate

The Company's amended September 10, 2010 EE&C/DR Plan removed this Smart Meter enabled program to reduce reliance of the Plan on the rapid deployment of Smart Meters.

4.17.1 Program Logic

Not applicable.

4.17.2 Program M&V Methodology

Not applicable.

4.17.3 Program Sampling

Not applicable.

4.17.4 Process Evaluation

Not applicable.

4.17.5 Program Partners and Trade Allies

Not applicable.

4.17.6 Program Finances

A summary of the project finances are presented in Table 4-17. Not applicable.

Table 4-17: Summary of Hourly Pricing Option (HPO) Rate Program Finances: TRC Test

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants			
A.2	EDC Incentives to Trade Allies			
A	**Subtotal EDC Incentive Costs**			
B.1	Design & Development			
B.2	Administration			
B.3	Management			
B.4	Marketing			
B.5	Technical Assistance			
B	**Subtotal EDC Implementation Costs**			
C	**EDC Evaluation Costs**			
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs			
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

4.18 Custom Applications Program

This program encourages energy and demand reductions for commercial and industrial customers by providing custom rewards for highly specialized processes and applications. The program will focus on improving the energy efficiency for specific processes and applications, such as: lighting systems, compressed air, chillers, refrigeration, variable speed drives, motors, energy management systems, fan and pump systems, combined heat-power systems, and other relevant measures, for which there are no current prescriptive measures offered.

The customer is eligible for up to 50% of the customer's total capital project cost, with a per project cap of $500,000. Awards will be based on a review of kWh savings per project's cost.

This program along with the Custom Technology Applications Program absorbed the Commercial and Industrial Drives Program effective January 2011 for all new approved customer applications.

This Program launched in March 2010.

4.18.1 Program Logic

A program logic model is a visual representation of the program's theory that illustrates a set of interrelated program activities that combine to produce a variety of outputs that lead to key short-, mid- and long-term outcomes. Below is the PY2 Program Logic Model. Tetra Tech will update logic models annually to capture changes in the programs as they develop.

Custom Applications Program Logic Model

Inputs/ Resources	Sufficient budget is allocated . West Penn Power program staff. Statewide Technical Resource Manual.	Marketing materials and campaign, program website. Key account managers. Rebate packet.	West Penn Power program staff. Submitted pre-qualification form.	Program infrastructure. Incentives budget; possible tax credits; other funding. Project invoices, receipts, and documentation.
Activities	**Develop Program Infrastructure** →	**Customer Communications** →	**Rebate Application Pre-approval** →	**Rebate Measures**
Outputs	The C&I Custom Apps Program launched March 1, 2010. Program measures defined, forms, rebates and marketing strategy developed, refined and documented. Program website and tracking system developed.	Account managers identify customers for the program and solicit bids. Pre-qualified customers receive a detailed audit from an ESCO.	West Penn Power approves customer applications with dollar limit. Site visits at Program Manager's direction. Project data entered into program tracking database.	West Penn Power validates customer project and initiates payment. Participants receive rebates in timely manner. Necessary EM&V data collected.
Short to medium term outcomes	Program administrative functions ready for launch. Tracking system supports program processes, reporting requirements, and evaluation efforts. West Penn Power staff knowledgeable about the program and its resources.	Program offering is meaningful and customers understand benefits/value. Business customers' awareness of and participation in the program increases. Customers decides to participate and submits pre-qualification forms for approval. Educate customers on the availability of incentives from other sources.	Customer installs measures outlined in application. Customers aware of exact rebate amount before installation. Minimize customer dissatisfaction with program by managing customer expectations.	74,261 MWh and 14.6 MW savings by the end of 2012. Provide rebates for 21 participants by the end of 2012. Rebate reduces the payback period for customers. Summary reports for West Penn Power program staff.
Long term outcomes	Energy saving goals of the C&I Custom Applications program are achieved within budgetary constraints.	Increased awareness of and demand for energy efficiency equipment in all business segments.	Insure that incentivized equipment meets program requirements.	Increased penetration of energy efficiency equipment in all business segments.

4.18.2 Program M&V Methodology and Program Sampling

The Custom Applications Program will be evaluated in PY2. The table below summarizes completed and planned activities and program sampling.

Summary of Evaluation Activities for C&I Custom Applications Program

Action	Impact	Process	Details
Market Channel Actor Surveys (including Design Team Members)		√	Not scheduled yet due to low number of participants.
Participant Surveys (census)	√	√	Sampled a census of program participants through the second quarter of PY2 for process, free ridership and spillover. Included in commercial program participant surveys. There were three participating customers, accounting for one lighting project and three VFD projects (formerly under the C&I Drives program), through the second quarter of PY2. Completed one participant survey in 2010.
Engineering Review (census)	√		Reviewed engineering assumptions, calculations, models used to estimate equipment/measure savings for an estimated 5 sites in 2010, and an estimated 8 sites annually in 2011-2012. There were 4 Custom projects and 5 VFD projects through the third quarter of PY2.
On-site Verification (census)	√		All sites will be visited with metering as needed to confirm savings. SAIC has reviewed the Site Specific M&V plans for all custom projects. There are 4 Custom projects and 5 VFD projects to be scheduled for site visits.
On-site Data Collection and/or Metering (as needed)	√		Metering will be installed on an as needed basis. Ideally, data will be available from the energy management systems and/or advanced power meters in use at the sites. The data collection and metering will be based on the project-specific evaluation plan approved by the SWE.

4.18.3 Program Sampling

Refer to Section 4.18.2 above.

4.18.4 Process Evaluation

Commercial program process evaluation activities have largely focused on program documentation review and program manager interviews to understand the program's design and implementation, several tracking system review sessions to ensure the correct data is tracked for EM&V efforts and interviews to coordinate the EM&V process to ensure a robust impact evaluation effort in PY2. The

evaluation team conducted interviews with West Penn Power staff involved in planning and developing, implementing, tracking, and overseeing the evaluation of C&I programs.

The Custom programs are picking up a number of the large commercial lighting projects that were expected to be covered under Commercial Lighting. The decision was made to include them as Custom Programs due to M&V requirements of the SWE. In general, the requirement to not shift funds between programs has caused issues for Program Managers and for evaluation budgets that were based on a much smaller number of Custom projects.

Finally, the biggest issue has been the SWE requirements for on-site data collection. A third-party M&V contractor is used by the marketing manager to conduct any on-site data collection to meet SWE requirements. These have typically only included pre-installation, particularly for larger commercial projects. Given that all of these projects are included in the Custom Program category because of the use of the M&V contractor, there is additional burden on the program budget.

The evaluation team fielded the C&I participant surveys in March of 2011 with participants through the second quarter of PY2. The evaluation team surveyed one VFD participant through the second quarter of PY2.

4.18.5 Program Partners and Trade Allies

WPP has joined the Pennsylvania Rural Water Association and Pennsylvania Municipal Authority Association to help promote and advertise this program.

4.18.6 Program Finances

A summary of the project finances are presented in Table 4-18.

Table 4-18 Summary of Custom Applications Program Finances: TRC Test[43]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ 268,295	$ 412,933	$ 412,933
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ 268,295	$ 412,933	$ 412,933
B.1	Design & Development	$ 1,364	$ 14,653	$ 338,071
B.2	Administration	$ 43,898	$ 188,674	$ 258,439
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 2,891	$ 9,711	$ 16,518
B.5	Technical Assistance	$ 61,301	$ 156,405	$ 417,684
B	**Subtotal EDC Implementation Costs**	$ 109,454	$ 369,443	$ 1,030,712
C	**EDC Evaluation Costs**	$ (3,763)	$ 22,291	$ 23,065
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 373,986	$ 804,667	$ 1,466,710
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[43] Definitions for terms in following table are subject to TRC Order.

4.19 Customer Load Response Program

West Penn Power will assist customers by providing load management services by actively educating and providing assistance with the transition to market prices, load shaping, participation in PJM energy and capacity markets, and advanced metering technology. Contracting with customers for load reduction as well as assisting customers with entry into the real time energy markets will help control the demand during peak hours.

This program marketing was launched in April 2011 with a limited number of events planned to begin in July 2011. This pilot will test predictive modeling developed to determine the top 100 peak hours as well as customers' acceptance of the program.

4.19.1 Program Logic

Program Logic will be determined in PY3.

4.19.2 Program M&V Methodology

Program M&V Methodology will be determined in PY3.

4.19.3 Program Sampling

Program Sampling will be determined in PY3.

4.19.4 Process Evaluation

Process Evaluation will be determined in PY3.

4.19.5 Program Partners and Trade Allies

This program is being implemented by WPP.

4.19.6 Program Finances

A summary of the project finances are presented in Table 4-19. Charges incurred to date are associated with design and development as well as program start-up costs.

Table 4-19 Summary of Customer Load Response Program Finances: TRC Test[44]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ -	$ -	$ -
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ -	$ -	$ -
B.1	Design & Development	$ 1,364	$ 23,950	$ 84,160
B.2	Administration	$ 15,380	$ 29,699	$ 29,699
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 512	$ 1,698	$ 1,698
B.5	Technical Assistance	$ 15,096	$ 30,741	$ 30,741
B	**Subtotal EDC Implementation Costs**	$ 32,352	$ 86,088	$ 146,298
C	**EDC Evaluation Costs**	$ 9,182	$ 9,182	$ 9,182
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 41,534	$ 95,270	$ 155,480
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[44] Definitions for terms in following table are subject to TRC Order.

4.20 Customer Resources Demand Response Program

The Customer Resources Demand Response Program is focused on reducing kW demand by deploying customer load and generation resources. PJM Curtailment Service Providers will provide services to register and dispatch customer curtailable load during targeted hours of WPP's 100 hours of highest demand. WPP has contracted with a PJM Curtailment Service Provider to deliver a contracted amount of curtailable load. The PJM Curtailment Service Providers will structure individual contracts with customers to respond to curtailment event notices issued by WPP to the customer's CSP. PJM Curtailment Service Providers and customers will have flexibility in selecting how many hours that they can participate with 50 hours being typical.

WPP will pay the PJM Curtailment Service Providers based on the actual load reduction that occurred during the curtailment events, based on the contracted rate established through an RFP process. A customer who participates in this program will be provided an incentive by their Curtailment Service Provider according to the Curtailment Service Provider's contract with the customer for each hour the customer's load is dispatched under this program. All payments to the customer will be from the customer's Curtailment Service Provider. In order for the customer to realize the maximum benefits from participating in WPP's demand response programs, the customer's Curtailment Service Provider must also register the customer's load in the available PJM load response programs.

The program marketing was launched in April 2011 with a limited number of events planned to begin in July 2011. This pilot will test predictive modeling developed to determine the top 100 peak hours as well as customers' acceptance of the program. A 3rd party curtailment service provider is under contract to register, recruit, and dispatch load curtailments.

4.20.1 Program Logic

Program Logic will be determined in PY3.

4.20.2 Program M&V Methodology

Program M&V Methodology will be determined in PY3.

4.20.3 Program Sampling

Program Sampling will be determined in PY3.

4.20.4 Process Evaluation

Process Evaluation will be determined in PY3.

4.20.5 Program Partners and Trade Allies

A 3rd party curtailment service provider, Energy Connect, Inc., is under contract to register, recruit, and dispatch load curtailments.

4.20.6 Program Finances

A summary of the project finances are presented in Table 4-20. Charges incurred to date are associated with design and development as well as program start-up costs.

Table 4-20 Summary of Customer Resources Demand Response Program Finances: TRC Test[45]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ -	$ -	$ -
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ -	$ -	$ -
B.1	Design & Development	$ 1,364	$ 2,192	$ 2,192
B.2	Administration	$ 16,001	$ 32,426	$ 32,426
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 512	$ 1,698	$ 1,698
B.5	Technical Assistance	$ 15,096	$ 21,741	$ 21,741
B	**Subtotal EDC Implementation Costs**	$ 32,973	$ 58,057	$ 58,057
C	**EDC Evaluation Costs**	$ 12,786	$ 12,786	$ 12,786
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 45,759	$ 70,843	$ 70,843
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[45] Definitions for terms in following table are subject to TRC Order.

4.21 Commercial and Industrial Drives Program

The Company's amended September 10, 2010 EE&C/DR Plan removed this program and instead provides for the installation of energy efficient drives through the Company's existing Custom Technology Applications and Custom Applications Programs.

4.21.1 Program Logic

Not applicable.

4.21.2 Program M&V Methodology and Program Sampling

Not applicable.

4.21.3 Program Sampling

Not applicable.

4.21.4 Process Evaluation

Not applicable.

4.21.5 Program Partners and Trade Allies

Not applicable.

4.21.6 Program Finances

A summary of the project finances are presented in Table 4-21. Expenses reflected include costs for customer approved applications recevied prior to approval to decommission recevied in January 2011.

Table 4-21 Summary of Commercial & Industrial Drives Program Finances: TRC Test[46]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ -	$ 10,350	$ 10,350
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ -	$ 10,350	$ 10,350
B.1	Design & Development	$ -	$ -	$ 323,418
B.2	Administration	$ 12,822	$ 126,138	$ 186,729
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 223	$ 6,283	$ 12,249
B.5	Technical Assistance	$ 10,387	$ 46,554	$ 307,833
B	**Subtotal EDC Implementation Costs**	$ 23,432	$ 178,975	$ 830,229
C	**EDC Evaluation Costs**	$ (8,453)	$ 14,869	$ 15,697
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 14,979	$ 204,194	$ 856,276
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: (1) Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[46] Definitions for terms in following table are subject to TRC Order.

4.22 Distributed Generation Program

Customers will contract with a Distributed Generation Manager to provide the customer with operation and maintenance services on the customer's generator. The DG Manager will dispatch the generator up to 100 hours in response to curtailment event notices issued by WPP during the targeted hours of WPP's 100 hours of highest demand. A customer who participates in this program will be provided an incentive on a $/MWh basis for each hour that their generator is dispatched to target WPP's hours of highest demand.

In order for the customer to realize the maximum benefits from participating in WPP's demand response programs, the customer's Curtailment Service Provider must also register the customer's load in the PJM load response programs. The customer can choose any registered Curtailment Service Provider and WPP will provide potential customers with a list of the PJM Curtailment Service Providers that can register their load in the PJM markets. To assist with marketing and customer recruitment, WPP will provide a list of the potential customer generators to PJM Curtailment Service Providers.

The program marketing was launched in April 2011 with a limited number of events planned to begin in July 2011. This pilot will test predictive modeling developed to determine the top 100 peak hours as well as customers' acceptance of the program. A 3rd party distributed generation manager is under contract to dispatch load curtailments.

4.22.1 Program Logic

Program Logic will be determined in PY3.

4.22.2 Program M&V Methodology

Program M&V Methodology will be determined in PY3.

4.22.3 Program Sampling

Program Sampling will be determined in PY3.

4.22.4 Process Evaluation

Program Evaluation will be determined in PY3.

4.22.5 Program Partners and Trade Allies

A 3rd party distributed generation manager, Power Secure, is under contract to dispatch load curtailments.

4.22.6 Program Finances

A summary of the project finances are presented in Table 4-22. Charges incurred in CPITD reflect a market assessment study cost along with initial program design and development as well as program startup cocts.

Table 4-22 Summary of Distributed Generation Program Finances: TRC Test[47]

	Category	IQ	PYTD	CPITD
A.1	EDC Incentives to Participants	$ -	$ -	$ -
A.2	EDC Incentives to Trade Allies	$ -	$ -	$ -
A	**Subtotal EDC Incentive Costs**	$ -	$ -	$ -
B.1	Design & Development	$ 1,364	$ 1,621	$ 1,621
B.2	Administration	$ 17,883	$ 33,173	$ 33,173
B.3	Management	$ -	$ -	$ -
B.4	Marketing	$ 512	$ 1,698	$ 1,698
B.5	Technical Assistance	$ 15,096	$ 21,741	$ 21,741
B	**Subtotal EDC Implementation Costs**	$ 34,855	$ 58,233	$ 58,233
C	**EDC Evaluation Costs**	$ -	$ -	$ -
D	**SWE Audit Costs**			
E	**Participant Costs**			
	Total Costs	$ 34,855	$ 58,233	$ 58,233
F	**Annualized Avoided Supply Costs**			
G	**Lifetime Avoided Supply Costs**			
	Total Lifetime Economic Benefits			
	Portfolio Benefit-to-Cost Ratio			

NOTES: Analysis associated with Benefit-to-Cost calculations on hold pending TRC Technical Work Group output.

[47] Definitions for terms in following table are subject to TRC Order.