

## Template for Pennsylvania EDC Energy Efficiency and Conservation Plans

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Note: If any of your answers require you to disclose what you believe to be privileged or confidential information, not otherwise available to the public, you should designate at each point in the EE&C Plan that the answer requires you to disclose privileged and confidential information. Explain briefly why the information should be treated as confidential. You should then submit the information on documents stamped “CONFIDENTIAL” at the top in clear and conspicuous letters and submit one copy of the information under seal to the Secretary’s Office along with the EE&C Plan. In addition, an expunged copy of the filing should also be included with the EE&C Plan. If someone requests to examine the information, or if Commission staff believes that the proprietary claim is frivolous or otherwise not justified, the Secretary’s Bureau will issue a Secretarial Letter directing that the EDC file a petition for protective order pursuant to 52 Pa. Code § 5.423.

## Energy Efficiency and Conservation Plan

**A. Transmittal Letter** - with reference to statutory and regulatory requirements and Electric Distribution Company (EDC) contact that PA PUC should contact for more information.

**B. Table of Contents** - including lists of tables and figures.

### 1. Overview of Plan (~10 pages)

*(The objective of this section is to provide an overview of the entire plan)*

- 1.1. Summary description of plan, plan objectives, and overall strategy to achieve energy efficiency and conservation goals.

Pursuant to Act 129 of 2008 (“Act 129”), the Pennsylvania General Assembly charged the Pennsylvania Public Utility Commission (“PUC” or “Commission”) with establishing an energy efficiency and conservation program. The energy efficiency and conservation program requires each electric distribution company (“EDC”) with at least 100,000 customers to adopt a plan to reduce energy demand and consumption within its service territory. In response to Act 129, on January 16, 2009, the Commission entered an Implementation Order at Docket No. M-2008-2069887 which was utilized in Phase I program planning. On August 3, 2012, the Commission entered an Implementation Order at Docket Nos. M-2012-2289411 and M-2008-2069887 for Phase II program planning. The Act requires that by November 30, 2013, and a least every five years thereafter, the Commission shall evaluate the costs and benefits of the program. Based upon findings of the Statewide Evaluator (SWE) contained in its Market Potential Study<sup>1</sup>, the Commission determines that the benefits of a Phase II Act 129 program will exceed the costs and therefore proposes to adopt additional required incremental reductions in consumption for another Energy Efficiency and Conservation Plan (“EE&C” or “Plan”) program term.

In the August 3, 2012 Implementation Order, the Commission tentatively adopted the percentage reduction targets recommended by the SWE. Duquesne Light Company’s (“Duquesne Light” or “Duquesne” or the “Company”), energy consumption reduction target for the Phase II three-year energy efficiency consumption are 276,722 MWh. Implementation Order at 24. In compliance with the requirements of Act 129 and PUC Orders, Duquesne has used the energy consumption reductions established by the Commission to develop its energy efficiency and conservation plan, which is submitted herewith.

To support EE&C program planning for Phase II of the Plan, the Company reviewed the EE&C potential in the Duquesne Light service territory for a cross-section of customer segments comprising the major rate classes. In addition, review of the participation in the Phase I activities was performed. Once the EE&C review was complete, particular measures were selected for each customer segment based on numerous factors, as described in the detailed sections of the Plan that follow this

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<sup>1</sup> Electric Energy Efficiency Potential For Pennsylvania, GDS Associates, Inc, May 10, 2012; Pennsylvania Statewide Residential End-Use and Saturation Study, GDS Associates, Inc, April 18,2012; Pennsylvania Statewide Commercial & Industrial End-Use & Saturation Study, GDS Associates, April 18,2012.

summary. In essence, this planning process made extensive use of benchmarking data and drew heavily on the Phase I Program Year (PY) 2 and 3 performances as well as stakeholders input during the biannual stakeholders meetings. The valuable lessons learned about what has been effective elsewhere were applied to the specific information relative to Duquesne Light's customers. The Company then made decisions to include or exclude particular EE&C measures within its plan to achieve the mandated reductions in cost-effective ways that are consistent with customer interests.

1.2. Summary description of process used to develop the EE&C plan and key assumptions<sup>2</sup> used in preparing the plan.

Duquesne Light's Phase II EE&C Plan development process employed a "bottoms-up" approach comprised of a sequence of four task areas. At a high-level, these are described below:

1) Measure content and projected mix

Phase II Plan is built upon the Phase I PY 2-3 record of program performance. The initial measure mix was established based on the previous two years of measure activity. This was modified incorporating measures that were popular but treated as custom measures in Phase I. Next, Plan measure content was reconciled with content of the 2013 Technical Reference Manual (TRM) and information provided in the SWE saturation studies and potential forecast.<sup>3</sup>

2) Measure savings impact, cost and benefit

Measure deemed savings were updated consistent with the 2013 TRM. Measure costs were documented, referenced to California Public Utilities Commission Database of Energy Efficient Resources (DEER), invoice data from PY2-3 and specific measure cost research. Incentive amounts were established using utility program benchmarking (Phase I Study), review of known regional incentive levels (other PA Electric Distribution Company (EDC) programs), and as required to achieve budgetary requirements. Avoided cost assumptions were updated consistent with the Total Resource Cost Test (TRC) Order<sup>4</sup> and applied to render measure, program, portfolio and Plan level cost-effectiveness as expressed by the TRC ratio.

3) Program definition

PY2-3 program performance as well as customer participant feedback supported retention of the portfolio of programs, based on the Phase I market segmentation. Where programs underperformed, program design was revised. Specifically, introduction of a small commercial direct install program is incorporated to overcome barriers to participation demonstrated in the PY2-3 small office and small retail segment targeted programs. Additionally, language of the Commission's Implementation Order supported addition of the residential whole house audit/retrofit program as well as small commercial multifamily building retrofit program. Implementation Order at 20 and 49.

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<sup>2</sup> Whenever assumptions are used, provide the basis for using that assumption.

<sup>3</sup> Ibid

<sup>4</sup> PA PUC 2011 Total Resource Cost Test Order, July 28, 2011, at Docket No. M-2009-2108601

#### 4) Portfolio/Program Goals and Funding

Program goal allocation and associated program budgets were adjusted to accommodate the Commission's Implementation Order, which required segment carve-outs for the low income and governmental/nonprofit segments and identified program comprehensiveness requirements. Goal allocation for the remaining customer segments was based on segment energy use, previous delivery channel strengths and weaknesses, as well as requirements to achieve mandated reductions at authorized budgets.

- 1.3. Summary tables of portfolio savings goals, budget and cost-effectiveness (see Tables 1, 2 and 3).<sup>5</sup>

The summary tables of portfolio savings goals, budget and cost-effectiveness are in Section 11, Tables 1, 2 and 3.

- 1.4. Summary of program implementation schedule over three year plan period (see Chart 1 Notes).

Residential Sector: Pursuant to the Commission's Implementation Order for Phase II program planning and discussions held at Stakeholder Meetings, Duquesne Light developed plans to launch six programs targeting the residential sector: a low income program; a residential rebate program including upstream components; a schools educational program; a whole house retrofit program; a home energy reporting program; and, a residential appliance recycling program. The low income program will leverage the public agency partnership program operated during Phase I (described below). Several of the programs were approved and implemented in Phase I and have an existing Conservation Service Provider ("CSP") that will continue to be utilized in Phase II. Retention of CSPs currently implementing Phase I approved programs will enable Duquesne Light continuance of those programs concurrent with the Commission's approval of this plan, no later than March 14, 2013, as reflected in the Gantt Chart in Section 12, Chart 1 Residential Portfolio Program. Duquesne Light will complete contract negotiations with additional CSPs following the Request for Proposal (RFP) process for each of the new programs included in Phase II. Duquesne Light will plan to meet with stakeholders, as needed, to discuss the status of the program and issues, no less than semi-annually, until May 31, 2016, unless otherwise ordered by the Commission.

Commercial Sector: Pursuant to the Commission's Implementation Order for Phase II program planning and discussions held at Stakeholder Meetings, Duquesne Light developed plans to launch six programs targeting the commercial sector: a commercial umbrella program; an office building program; a retail program; a direct install program; an upstream lighting; and a health care program. Several of the programs were approved and implemented in Phase I and have an existing Conservation Service Provider ("CSP") that will continue to be utilized in Phase II. Retention of CSPs currently implementing Phase I approved programs will enable Duquesne Light continuance of those programs concurrent with the Commission's approval of this plan, no later than March 14, 2013, as reflected in the Gantt Chart for Commercial and Industrial Programs in Section 12, Charts 2 and 3. Duquesne Light will complete contract negotiations with additional CSPs following the Request for Proposal (RFP)

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<sup>5</sup> Tables (and Chart) referenced in the template outline are located in the separate master spreadsheet.

process for each of the new programs included in Phase II. Duquesne Light will plan to meet with stakeholders, as needed, to discuss the status of the program and issues, no less than semi-annually, until May 31, 2016, unless otherwise ordered by the Commission.

Industrial Sector: Pursuant to the Commission's Implementation Order for Phase II program planning and discussions held at Stakeholder Meetings, Duquesne Light developed plans to launch four programs targeting the industrial sector: an industrial umbrella; a chemicals program; a mixed industrial program; and, a primary metals program. Several of the programs were approved and implemented in Phase I and have an existing Conservation Service Provider ("CSP") that will continue to be utilized in Phase II. Retention of CSPs currently implementing Phase I approved programs will enable Duquesne Light continuance of those programs concurrent with the Commission's approval of this plan, no later than March 14, 2013, as reflected in the Gantt Chart for Commercial and Industrial Programs in Section 12, Charts 2 and 3. Duquesne Light will complete contract negotiations with additional CSPs following the Request for Proposal (RFP) process for each of the new programs included in Phase II. Duquesne Light will plan to meet with stakeholders, as needed, to discuss the status of the program and issues, no less than semi-annually, until May 31, 2016, unless otherwise ordered by the Commission.

Governmental/Non-Profit/Education Sector Programs: Pursuant to Commission's Implementation Order for Phase II program planning and discussions held at Stakeholder Meetings, Duquesne Light developed plans to launch three programs targeting this sector: an education segment energy efficiency program; a multifamily housing retrofit program; and, a public agency partnership program. Duquesne Light began working directly with regional local governments shortly after the Act 129 Stakeholder meetings in an effort to tailor EE&C programs to meet segment specific needs. Occurring in Phase I that will continue in Phase II, Duquesne Light executed memoranda of understanding with several key local public agencies and identified project areas for EE&C services. Project work continues or begins concurrent with the Commission's approval of the plan. Programs will be launched no later than June 1, 2013, as shown in the Gantt chart for Governmental/non-profit Sector Programs in Section 12, Chart 4. Duquesne Light will plan to meet with stakeholders as needed to discuss the status of the program and issues, no less than semi-annually, until May 31, 2016, unless otherwise ordered by the Commission.

- 1.5. Summary description of the EDC implementation strategy to acquire at least 25% of its consumption reduction target in each program year.

Many programs included in this Phase II plan have been implemented during the Phase I program period. Accordingly significant program ramp up is not anticipated and projected participation is expected to be linear. The implementation strategy utilized in Phase I has been successful in reaching the goals for the programs; therefore, it is reasonable to assume that at least the 25% consumption reduction target will be met in each program year. For the new programs in Phase II, similar implementation strategies to those in Phase I will be used.



1.6. Summary description of the EDC implementation strategy to manage EE&C portfolios and engage customers and trade allies.

Duquesne Light implements programs in an effective and economical manner by balancing utility resources with contracted resources. More specifically, contractors and subcontractors with expertise and experience in program implementation and operations are deployed under agreements with Duquesne Light. Management responsibility for meeting goals still rests with Duquesne Light, working in concert with contractors and subcontractors as outlined in the table below.

**Figure 1: Program Implementation Responsibility**

<b>EE Sector</b>	<b>Program</b>	<b>Implementation</b>
<b>Residential</b>	Residential Energy Efficiency Program	Core Team (or Contractor)
	REEP Whole House Audit/Retrofit	Sub-program Contractor
	Residential Appliance Recycling	Sub-program Contractor
	Residential Behavioral Savings	Sub-program Contractor
	School Energy Pledge Program	Core Team (or Contractor)
	Low Income Energy Efficiency	Core Team (or Contractor)
<b>Commercial</b>	Commercial Sector Umbrella Program	Core Team (or Contractor)
	Office Building Energy Efficiency	Sub-program Contractor
	Healthcare Segment Energy Efficiency	Core Team (or Contractor)
	Retail Segment Energy Efficiency	Sub-program Contractor
	Commercial Upstream Lighting	Sub-program Contractor
	Small Commercial Direct Install	Sub-program Contractor
<b>Industrial</b>	Industrial Sector Umbrella Program	Core Team (or Contractor)
	Chemical Products Energy Efficiency	Sub-program Contractor
	Mixed Industrial Energy Efficiency	Sub-program Contractor
	Primary Metals Energy Efficiency	Sub-program Contractor
<b>Governmental</b>	Education Segment Energy Efficiency	Core Team (or Contractor)
	Multifamily Housing Retrofit	Core Team (or Contractor)
	Public Agency Partnership Program	Core Team (or Contractor)

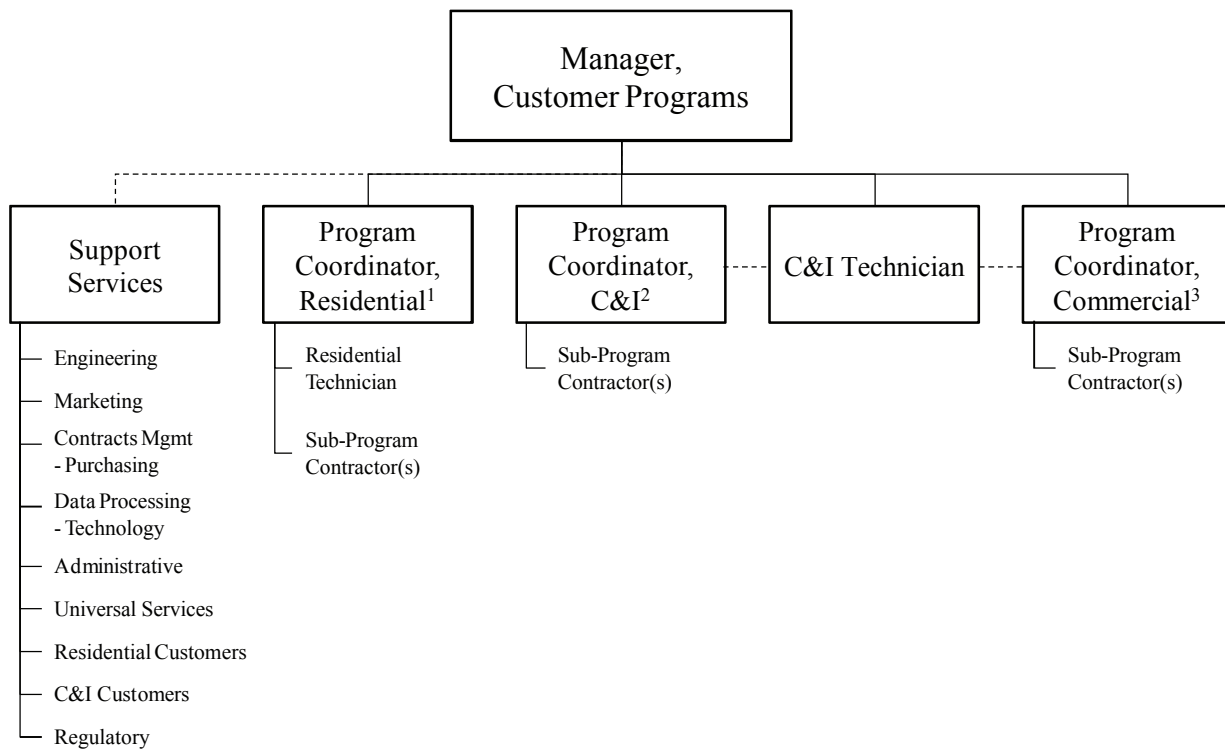
The Core Team in Figure 1 refers to implementation directly by Duquesne Light staff and supported by limited services contractors or Conservation Service Providers (CSPs) at Duquesne Light’s discretion. Program implementation requires significant planning and operations management functions. In addition to initiating the contracting process, each contractor is managed and integrated into an organized, cohesive operation. Program procedural guidelines are developed and followed. Documentation and electronic data structures are maintained and managed.



Customers are engaged through at least three channels. First, Duquesne Light promotes the programs to its customers, through marketing approaches such as mass media advertising, direct marketing, events, conferences, account representatives and electronic media. Second, the Duquesne Light contractors and subcontractors have similar responsibilities, with a specific focus on securing commitments for customers to participate in the programs. Third, trade allies, such as builders, architects, engineers, vendors, equipment installation contractors, retailers and others are informed of the Duquesne Light programs, with the objective of securing their willingness to participate and secure their customers and clients to participate. Trade allies are also engaged, primarily through direct marketing, events, conferences and account representatives.

The implementation organization for Duquesne Light is housed within the customer care function. The delivery organization size and function is driven by the portfolio of programs offered. The size and structure also reflects the use of contractors and subcontractors. The organization is headed by one manager, who is responsible for the energy efficiency and conservation program planning and implementation. The manager is supported by several sector or segment specific program coordinators. There also is support staff for functions to include engineering, marketing, data processing, regulatory and contract management. The organizational chart pictured below represents the structure of the organization to implement the energy efficiency and conservation plan.

**Figure 2: Customer Programs Organizational Chart**



<sup>1</sup> Residential Umbrella, Low Income, Residential DSR  
<sup>2</sup> Industrial Umbrella, Office, Retail, Chemicals, Metals, Industrial DSR  
<sup>3</sup> Commercial Umbrella, Healthcare, Education, Public Agencies, Commercial DSR

- 1.7. Summary description of EDC's data management, quality assurance and evaluation processes; include how EE&C plan, portfolios, and programs will be updated and refined, based on evaluation results.

Data Management: All energy efficiency project<sup>6</sup> activity is tracked and recorded in the Program Management and Reporting System (PMRS). When projects are established, PMRS assigns project numbers that are linked to the Duquesne Light's customer information and billing system by customer service account number. Hard copy project files are organized and filed by PMRS project number. Data elements tracked in PMRS include customer data, project and measure data; energy and demand savings; as well as financial rebate and, as applicable, Conservation Service Provider (CSP) performance payment data. Measure level data contain applicable baseline, as well as proposed and installed, measure definition to support claimed savings for measures listed in Figures 10 and 19. PMRS data extraction supports all program reporting as well as evaluation measurement and verification sampling.

Quality Assurance: (A more detailed description of quality assurance is provided under Section 6.) All Conservation Service Providers (CSP) under contract to implement Duquesne Light energy efficiency programs are required by contract statements of work to provide a Program Management Plan ("PMP"). The PMP presents the program rationale, assumptions, approach, processes to include policies and procedures, production plan, marketing plan, performance metrics and a quality assurance plan.

Procedures are in place to ensure prospective projects receive appropriate and consistent review prior to approval and incentive payment processing. This ranges from minimal residential measure rebate application processing to extensive commercial and industrial (C&I) project development and customer incentive processing. C&I incentive processing varies significantly depending on project type and size. Project review flow charts and project file content requirements are addressed in Section 6.

Evaluation Process: Projects and measure reported savings are verified pursuant to the Duquesne Light Evaluation Measurement and Verification (EM&V) Plan. The EM&V Plan ensures customer projects are verified using a systematic process that is consistent with the Statewide Evaluator's (SWE) Audit Plan and Evaluator's Framework for Pennsylvania Act 129 Energy Efficiency and Conservations Programs (Audit Plan). The Duquesne Light EM&V Plan specifies sample plans and applicable verification rigor consistent with the Audit Plan and is vetted with and approved by the SWE.

Program Refinements: Program refinement is continuous, resulting from experience gained through program implementation and adherence to quality assurance procedures

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<sup>6</sup> A *project* is an activity or course of action involving one or multiple energy efficiency measures, at a single facility or site. A *program* is a group of projects, with similar characteristics and installed in similar applications. Individual programs include those that involve encouraging and/or incenting the installation of equipment or practices associated with new-construction and retrofit solar energy and energy efficiency projects. The *portfolio* consists of all the programs in the residential, commercial/industrial small, commercial/industrial large or governmental/non-profit sectors. Residential sector programs include low-income, single-family and multi-family housing projects. Commercial/Industrial Small sector programs include small commercial, industrial, agricultural, and public sector facility projects. Commercial/Industrial Large sector programs include large commercial, industrial, agricultural, and public sector facility projects. Governmental/Non-Profit includes Federal, State, Municipal, and Local Governments; as well as school districts, institutions of higher learning, and non-profit entities. The applicable EE&C sector designation is based on a customer's rate schedule not the size of the energy efficiency project or type of building.

described above. Augmenting internal process improvements, programs and processes are subject to program implementation process evaluations performed by an independent EM&V contractor. Additionally, customer and stakeholder input are solicited during regularly scheduled Act 129 EE&C Program stakeholder meetings.

#### 1.8. Summary description of cost recovery mechanism.

The Act allows all EDCs to recover on a full and current basis from customers, through a reconcilable adjustment clause under 66 Pa. C.S. § 1307, all reasonable and prudent costs incurred in the provision or management of its plan. The Act also requires that each EDC's plan include a proposed cost-recovery tariff mechanism, in accordance with 66 Pa. C.S. § 1307, to fund all measures and to ensure full and current recovery of prudent and reasonable costs, including administrative costs, as approved by the Commission. To that end, Duquesne Light has designed a surcharge and reconciliation mechanism for all customer segments. The surcharge has been designed in a manner that recovers costs of the programs from the customers who have an opportunity to participate in those programs.

The Company, as successfully implemented in Phase I, proposes to implement five surcharges for Phase II. The Residential surcharge is designed to recover costs on a cents per kilowatt-hour basis with an annual reconciliation; the charges would be included in the overall distribution kWh rate. The Small and Medium Commercial and Industrial surcharges are also designed to recover costs on a cents per kilowatt-hour basis with an annual reconciliation. The large Commercial and Industrial surcharges are designed to recover costs through a combination of a fixed monthly surcharge and a demand-based surcharge with an annual reconciliation. All of the commercial and industrial customers will have a separate line item delineation of these charges on the bill.

## **2. Energy Efficiency Portfolio/Program Summary Tables and Charts**

*(The objective of this section is to provide a quantitative overview of the entire plan for the four-year period. The audience will be those who want to see the “numbers”, but not all the details.)*

- 2.1. Residential, Commercial/Industrial Small, Commercial/Industrial Large and Governmental/Non-profit Portfolio Summaries (see Table 4).

See Section 11 for Table 4.

- 2.2. Plan data: Costs, Cost-effectiveness and Savings by program, sector and portfolio (see Tables 1-4).

See Section 11 for Tables 1-4.

- 2.3. Budget and Parity Analysis – (see Table 5).

See Section 11 for Table 5.

### 3. Program Descriptions (2 to 3 pages per program)

*(The objective of this section is to provide detailed descriptions of each proposed program and the background on why particular programs were selected and how they form balanced/integrated portfolios.)*

#### 3.1. Discussion of criteria and process used for selection of programs:

The Phase I EE&C Plan was based on detailed information about utility customer populations, building stock and regional energy use contained in Duquesne Light's filed energy efficiency potential forecast.<sup>7</sup> Duquesne Light's Phase II EE&C Plan incorporated needed updates that were provided through the use and application of information contained in the Pennsylvania Public Utilities Commission adopted statewide energy efficiency potential study<sup>8</sup> as well as end-use saturation studies for residential, commercial and industrial sectors<sup>9,10</sup>.

The Phase II EE&C Plan projected measure content and savings (measure mix) reflect measure activity documented during the 2010 and 2011 program years with updated deemed savings taken from the 2013 PA Technical Reference Manual.

Given the aforementioned information and an understanding about specific building stock technology applications capable of rendering the targeted reductions, the project team identified optimal delivery mechanisms. Energy efficiency delivery mechanisms ("programs") described in this Plan were adopted from Phase I benchmarking<sup>11</sup> as well as an assessment of past program performance.

##### 3.1.1. Describe portfolio objectives and metrics that define program success (e.g., energy savings, customers served, number of units installed).

As described above, the project team identified key target markets for efficiency gain potential and proven approaches to program delivery. Given this foundation, the planning process imposed program budget limits consistent with the Act and the Commission's Implementation Order of August 3, 2102. Available funding was first allocated to each major rate class in proportions approximating annual energy consumption, then adjusted based on requirements to achieve the Commission's required reductions in low income and governmental/nonprofit segments, as well as certain comprehensiveness requirements of the Commission's Implementation Order of August 3, 2012. Implementation Order at 45 and 55. Program goal allocations also incorporated demonstrated delivery channel strengths and weaknesses from Phase I in a balance to achieve reduction mandates and funding authorization.

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<sup>7</sup>Petition of Duquesne Light Company for Approval of its Energy Efficiency and Conservation and Demand Response Plan Docket No. M-2009-2093217, June 30, 2009; Part (3) Energy Efficiency and Demand Side Response Study, MCR Performance Solutions, LLC, June 26, 2009

<sup>8</sup> ibid, footnote 2

<sup>9</sup> ibid, footnote 2

<sup>10</sup> ibid, footnote 2

<sup>11</sup> ibid, footnote 4

**Figure 3: Budget**

<b>Sector</b>	<b>Energy Use</b>	<b>3-Year Projected Expenditures</b>	
Residential	30.5%	\$26,630,839	45.5%
Commercial	48.8%	\$19,498,105	33.3%
Industrial	20.8%	<u>\$12,364,448</u>	21.1%
Subtotal EE		\$58,493,392	
Maintain Phase-I DR Programs		\$144,000	
Total		\$58,637,392	

The Act requires certain amounts of the mandated reductions be achieved through programs serving low income customers. Working with the governmental/non-profit sector, programs were designed and funded to meet these requirements. In addition to mandated programs, a portfolio of programs was assembled to penetrate key markets. The table below shows the structure of the portfolio to meet these objectives:

**Figure 4: Portfolio Objectives****Energy (kWh) and Demand (kW) Savings**

Sector	Program Name	May 31, 2016	May 31, 2016
		kWh	kW
<b>Residential</b>	Residential Energy Efficiency Program	100,874,929	5,546
	REEP Whole House Audit/Retrofit	997,648	72
	Residential Appliance Recycling	4,774,947	591
	Residential Behavioral Savings	28,036,928	0
	School Energy Pledge Program	4,269,288	139
	Low Income Energy Efficiency	14,942,988	751
<b>Commercial</b>	Commercial Sector Umbrella Program	15,577,880	2,610
	Office Building Energy Efficiency	21,750,658	3,644
	Healthcare Segment Energy Efficiency	12,325,373	2,065
	Retail Segment Energy Efficiency	9,992,864	1,674
	Commercial Upstream Lighting	10,050,411	2,361
	Small Commercial Direct Install	6,126,074	1,029
<b>Industrial</b>	Industrial Sector Umbrella Program	5,531,182	929
	Chemical Products Energy Efficiency	13,689,675	2,300
	Mixed Industrial Energy Efficiency	12,237,740	2,056
	Primary Metals Energy Efficiency	37,681,176	6,331
<b>Governmental</b>	Education Segment Energy Efficiency	11,448,139	1,918
	Multifamily Housing Retrofit	5,173,551	239
	Public Agency Partnership Program	16,584,950	2,779
<b>Total EE&amp;C Plan Savings</b>		332,066,400	37,032
<b>Mandated Reductions</b>		276,722,000	N/A

*Note: Portfolio savings objective is 20% above the mandated reduction to provide for 80% measurement realization.*

3.1.2. Describe how programs were constructed for each portfolio to provide market coverage sufficient to reach overall energy and demand savings goals. Describe analyses and/or research that were performed (e.g., market, best-practices, market modeling).

Program Portfolio Structures:

As described under Section 3.1 and 3.1.1, energy efficiency potential is forecast based on customer building stock and technology applications within that building stock. This approach is functional and consistent with industry standard practices. Programs described herein are planned according to a customer market segmentation approach. Programs are designed to (1) target identified efficiency gain potential (energy and



demand), and (2) address market segment specific needs and barriers. The following chart shows customer sector building stock categories observed in the development of the energy efficiency programs described herein:

**Figure 5: Customer Sector Building Stock Categories<sup>12</sup>**

<b>Residential Building Stock</b>	<b>Commercial Building Stock</b>	<b>Industrial Building Stock</b>
Single Family	Colleges	Food Processing
Multifamily	Food Stores	Textiles / Apparel
Manufactured Housing (mobile homes)	Healthcare	Lumber / Furniture
	Lodging	Paper & Allied Products
	Offices - Large	Printing
	Offices - Small	Chemical Products
	Refrigerated Warehouses	Petroleum / Coal
	Retail Stores	Rubber / Plastics
	Restaurants	Stone / Clay / Glass
	Schools	Primary Metals
	Warehouses	Fabricated Metals
		Industrial Machinery
		Electronics
		Transportation Equipme Instruments

The programs described in the following sections are developed to address specific market segments or delivery channels. Where programs are structured to serve both Small Commercial/Industrial and Large Commercial/Industrial sectors, narrative program descriptions are provided in Section 3.3 Small Commercial/Industrial only. For these programs serving both sectors, budget and savings impacts are bifurcated based on anticipated sector participation and presented in the appropriate template sections.<sup>13</sup>

#### Residential Revenue Class

Duquesne Light's project team analyzed residential sector summary actual data for 2007–2008 and 2009-2013 forecast data for customer count, energy and demand statistics. Dwelling type and vintage definition was developed by analyzing American Community Survey data for Allegheny and Beaver counties, representative of housing characteristics in Duquesne Light's service area.<sup>14</sup> The analysis supported a proportional allocation of percentages of regional housing stock into single-family, multi-family and mobile home dwelling types. Housing stock was further disaggregated into vintage groups built 30 years ago or newer and more than 30 years ago. For the purposes of establishing prototypical housing stock characteristics, the team evaluated available saturation studies, analyzed Pennsylvania building construction codes and standards, interviewed weatherization contractors who are

<sup>12</sup> *ibid*, footnote 6

<sup>13</sup> This treatment applies to the commercial upstream lighting program, commercial sector umbrella program and industrial sector umbrella program.

<sup>14</sup> *ibid*, footnote 6

active in the area and performed secondary research. The following table provides Duquesne Light housing stock projections:

**Figure 6: Duquesne Light Housing Stock Projections**

**Residential Housing Stock Dwellings Percent**

Single Family Post-1978	58,411	10.9%
Single Family Pre-1978	329,561	61.7%
Multifamily Post-1978	20,984	3.9%
Multifamily Pre-1978	118,393	22.2%
Mobile Homes Post-1978	996	0.2%
Mobile Homes Pre-1978	<u>5,622</u>	<u>1.1%</u>
	533,968	100.0%
Total Post-1978	80,391	15.1%
Total Pre-1978	<u>453,577</u>	<u>84.9%</u>
	533,968	100.0%

Residential EE&C program planning incorporates energy and demand savings associated with implementing lighting, appliance, heating ventilation and air conditioning, building shell, water heating and other energy efficiency measures shown in Figure 10. Residential sector measures and their energy and demand savings estimates are consistent with the Pennsylvania 2013 Technical Reference Manual (TRM).

Where appropriate, especially for weather sensitive measures, measure savings impacts were modeled by applying prototypical housing stock definitions and using building performance modeling software with weather inputs that are appropriate for the Pittsburgh area. Prototypical housing stock type and size definitions for single-family (SF), multi-family (MF) and mobile homes (MB) are summarized below:

**Figure 7: Prototypical Housing Stock Type and Size**

<b>Modeled Housing Stock Sizes</b>	<b>Ft<sup>2</sup></b>
Single Family Post-1978	1,643
Single Family Pre-1978	2,123
Multifamily Post-1978	724
Multifamily Pre-1978	936
Mobile Homes Post-1978	855
Mobile Homes Pre-1978	1,105

Heating ventilation and air conditioning (HVAC) measure efficiencies were adjusted to align with new federal efficiency standards.

### Commercial Revenue Class

Duquesne Light's project team analyzed commercial sector summary actual data for 2007–2008 and 2009–2013 forecast data for customer count, energy and demand statistics. The project team utilized Standard Industrial Classification (SIC) codes available for Duquesne Light's larger commercial customers, identifying market segments (building types) for commercial customer accounts amounting to approximately 75% of commercial sector consumption. The team reviewed more than 61,000 commercial and industrial account records and assigned SIC codes to expand the amount of classified commercial sector consumption to more than 99% of sector consumption.

County Business Pattern data (business establishments with paid employees) were applied to annual energy consumption by building type and energy consumption percentages by building type were calculated. Proportional energy consumption for building types was compared with SIC coded Duquesne Light commercial customer data. Any significant variation was noted. Sector consumption for retail stores and restaurants was adjusted upward as a result of this analysis. This treatment is justified due to the age of available segment data and high “churn” rates for these customer segments. Overall, the customer data was corroborated by the exercise and found to present a reasonable and stable basis for energy efficiency program planning.

Energy intensity (kWh per ft<sup>2</sup>) by building type was established using U.S. DOE EIA Commercial Building Energy Consumption Survey information and by using the U.S. DOE Building Energy Simulation Modeling Program DOE-2.1.E (DOE-2) for building type performance modeling. Energy intensities were applied to building type annual consumption data to calculate building stock ft<sup>2</sup> as shown in the table below:

**Figure 8: Building Stock Square Feet<sup>15</sup>**

<b>Building Types</b>	<b>(ft<sup>2</sup>)</b>
Colleges	7.0%
Food Stores	3.0%
Health Care	17.0%
Lodging	1.0%
Large Offices	30.0%
Misc	5.0%
Refrigerated Warehouses	0.1%
Retail Stores	10.5%
Restaurants	5.0%
Schools	3.5%
Small Offices	16.0%
Warehouses	<u>1.9%</u>
	100.0%

**Sub-Program Segments**

Office Buildings	46.0%
Health Care	17.0%
Retail (Stores/Lodging/Restaurants)	18.5%
Education (Colleges & Schools)	<u>10.5%</u>
	92.0%

Commercial Segment Umbrella Program 8.0%

Commercial sector EE&C programs for office buildings, health care, retail stores and education provide specialized EE&C services for customers consuming 92% of the commercial sector energy. All commercial sector customers can receive EE&C incentives under the Commercial Sector Umbrella Energy Efficiency Program.

Commercial sector energy efficiency potential is driven by building type floor space (ft<sup>2</sup>), where equipment density is expressed in terms of units (hp, lamps, fixtures, tons, etc) per ft<sup>2</sup>. Equipment densities are based on building type architectural features, internal loads, lighting power density, equipment density, occupant density and air supply requirements.

**Industrial Revenue Class**

Duquesne Light's project team analyzed industrial sector summary actual data for 2007–2008 and 2009-2013 forecast data for customer count, energy and demand statistics. The project team utilized Standard Industrial Classification (SIC) codes available for Duquesne Light's larger industrial customers, identifying market segments

<sup>15</sup> *ibid*, footnote 6

for industrial customer accounts amounting to approximately 50% of industrial sector consumption. The team examined more than 61,000 commercial and industrial account records and assigned SIC codes to expand the amount of classified industrial sector consumption to more than 85% of sector consumption. This available information was considered the optimal level given the unique characteristics of Duquesne Light’s industrial customer base. The following table shows industrial market segment energy consumption:

**Figure 9: Industrial Market Segment Energy Consumption<sup>16</sup>**

<b>Market Segment</b>	<b>Segment Energy Use %</b>
Food Processing	2.8%
Textiles / Apparel	0.0%
Lumber / Furniture	0.2%
Paper	0.0%
Printing	1.3%
Chemicals	19.8%
Petroleum / Coal	0.2%
Rubber / Plastics	1.6%
Stone / Clay / Glass	7.3%
Primary Metals	54.5%
Fabricated Metals	3.9%
Industrial Machinery	2.7%
Electronics	3.9%
Transportation Equipment	0.8%
Instruments	0.2%
Miscellaneous Mfg	<u>0.8%</u>
	100.0%
 <b>Sub-Program Segments</b>	
Primary Metals	54.5%
Chemicals	19.5%
Mixed Segments	<u>18.0%</u>
	92.0%
 Industrial Segment Umbrella Program	 8.0%

Industrial sector EE&C programs provide specialized services for the primary metals, chemical products and the mixed segments, which comprise 92% of the industrial

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<sup>16</sup> ibid, footnote 6

sector energy. All industrial sector customers can receive EE&C incentives under the Industrial Sector Umbrella Energy Efficiency Program.

The industrial sector energy efficiency potential was driven by market segment annual energy consumption by end use category and historical energy savings potential for each category (compressed air, fan and pumping systems, process heating and cooling, HVAC and lighting). Industrial sector measure data were provided by Lawrence Berkeley National Laboratories, as presented in the referenced industrial sector energy efficiency potential forecast.<sup>17</sup>

3.1.3. Describe how energy efficiency, conservation, solar, solar photovoltaic systems, geothermal heating, and other measures are included in the portfolio of programs as applicable.

The project team performed extensive research described above to document the cost and impacts of EE&C Plan measures. Duquesne Light's Solar Photovoltaic Incentives Program was submitted in Phase I, but was removed per the Opinion and Order entered October 27, 2009 in Docket No. M-2009-2093217 and will not be offered in Phase II.

3.1.4. Describe the comprehensive measures to be offered to the residential and small commercial rate classes.

Refer to Whole House in Section 3.2.5, Commercial Direct Install in Section 3.3.3 and Multifamily in Section 3.5.2 for the comprehensive measures to be offered.

3.2. Residential Sector (as defined by EDC Tariff) Programs include formatted descriptions of each program organized under the following headings:

- Program title and program years during which program will be implemented<sup>18</sup>
- Objective(s)
- Target market
- Program description
- Implementation strategy (including expected changes that may occur in different program years)
- Program issues and risks and risk management strategy
- Anticipated costs to participating customers
- Ramp up strategy
- Marketing strategy

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<sup>17</sup> PGE0252.01 California Industrial Existing Construction Energy Efficiency Potential Study, KEMA, May 2006

<sup>18</sup> It is assumed that there are three program years, each starting June 1 and ending May 31<sup>st</sup>. The first program year (PY) is Program Year 2013 and the last program year is Program Year 2015.

- Eligible measures and incentive strategy, include tables for each year of program, as appropriate, showing financial incentives & rebate levels (e.g., \$ per measure, \$ per kWh or MW saved)
- Program start date with key schedule milestones
- Assumed Evaluation, Measurement and Verification (EM&V) requirements required to document savings by the Commission's statewide EE&C Plan Evaluator
- Administrative requirements – include internal and external staffing levels
- Estimated participation – includes tables indicating metric(s) with target value(s) per year
- Estimated program budget (total) by year – include table with budget per year
- Estimated percentage of sector budget attributed to program
- Savings targets – include tables with total MWh and MW goals per year and cumulative tables that document key assumptions of savings per measure or project
- Cost-effectiveness – include TRC for each program
- Other information deemed appropriate

### 3.2.1. Residential Energy Efficiency Rebate Program

Title: The Residential Energy Efficiency Rebate Program (“REEP”) will be implemented during program years 2013 through 2015.

Objectives: The REEP program is designed to mitigate primary cost and awareness barriers to residential customer adoption of energy efficiency measures and practices. To affect this outcome, REEP provides access to both printed and Internet based educational materials, as well as financial incentives in the form of energy efficient product rebates.

Target Market: This program is made available to Duquesne Light residential customers.

Program Description: The REEP encourages customers to make an energy efficient choice when purchasing and installing household appliances and equipment measures by offering educational materials on energy efficiency options and rebate incentives. Program educational materials and rebates are provided in conjunction with the Duquesne Light online home energy audit. The online home energy audit will allow customers to obtain instant results by answering questions regarding their home energy use. A menu of approved measures and rebate amounts simplifies the audit process for the customer and provides a "per-widget" rebate to reduce the cost of replacing outdated and inefficient equipment. A more comprehensive home energy audit will be available for customers (see whole house section). This more comprehensive audit features an onsite assessment of home energy use conducted by residential program technicians. Additionally, a no-cost home energy audit is available to low-income



customers through Duquesne Light's Low Income Usage Reduction Program ("LIURP").

Implementation Strategy: The REEP is implemented with assistance by a qualified CSP. Members of Duquesne Light's core team will support ongoing planning activities, contract management and assist with program outreach and marketing, as well as internal tracking and reporting. The CSP program coordinator may perform marketing, rebate processing, verification and calculation of overall savings. Customers submit rebate applications via mail or fax.

Duquesne Light worked with regional stakeholders to incorporate within REEP, upstream and mid-stream incentives (incentives provided manufacturers and retail distributors) to support point-of-purchase instant rebates. A web-based home energy efficiency survey application is provided via linkage to Duquesne Light's website.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warning regarding program under- or over-subscription. Provisions in CSP contract language provide for shifting funds from under-performing programs.

Anticipated Cost to Participating Customers: The REEP program is designed to offset approximately one-third of energy efficiency measure incremental cost. The cost to the participant is approximately two-thirds the incremental cost for choosing to purchase identified energy efficiency equipment.

Ramp-up Strategy: This program was launched on December 1, 2009 and will continue through Phase II of Act 129.

Marketing Strategy: Duquesne Light will continue to assist the CSP to coordinate marketing activities with local entities and outreach channels (e.g., local governments, community, faith-based and ethnic-based organizations, business associations, chambers of commerce, customer trade associations, etc). Duquesne Light will also support the program by marketing program services to its customers and through existing channel partners, such as large commercial, institutional and local government customers. Duquesne Light will work with its CSP contractor to develop a marketing plan that may incorporate direct mail, web-based, circulated print media, as well as radio and television advertising options.

Eligible Measures and Incentives: REEP program incentives are designed to offset a portion of measure incremental costs. Incentives offered under this program are provided in the following table:

**Figure 10: Residential Energy Efficiency Program Eligible Measures**

**Residential Energy Efficiency Program Customer Incentives**

Residential Measures	Unit kWh	Unit kW	Units	Unit Incentive	Low Range Incentive	High Range Incentive
Dehumidifier 1-25 pints/day	186	0.0098	Dehumidifier	\$24.00	\$21.60	\$26.40
Dehumidifier 25-35 pints/day	186	0.0098	Dehumidifier	\$24.00	\$21.60	\$26.40
Dehumidifier 35-45 pints/day	172	0.0098	Dehumidifier	\$24.00	\$21.60	\$26.40
Dehumidifier 45-54 pints/day	134	0.0098	Dehumidifier	\$24.00	\$21.60	\$26.40
Dehumidifier 54-75 pints/day	98	0.0098	Dehumidifier	\$24.00	\$21.60	\$26.40
Dehumidifier 75-185 pints/day	178	0.0098	Dehumidifier	\$24.00	\$21.60	\$26.40
Freezer Upright w/manual defrost	53	0.0061	Freezer	\$10.00	\$9.00	\$11.00
Freezer Upright w/automatic defrost	81	0.0092	Freezer	\$10.00	\$9.00	\$11.00
Freezer - Chest Freezer	43	0.0049	Freezer	\$10.00	\$9.00	\$11.00
Freezer Compact Upright w/manualdefrost	68	0.0078	Freezer	\$10.00	\$9.00	\$11.00
Freezer Compact Upright w/automatic defrost	140	0.0160	Freezer	\$10.00	\$9.00	\$11.00
Freezer - Compact Chest Freezer	58	0.0066	Freezer	\$10.00	\$9.00	\$11.00
Refrigerator Manual Defrost	87	0.0099	Refrigerator	\$24.00	\$21.60	\$26.40
Refrigerator Partial Automatic Defrost	87	0.0099	Refrigerator	\$24.00	\$21.60	\$26.40
Refrigerator Top mount freezer without door ice	108	0.0123	Refrigerator	\$24.00	\$21.60	\$26.40
Side mount freezer without door ice	129	0.0147	Refrigerator	\$24.00	\$21.60	\$26.40
Refrigerator bottom mount freezer without door ice	121	0.0138	Refrigerator	\$24.00	\$21.60	\$26.40
Refrigerator Bottom mount freezer with door ice	155	0.0177	Refrigerator	\$24.00	\$21.60	\$26.40
Refrigerator Top mount freezer with door ice	124	0.0125	Refrigerator	\$24.00	\$21.60	\$26.40
Refrigerator Side mount freezer with door ice	156	0.0178	Refrigerator	\$24.00	\$21.60	\$26.40
Refrigerator only-single door without ice	102	0.0116	Refrigerator	\$24.00	\$21.60	\$26.40
Refrigerator/Freezer-single door	102	0.0116	Refrigerator	\$24.00	\$21.60	\$26.40
Energy Star Room Air Conditioner	22	0.0590	Air Conditioner	\$24.00	\$21.60	\$26.40
Dishwasher with Electric Water Heater	29	0.0225	Dishwasher	\$24.00	\$21.60	\$26.40
Clothes Washer - Electric Water Heater and Electric Dryer	215	0.0147	Washer	\$24.00	\$21.60	\$26.40
Clothes Washer - Electric Water Heater and Gas Dryer or No Dryer	159	0.0147	Washer	\$24.00	\$21.60	\$26.40
Clothes Dryer, Electric Clothes Dryer with Moisture Sensor.	136	0.0470	Dryer	\$24.00	\$21.60	\$26.40
Electric Water Heater - 0.93 Energy Factor	89	0.0082	Water Heater	\$24.00	\$21.60	\$26.40
Electric Water Heater - 0.94 Energy Factor	122	0.0112	Water Heater	\$24.00	\$21.60	\$26.40
Electric Water Heater - 0.95 Energy Factor	154	0.0142	Water Heater	\$24.00	\$21.60	\$26.40
Heat Pump Water Heater	1,586	0.1455	Water Heater	\$286.00	\$257.40	\$314.60
ENERGY STAR Television <20"	66	0.0100	TV	\$14.00	\$12.60	\$15.40
ENERGY STAR Television 20 - <30"	97	0.0150	TV	\$14.00	\$12.60	\$15.40
ENERGY STAR Television 30 - <40"	155	0.0240	TV	\$14.00	\$12.60	\$15.40
ENERGY STAR Television 40 - <50"	291	0.0445	TV	\$14.00	\$12.60	\$15.40
ENERGY STAR Television 50 - <60"	476	0.0730	TV	\$14.00	\$12.60	\$15.40
ENERGY STAR Television ≥60"	541	0.0830	TV	\$14.00	\$12.60	\$15.40
Interior Compact Fluorescent Fixture, 5 - 25 Watts	27	0.0014	Fixture	\$5.00	\$4.50	\$5.50
Interior Compact Fluorescent Fixture, ≥= 26 Watts	27	0.0014	Fixture	\$5.00	\$4.50	\$5.50
Energy Star Outdoor Fixture	84	0.0025	Fixture	\$7.00	\$6.30	\$7.70
Energy Star Torchiere	65	0.0030	Torchiere	\$10.00	\$9.00	\$11.00
Linear Fluorescent T5/T8 Lamp	29	0.0307	Lamp	\$1.00	\$0.90	\$1.10
Central Air Conditioner SEER 15	160	0.2585	Ton	\$95.00	\$85.50	\$104.50
Central Air Conditioner SEER 16	224	0.3635	Ton	\$95.00	\$85.50	\$104.50
Central Air Conditioner SEER 17	281	0.4561	Ton	\$95.00	\$85.50	\$104.50
Central Air Conditioner SEER 18	332	0.5385	Ton	\$95.00	\$85.50	\$104.50
Central Air Conditioner SEER 19	378	0.6121	Ton	\$95.00	\$85.50	\$104.50
Central Air Conditioner SEER 20	419	0.6785	Ton	\$95.00	\$85.50	\$104.50
Central Air Conditioner SEER 21	456	0.7385	Ton	\$95.00	\$85.50	\$104.50
Heat Pump - 14 SEER / 8.6 HSPF A/C Heat Pump	677	0.1385	Ton	\$95.00	\$85.50	\$104.50
Heat Pump - 15 SEER / 8.8 HSPF A/C Heat Pump	751	0.2585	Ton	\$95.00	\$85.50	\$104.50
Heat Pump - 16 SEER / 8.4 HSPF A/C Heat Pump	816	0.3635	Ton	\$95.00	\$85.50	\$104.50
Heat Pump - 17 SEER / 8.6 HSPF A/C Heat Pump	873	0.4561	Ton	\$95.00	\$85.50	\$104.50
Heat Pump - 18 SEER / 9.2 HSPF A/C Heat Pump	1,254	0.5385	Ton	\$95.00	\$85.50	\$104.50
High Efficiency Fan Heating	359	0.0830	Fan	\$62.00	\$55.80	\$68.20
Programmable Thermostat	66	0.0000	Thermostat	\$24.00	\$21.60	\$26.40
Whole House Fans (CAC HP Cooling)	199	0.0000	Fan	\$95.00	\$85.50	\$104.50
Ductless Mini-Split Heat Pumps	140	0.3123	Heat Pump	\$95.00	\$85.50	\$104.50
Faucet Aerator	44	0.0040	Aerator	\$1.00	\$0.90	\$1.10
High Efficiency Showerhead	243	0.0223	Showerhead	\$5.00	\$4.50	\$5.50
Water Heater Pipe Wrap	96	0.0088	Kit (4ft)	\$3.00	\$2.70	\$3.30
Water Heater Tank Wrap	148	0.0169	Kit	\$5.00	\$4.50	\$5.50
Solar Water Heat	1,623	0.1490	System	\$286.00	\$257.40	\$314.60
Insulation - Ceiling & Wall Insulation	0.0533	0.000035	Square Feet	\$0.30	\$0.27	\$0.33
Occupancy Sensor based Control	95	0.0000	Sensor	\$10.00	\$9.00	\$11.00
Smart Strip - Surge Protector	184	0.0130	Strip	\$10.00	\$9.00	\$11.00
Swimming Pool Pump, Two-Speed	530	0.2800	Pump	\$57.00	\$51.30	\$62.70
Swimming Pool Pump, Variable Speed	394	0.3596	Pump	\$57.00	\$51.30	\$62.70

Program Start Date and Key Milestones: Refer to Section 12 Chart 1, Residential Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: In addition to overarching portfolio management, organizational planning includes provision for two dedicated full-time employees to perform management and coordination of all residential programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the two Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation: The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 11: Residential Energy Efficiency Program*****Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$2,817,006	\$2,817,006	\$2,817,006	\$8,451,017
Admin	\$3,020,028	\$3,020,028	\$3,020,028	\$9,060,083

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	1,849	1,849	1,849	5,546
Energy Savings (kWh)	33,624,976	33,624,976	33,624,976	100,874,929

Cost Effectiveness: TRC 1.4

### 3.2.2. Schools Energy Pledge Program

Title: Residential/Schools Energy Pledge Program (“SEP”) will be implemented during the program years 2013 through 2015.

Objectives: Residential markets represent substantial aggregate savings potential but small per-unit (household) savings, coupled with geographic dispersion, results in high program transaction costs. This creates stranded opportunities and what the energy efficiency industry terms “hard-to-reach” markets. SEP engages the schools market segment as a means to channel energy efficiency services into hard-to-reach residential populations. The energy efficiency impacts projected are based on engaging 70 schools and achieving minimal participation by 200 students per enrolled school; approximately 50 percent student body participation. Actual participation rates in Phase I and other regions of the country are closer to 70 percent. SEP pledge forms can be customized to include linkage to other energy efficiency programs, such as refrigerator recycling, weatherization, on-line home energy audits or other energy efficiency programs.

Target Market: Demographics indicate there are approximately 0.34 school age children per household in Allegheny and Beaver counties. When applied to Duquesne Light's residential population, this equates to 175,000 school age children. The SEP program targets primary grades (K-5), or approximately 73,000 primary school students. An average of 450 students per primary school<sup>19</sup> extrapolates to approximately 162 primary schools in Duquesne Light's service territory.

Program Description: Schools Energy Pledge program energy efficiency impacts take place in student homes when families adopt the energy efficiency measures that students learn about at school. Through the SEP program, students learn about energy efficiency, participate in a school fundraising drive and help their families to implement energy-saving measures at home. Major program elements include:

- **Launch:** Schools announce the program with a short, energizing video for students during a kick-off assembly.
- **Learn:** Students engage in hands-on lessons linking scientific concepts with practical applications.
- **Pledge:** Families sign a pledge to install energy efficiency measures contained in an energy saving toolkit.
- **Track:** A graphic display at school shows the number of pledge forms returned to school by students and progress toward school fundraising, energy savings and greenhouse gas reduction goals.
- **Reward:** Schools receive energy efficiency incentive funds for the pledges returned.

Implementation Strategy: SEP is an energy efficiency program that was co-developed through a partnership between MCR Performance Solutions, LLC (MCR) and Strategic Energy Innovations. SEP implementation is conducted by the Core Team. Implementation includes all program materials, standardized forms, lesson plans, site coordinator training, tracking and reporting. Energy saving toolkits are customized and provided by mail directly to participating households.

Program Risk and Risk Management Strategy: SEP is licensed to be implemented by Duquesne Light. Program implementation cycles are approximately four months. SEP is a very low risk educational schools program with quantifiable impacts in the residential sector.

Anticipated Cost to Participating Customers: The SEP program is provided at no cost to participating customers.

Ramp-up Strategy: This program is the continuation of a highly successful program during Phase I years with participation of more than 16,000 students and their families. Schools are prepositioned for Phase II, waiting in line to gain access to program services. As such, no "ramp-up" period for the program is anticipated, but continuation of a previously demonstrated strong school, student and family participation.

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<sup>19</sup> State of Pennsylvania statistics provided by the National Center for Educational Statistics

Marketing Strategy: The SEP was successfully implemented during Phase I of Act 129; going forward, the marketing strategy includes referral from previous participants, either through parents or teachers, who help identify additional schools for future participation in the program. A memorandum of understanding between the Duquesne Light and participating schools districts or individual schools is signed. This approach is a part of defined SEP implementation activities.

Eligible Measures and Incentives: The SEP is tailored to specific regional needs. Classroom lesson plans are linked to state curriculum standards for science and mathematics. The school energy efficiency toolkit includes CFLs, LED night lights, smart strip, and educational materials.

Program Start Date and Key Milestones: Refer to Section 12 Chart 1, Residential Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: In addition to overarching portfolio management, organizational planning includes provision for two dedicated full-time employees to perform management and coordination of all residential programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the two Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation: The baseline program targets 70 schools with participation projected at approximately 14,000 students. Historically, this trademarked program achieves no less than 50 percent participation by students and families.

**Figure 12: Schools Energy Pledge Program*****Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$85,914	\$85,914	\$85,914	\$257,742
Admin	\$342,529	\$342,529	\$342,529	\$1,027,588

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	46	46	46	139
Energy Savings (kWh)	1,423,096	1,423,096	1,423,096	4,269,288

Cost Effectiveness: TRC 1.5

### 3.2.3. Residential Appliance Recycling Program

Title: The Residential Appliance Recycling Program (“RARP”) will be implemented during program years 2013 through 2015.

Objectives: Assist customers to become more energy efficient by educating them about the amount of energy consumed and the costs associated with operating inefficient refrigerators and freezers. Provide access to an easy-to-use service to remove and recycle the operational inefficient refrigerators and freezers. Customer motivation is increased by providing a cash incentive for program participation.

Target Market: Duquesne Light’s energy efficiency potential forecast estimates that of the 533,000 households served, approximately 42,000 households operate more than one refrigerator or freezer.

Program Description: The Residential Appliance Recycling Program encourages residential customers in Duquesne Light’s service territory to turn in their older



operating refrigerators and freezers to be recycled. Removing an older, operating refrigerator or freezer can result in an energy savings specified in the 2013 TRM. To encourage participation in this program, this program provides a \$35 check for the removal of the old refrigerator or freezer. The program will consist of Duquesne Light hiring a contractor to administer the program that would consist of the following services:

- Vendor to handle questions and to set up recycling appointments
- Website (program details, reservation requests)
- Onsite verification of unit that is in working condition
- Unit collection/transportation
- Recycling processing (including CFC-11 (foam) incineration or recycling)
- Rebate check & rebate processing
- Reporting

Implementation Strategy: Contractor proposals are evaluated based upon inclusion of a proposed marketing and outreach plan, to include elements such as the following:

- Customer marketing
- Bill insert and direct mail document development
- Radio and television advertisement development
- Trade show and store display development
- Rebate processing and verification
- Customer enrollment: Customer contacts vendor call center to schedule to have their older, functioning refrigerator or freezer removed. Once the refrigerator or freezer has been determined to be functional, it is removed without any cost to the customer.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts, and provides early warning regarding program under- or over-subscription. Provisions in CSP contract language provide for shifting funds from under-performing programs.

Anticipated Cost to Participating Customers: There is no cost to participating customers.

Ramp-up Strategy: This program is the continuation of a successful Phase I program; however, there are still large populations of refrigerators and freezers to be "harvested." Phase I customer participation resulted in recycling 8,991 units as of the end of PY 3 out of the aforementioned 42,000. No ramp-up strategy is indicated.

Marketing Strategy: Duquesne Light works with a selected CSP to develop a marketing plan that incorporates direct mail, web-based, circulated print media as well

as radio and television advertising options. The vendor CSP will handle questions, set up recycling appointments and provide website-based systems to provide program details and make reservation requests.

Eligible Measures and Incentives: Based on the experience of other utilities attempting to operate appliance recycling programs that include room air conditioners, Duquesne Light has limited the program scope to refrigerators and freezers. A \$35 check is given to the customer once the following conditions have been met:

- Customers are required to have the functioning refrigerator or freezer at their billing address at the time of the removal.
- The refrigerator or freezer must be a consumer model between 10-30 cubic feet.

Program Start Date and Key Milestones: Refer to Section 12 Chart 1, Residential Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission’s Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: In addition to overarching portfolio management, organizational planning includes provision for two dedicated full-time employees to perform management and coordination of all residential programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the two Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation: Duquesne projects an annual capture rate reflected in the following table:

Program Year	Participating Customers
2013	2,393
2014	2,393
2015	2,394
Total	7,180

**Figure 13: Residential Appliance Recycling Program*****Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$60,533	\$60,533	\$60,533	\$181,600
Admin	\$74,712	\$74,712	\$74,712	\$224,137

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	197	197	197	591
Energy Savings (kWh)	1,591,649	1,591,649	1,591,649	4,774,947

Cost Effectiveness: TRC 2.8

#### 3.2.4. Residential Home Energy Reporting Program

Title: The Residential Home Energy Reporting Program will be implemented during program years 2013 through 2015.

Objectives: The objectives of the program are (1) to educate residential participants on electricity consumption using graphic information tools; (2) to change household behavior leading to less electricity usage; and (3) to deliver energy savings of more than 1% of average participant's electric usage.

Target Market: The program targets 50,000 high-use residential customers, including 4,200 low-income, high use customers.

Program Description: The program sends via direct mail home energy use reports (HER) that compare recipient customer's energy use to 100 of their peers (i.e., customers with similar home type and size). HER provides for comparison of the last

two months of energy consumption by 1) the most efficient, top 20% of the peer group, 2) the HER recipient, and 3) the entire peer group. The reports generate verifiable savings between 1.5%-3.5% of total home energy use.

Implementation strategy: Six HERs are provided to each targeted customer in 2013, five HERs are provided to targeted customers in 2014 and five HERs are provided to targeted customers in 2015.

Program Risks and Risk Management Strategy: There is an attendant risk the program implementer cannot deliver the contracted HERs and that consumers will not respond to the HERs by changing energy use behavior. Duquesne Light has mitigated this risk by selecting an implementation contractor who has a proven track record; Opower previously deployed HERs on a national scale for more than ten million customers and offered these reports as a component of energy efficiency programs at 65 utilities. Energy savings results are quantified using a PA PUC approved scientific measurement and verification approach already in use at PPL. Public utility commissions in California, Minnesota, Massachusetts and New York have adopted similar protocols to count energy savings from behavior-based energy efficiency programs.

Anticipated Costs to Participating Customers: There is no cost to participating customers.

Ramp-up Strategy: This program is a continuation of Phase I programmatic offerings; no program ramp-up action is indicated.

Marketing Strategy: Large-scale, individualized direct-mail campaign and provision of a customer service web portal. High-use customers are selected on an opt-out basis for enrollment in the multi-year pilot.

Eligible Measures and Incentives: The HERs described above are the only program measure; there are no customer incentives. Estimated per customer savings are 612 kWh. Additionally, HERs will also be utilized to promote other residential program offerings as a means to help customers reduce consumption.

Program Start Date and Key Milestones: Refer to Section 12 Chart 1, Residential Portfolio Program.

Evaluation, Measurement, and Verification (EM&V): Duquesne Light will rely on the same measurement and verification approach already provided to more than 65 utilities across the country, including PPL Utilities in Pennsylvania. The PA PUC approved Opower's M&V methodology as a "custom measure" for verifying savings. The protocol includes clearly defined test and control groups and ex-post measurement of savings.

Administrative Requirements: In addition to overarching portfolio management, organizational planning includes provision for two dedicated full-time employees to perform management and coordination of all residential programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the two Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation: The program targets 50,000 high-use residential customers that include 4,200 low-income, high use customers rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 14: Residential Home Energy Reporting Program**

***Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$0	\$0	\$0	\$0
Admin	\$845,486	\$845,486	\$845,486	\$2,536,458

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	0	0	0	0
Energy Savings (kWh)	9,345,643	9,345,643	9,345,643	28,036,928

Cost-Effectiveness: TRC: 1.7

3.2.5. Whole House Retrofit Program

Title: The Residential Whole House Retrofit Program (“WHRP”) will be implemented during program years 2013 through 2015.

Objectives: The WHRP program is designed to simultaneously educate customers about the efficiency of their home as a system and to stimulate more comprehensive retrofit activity than typical equipment rebates. To affect this outcome, WHRP provides access to comprehensive home energy audits, direct install measures, education and information about available retrofit resources, including applicable measure rebates.

Target Market: The program provides tailored services to income qualifying and non-income qualifying Duquesne Light residential customers whom are not residents of high-rise (more than four story) buildings. Services to income qualifying versus non-income qualifying customers are described below under the comprehensive track.

Program Description: The WHRP provides resources to residential customers to obtain a comprehensive track residential home energy audit, installation of Residential Home Audit Conservation Kit and rebates for a range of eligible measures (Figure 10 above).

Non-Low Income Qualifying Residential Customers: The program provides up to a \$250 home energy audit credit for receiving approved audit services. Direct installation measures (described below) are provided at no cost. The program also provides home energy use education, as well as information about available rebates and other program options.

Low Income Residential Customers: For households that are at or below 150% of the federal poverty income guidelines, home energy audits are provided at no cost to participants. Direct installation measures (described below) also are provided at no cost. The program also provides home energy use education, as well as information about available rebates and other program options.

Implementation Strategy: The comprehensive audit services will be implemented with assistance by a qualified CSP(s) or Public Agency Partnership Program (PAPP) partners. Members of Duquesne Light's core team will support ongoing planning activities; contract management; and assist with program outreach and marketing, as well as internal tracking and reporting. Selected CSP(s), the Duquesne Light program coordinator or a PAPP partnering organization will perform eligibility verification, scheduling of audits, data administration, data entry, reporting, quality control and fulfillment of incentives.

Duquesne Light will conduct outreach and marketing activities and, alone or with the CSP, develop coordination with other programs, such as gas company efficiency programs and Keystone HELP.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts, and provides early warning regarding program under- or over-subscription. The WHRP will employ audit tools most applicable to programmatic needs and opportunities with related data being consolidated for migration into PMRS. This approach has the potential to create data management issues with attendant time delays. Such data management and ramp-up delay risks will be mitigated through the process of selecting the CSP(s) or PAPP partner(s) with existing systems, processes and demonstrated capabilities to implement cost-effective residential audit programs.

Anticipated Cost to Participating Customers:

Non-Low Income Qualifying Residential Customers: Duquesne Light estimates a typical home audit will cost between \$500 and \$750. A \$250 audit credit is offered to offset between 30 percent and 50 percent of this cost. An average Home Performance with ENERGY STAR project can range from \$5,000 to

\$10,000. Through coordination with the Keystone HELP offering significant financing options that exist, when combined with the Duquesne Light and potentially coordinated gas efficiency incentives, cash flow neutrality for the customer is an attainable objective. Direct install (EE kit) measures are provided at no cost to participating customers. Additional energy efficient product incentive payments are available from Duquesne Light that can offset a portion of the incrementally greater cost of high-efficiency equipment. Incentive “levels” refer to the percentage of incremental measure cost offset by program incentives. Participating customers pay the remaining amounts.

Low-Income Residential Customers: Home audits and installation of low-income direct install measures (described below) will be provided at no cost to income qualified customers. Additional energy efficient product incentive payments, that can offset a portion of the incrementally greater cost of high-efficiency equipment, are available from Duquesne Light. Incentive “levels” refer to the percentage of incremental measure cost offset by program incentives.

Ramp-up Strategy: Implementation services RFPs will be issued, responses will be reviewed and contract statements of work will be executed according to the implementations schedules provided in Section 12.

Marketing Strategy: There are two ways for residential customers to enter the program: 1) via the existing Duquesne Light Energy Insights online audit or 2) through other low-income customer engagement channels (such as PAPP, Smart Comfort referrals, etc). Upon completion of the online audit, participants will be given an opportunity to pursue a comprehensive track audit that links to the Whole House Audit/Retrofit Program.

Duquesne Light will lead marketing activities with support from the CSP and Home Performance contractors. The Duquesne Light Watt Choices website and bill inserts are accessible to the program. Local entities and outreach channels (e.g., local governments, community, faith-based and ethnic-based organizations, business associations, chambers of commerce, customer trade associations, etc.) will be accessed via the PAPP program. Duquesne Light will explore development of a full marketing plan that may incorporate direct mail and web-based, circulated print media, as well as radio and television advertising options; these channels will be utilized through cooperative marketing funding of Home Performance contractors whose businesses stand to benefit from the program.

Eligible Measures and Incentives:

Non-Low Income Qualifying Residential Customers:

- Up to \$250 home energy audit credit for receiving approved audit services
- Installation of residential home audit conservation measures
- Information about available rebates (Figure 10 above) and other program options

Low Income Residential Customers (provided at no cost to participants):

- Home energy audit
- Installation of CFLs, faucet aerators, low flow showerheads, smart strips, night lights, refrigerator replacement, water heater pipe wrap and water heater tank wrap (and other measures, as applicable)
- Information about available rebates (Figure 10 above) and other program options

Administrative Requirements: In addition to overarching portfolio management, organizational planning includes provision for two dedicated full-time employees to perform management and coordination of all residential programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the two Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation: The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment, rendering deemed savings estimates reflected in the Projected Program Impacts table below:



**Figure 15: Residential Whole House Retrofit Program (Non-low income)*****Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$125,000	\$125,000	\$125,000	\$375,000
Admin	\$125,000	\$125,000	\$125,000	\$375,000

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	24	24	24	72
Energy Savings (kWh)	332,549	332,549	332,549	997,648

Cost-Effectiveness: TRC 0.4

### 3.2.6. Low-Income Sector Programs

Low-Income Sector (as defined by 66 Pa. C.S. § 2806.1) Programs include formatted descriptions of each program organized under the same headings as listed above for residential programs; these programs also detail and provide services to achieve compliance with 66 Pa. C.S. § 2806.1.

Title: The Low Income Energy Efficiency Program (LIEEP) will be implemented during program years 2013 through 2015.

Objectives: The objective of LIEEP is to increase qualifying customers' comfort while reducing their energy consumption, costs and economic burden.

Target Market: The LIEEP provides energy efficiency services to households that are at or below 150% of the federal poverty income guidelines and are located in single-family and multifamily dwellings.

**Program Description:** LIEEP is an income-qualified program providing services designed to assist low-income households to conserve energy and reduce electricity costs. LIEEP relies on several contributing programs to achieve projected savings impacts and program cost-effectiveness. Low income sector comprehensive home energy audit/retrofits are anticipated to subscribe approximately 70% of program budgets, while other program elements, proven used and useful to low income customers during program years 2010 and 2011, assist in broadening the programmatic offering and offsetting the whole house audit/retrofit 0.5:1 TRC ratio.

**Figure 16: Low Income Projected Savings**

Low Income Projected Savings Contributing Programs	Program kWh	Program Costs
Residential Energy Efficiency Program	21.7%	3.7%
Whole House Audit/Retrofit	24.5%	69.9%
Residential Appliance Recycling Program	12.3%	3.8%
School Energy Pledge Program	11.0%	12.3%
Residential Behavioral Savings	30.6%	10.4%

**Implementation Strategy:** Key elements of the implementation process follow:

- 1) Duquesne Light executes a Partnership MOU with the Public Agency;
- 2) Duquesne Light facilitates working group meetings with the public agency and jurisdictional housing authority agencies;
- 3) The working group collaborates on development of concept papers for the proposed project;
- 4) Public agency working group members obtain feedback on the proposed projects and the working group makes necessary adjustments to the concept papers;
- 5) Duquesne Light prepares a project agreement and resolution for approval by the public agency governing body;
- 6) Duquesne and the public agency implement the project plan consistent with the terms of the project agreement.

Patterned after successful programs operating in other parts of the country, a key element of the LIEEP is co-funding by Duquesne Light and the Partnership agency of energy efficiency audits and measure implementation. LIEEP will utilize local contractors and/or other survey and installation entities based on availability, cost and quality of service. Whenever possible, LIEEP will utilize non-profit, community and faith based organizations to perform the energy efficiency surveys and measure installation.

**Program Risk and Risk Management Strategy:** All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts, and provides early warning regarding program under- or

over-subscription. Provisions in CSP contract language provide for shifting funds from under-performing programs.

Anticipated Cost to Participating Customers: There is no cost to low income household residents.

Ramp-up Strategy: Portions of the LIEEP are a continuation of Duquesne Light's Phase I EE&C Plan services. LIEEP customer participation through the Public Agency Partnership Program, Residential Appliance Recycling Program and School Energy Pledge Program is expected to continue without ramp-up provisions.

Two new program offerings will provide services to income qualified participants: the Whole House Audit/Retrofit Program and the Multifamily Housing Retrofit Program. These start-up programs will have ramp-up requirements that are a function of implementation contractor capabilities, preparation and experience. It is Duquesne Light's goal to procure implementation of "off-the-shelf" programmatic offerings that should minimize ramp-up time and expense. There is uncertainty to any RFP process and program management may experience a typical six month ramp-up period.

However, given that 75% of projected impacts are from continuing programs and given start-up program uncertainties, a linear extrapolation was applied in the projection of program participation and funding requirements.

Marketing Strategy: Local government agencies are engaged directly by Duquesne Light under the local government partnership model. Each partnering agency assists in communicating with all governmental departments and jurisdictional agencies.

Eligible Measures and Incentives: All measures are provided as specified in the project agreements described previously. The projects implemented under this program are provided at no cost to participants. The cost to identify and implement measures shall be co-funded by parties to the Partnership as specified in project agreements.

Program Start Date and Key Milestones: Refer to Section 12 Chart 1, Residential Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities are identified in the EM&V Related Program Content section, where there is a complete listing of the information that is provided to the Commission's statewide EE&C Evaluator. Duquesne will monitor and where possible, coordinate its planned whole house energy audits, especially in regard to LIEEP, with any statewide whole house programs that would benefit its customers.

Administrative Requirements: In addition to overarching portfolio management, organizational planning includes provision for two dedicated full-time employees to perform management and coordination of all residential programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the two Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation: Determination of low-income segment mandated reductions requires interpretation of the following Act 129 language:

Act 129 (House Bill No., 2200 Session of 2008) Section 2. Title 66: § 2806.1 Energy Efficiency and Conservation Program. (A)(11)(1)(G): “The plan shall include specific energy efficiency measures for households at or below 150% of the federal poverty income guidelines. The number of measures shall be proportionate to those households’ share of the total energy usage in the service territory.”

Low income program goals presented in this plan are adjusted to reflect the percentage of Act 129 mandated reductions equivalent to the low income segment energy use percentage of Duquesne Light’s total territory energy use.

Based on the required annual reductions described above, projected participating households are estimated at more than 8,000 for each full year of program operation.

**Figure 17: Low Income Energy Efficiency Program**

***Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$61,786	\$61,786	\$61,786	\$185,359
Admin	\$1,318,952	\$1,318,952	\$1,318,952	\$3,956,855

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	250	250	250	751
Energy Savings (kWh)	4,980,996	4,980,996	4,980,996	14,942,988

Cost Effectiveness: TRC 1.1

### 3.3. Small Commercial/Industrial Sector Programs

Small Commercial/Industrial Sector (as defined by EDC Tariff) Programs include formatted descriptions of each program organized under the same headings as listed previously for residential programs.

Definition of Terms:

Sector Umbrella Programs: Sector Umbrella Programs described in Sections 3.3 and 3.4 provide a level of service (incentives only) to all sector customers and establish the terms, conditions and incentive levels for all Sector Sub-Programs. Sector Umbrella Programs define prescriptive incentives (\$ per lamp, fixture, ton, square foot of insulation, etc.) and custom incentives provide \$ per kWh saved for all Sector Sub-Programs.

Sector Sub-Programs: Sector Sub-Programs described in Sections 3.3 and 3.4 are designed to mitigate segment-specific barriers to program participation by providing segment-specific energy efficiency audits and incentives. The manner of program delivery is aligned to segment characteristics and needs. Incentive levels for all Sector Sub-Programs are defined by Sector Umbrella Programs.

#### 3.3.1. Commercial Sector Umbrella Energy Efficiency Program Plan

Title: The Commercial Sector Umbrella Energy Efficiency Program Plan will be implemented during program years 2013 through 2015.

Objectives: The Commercial Sector Umbrella Program (“CSUP”) provides for the payment of incentives to offset the higher cost of high-efficiency equipment when compared to standard efficiency equipment. Importantly, the CSUP establishes the terms, conditions and incentive levels for all Sector Sub-Programs. This approach has two key functions: (1) Changes to incentive levels occur once at the CSUP, thereafter referenced by all other programs; and (2) all program incentive offers are consistent, eliminating confusion and gaming (customers and/or contractors can participate in any program within the portfolio and receive exactly the same incentive). Incentive program tracking, reporting and processing are performed under the structures and procedures established under the CSUP.

Additionally, Sector Sub-Programs are structured to provide specialized services to customers consuming 92% of the sector energy use. The CSUP provides access to energy efficiency incentives by customers not served by the Sector Sub-Programs.

Target Market: The CSUP is primarily an operations activity facilitating operation of the Sector Sub-Programs. The CSUP also serves to provide cash incentives to customers that lack service under one of the Sector Sub-Programs.

Program Description: The CSUP establishes the terms, conditions and incentive levels for all Sector Sub-Programs. Incentive program tracking, reporting and processing are performed under the structures and procedures established under the CSUP. The CSUP

provides incentives to offset the higher cost of high-efficiency equipment when compared to standard efficiency equipment. Customers submit rebate applications via mail or fax.

Implementation Strategy: The CSUP is operated by the Duquesne Light core team or a designated CSP. Procedural guidelines for the CSUP define the processes for all incentive reservation and redemption, as well as program activity and impact reporting.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts, and provides early warning regarding program under- or over-subscription. Provisions in CSP contract language provide for shifting funds from under-performing programs.

Anticipated Cost to Participating Customers: Incentive payments offset a portion of the incrementally greater cost of high-efficiency equipment. Incentive "levels" refer to the percentage of incremental measure cost offset by program incentives. Participating customers pay the remaining amounts.

Ramp-up Strategy: This program was launched on December 1, 2009 and will continue through Phase II of Act 129.

Marketing Strategy: The CSUP is primarily an operational program. Customers will have access to CSUP incentive applications through a link on Duquesne Light's Act 129 website.

Eligible Measures and Incentives: Prescriptive measures and associated rebate amounts are provided in the listing of eligible measures provided in Figure 19 at the end of this section.

Program Start Date and Key Milestones: Refer to Section 12 Chart 2, Small Commercial/Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation (Small C&I): The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment, rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 18: Commercial Sector Umbrella Program – Small**

***Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$166,974	\$166,974	\$166,974	\$500,921
Admin	\$42,910	\$42,910	\$42,910	\$128,730

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	255	255	255	765
Energy Savings (kWh)	1,521,440	1,521,440	1,521,440	4,564,319

Cost Effectiveness: TRC 2.1

Commercial and industrial energy efficiency program eligible measures and incentive amounts are provided in the following table:

**Figure 19: Commercial and Industrial Energy Efficiency Program Eligible Measures**

Measure Name	Unit kWh	Unit kW	Units	Unit Incentive	Low Range Incentive	High Range Incentive
Custom, C&I	variable	variable	kWh	\$0.08	\$0.07	\$0.09
Screw-in Compact Fluorescent Lamp: 5-25 watts	165	0.0419	Lamp	\$1.00	\$0.90	\$1.10
Screw-in Compact Fluorescent Lamp: ≥26 Watts	256	0.0756	Lamp	\$1.00	\$0.90	\$1.10
Interior Compact Fluorescent Fixture 5-25 Watts	248	0.0332	Fixture	\$14.00	\$12.60	\$15.40
Interior Compact Fluorescent Fixture, 26-65 Watts	237	0.0267	Fixture	\$14.00	\$12.60	\$15.40
Interior Compact Fluorescent Fixture, 66-90 Watts	1,614	0.2168	Fixture	\$14.00	\$12.60	\$15.40
Interior Compact Fluorescent Fixture, >90 Watts	1,631	0.5316	Fixture	\$14.00	\$12.60	\$15.40
Exterior Compact Fluorescent Fixture, ≤70W replacement fixture	286	0.0167	Fixture	\$14.00	\$12.60	\$15.40
Cold Cathode Fluorescent Lamp: 2-18 Watts	320	0.1435	Lamp	\$5.00	\$4.50	\$5.50
Integrated Ballast Ceramic Metal Halide PAR Lamp	349	0.0638	Lamp	\$14.00	\$12.60	\$15.40
Screw-in Compact Fluorescent Reflector Lamps: 14-26 Watts	550	0.0874	Lamp	\$5.00	\$4.50	\$5.50
Induction Lamp and Fixture, 55-100 Watts	804	0.0900	Fixture	\$48.00	\$43.20	\$52.80
Induction Lamp and Fixture >100 Watts	2,138	0.3119	Fixture	\$95.00	\$85.50	\$104.50
T5-4' 1 lamp HO Electronic Ballast	140	0.0330	1 lamp and 1 ballast	\$19.00	\$17.10	\$20.90
T5-4' 2 lamp HO Electronic Ballast	285	0.0669	2 lamps and 1 ballast	\$19.00	\$17.10	\$20.90
T5 4 ft 3 lamp HO Electronic Ballast	148	0.0348	3 lamps and 1 ballast	\$38.00	\$34.20	\$41.80
T5 4 ft 4 Lamp HO Electronic Ballast	238	0.0559	4 lamps and 1 ballast	\$38.00	\$34.20	\$41.80
T5 4 ft 6 lamp HO Electronic Ballast	417	0.0980	6 lamps and 2 ballast	\$52.00	\$46.80	\$57.20
T5 - 4' 8 Lamp - HO - Electronic Ballast	2,387	0.5607	8 lamps and 2 ballast	\$67.00	\$60.30	\$73.70
T8-17W 2 ft 1 Lamp Electronic Ballast	23	0.0055	1 lamp and 1 ballast	\$10.00	\$9.00	\$11.00
T8-17W 2 ft 2 Lamp Electronic Ballast	70	0.0165	2 lamps and 1 ballast	\$11.00	\$9.90	\$12.10
T8-17W 2 ft 3 Lamp Electronic Ballast	117	0.0275	3 lamps and 1 ballast	\$16.00	\$14.40	\$17.60
T8-17W 2 ft 4 Lamp Electronic Ballast	160	0.0376	4 lamps and 1 ballast	\$19.00	\$17.10	\$20.90
T8-25W 3 ft 1 Lamp Electronic Ballast	47	0.0110	1 lamp and 1 ballast	\$10.00	\$9.00	\$11.00
T8-25W 3 ft 2 Lamp Electronic ballast	78	0.0183	2 lamps and 1 ballast	\$12.00	\$10.80	\$13.20
T8-25W 3 ft 3 Lamp Electronic Ballast	144	0.0339	3 lamps and 1 ballast	\$16.00	\$14.40	\$17.60
T8-25W 3 ft 4 Lamp Electronic Ballast	176	0.0412	4 lamps and 1 ballast	\$19.00	\$17.10	\$20.90
T8-30W 4 ft 1 Lamp (or 24" U tube) Electronic Ballast	59	0.0137	1 lamp and 1 ballast	\$14.00	\$12.60	\$15.40
T8-28W 4 ft 1 Lamp (or 24" U tube) Electronic Ballast	66	0.0156	1 lamp and 1 ballast	\$14.00	\$12.60	\$15.40
T8-25W 4 ft 1 Lamp (or 24" U tube) Electronic Ballast	82	0.0192	1 lamp and 1 ballast	\$14.00	\$12.60	\$15.40
T8-30W 4 ft 2 Lamp Electronic Ballast	74	0.0174	2 lamps and 1 ballast	\$17.00	\$15.30	\$18.70
T8-28W 4 ft 2 Lamp Electronic Ballast	94	0.0220	2 lamps and 1 ballast	\$17.00	\$15.30	\$18.70
T8-25W 4 ft 2 Lamp Electronic Ballast	113	0.0266	2 lamps and 1 ballast	\$17.00	\$15.30	\$18.70
T8-30W 4 ft 3 Lamp Electronic Ballast	144	0.0339	3 lamps and 1 ballast	\$19.00	\$17.10	\$20.90
T8-28W 4 ft 3 Lamp Electronic Ballast	168	0.0394	3 lamps and 1 ballast	\$19.00	\$17.10	\$20.90
T8-25W 4 ft 3 Lamp Electronic Ballast	191	0.0449	3 lamps and 1 ballast	\$19.00	\$17.10	\$20.90
T8-30W 4 ft 4 Lamp Electronic Ballast	152	0.0357	4 lamps and 1 ballast	\$21.00	\$18.90	\$23.10
T8-28W 4 ft 4 Lamp Electronic Ballast	187	0.0440	4 lamps and 1 ballast	\$21.00	\$18.90	\$23.10
T8-25W 4 ft 4 Lamp Electronic Ballast	226	0.0531	4 lamps and 1 ballast	\$21.00	\$18.90	\$23.10
T8-30W 4 ft 6 Lamp Electronic Ballast	289	0.0678	6 lamps and 2 ballast	\$24.00	\$21.60	\$26.40
T8-28W 4 ft 6 Lamp Electronic Ballast	335	0.0788	6 lamps and 2 ballast	\$24.00	\$21.60	\$26.40
T8-25W 4 ft 6 Lamp Electronic Ballast	382	0.0898	6 lamps and 2 ballast	\$24.00	\$21.60	\$26.40
T8-28W replacing 32W, lamp only (1st to 2nd gen retrofit) Δ4W	13	0.0045	Lamp	\$1.00	\$0.90	\$1.10
T8-25W Replacing 32W, Lamp Only (1st to 3rd gen retrofit) Δ7W	22	0.0079	Lamp	\$1.00	\$0.90	\$1.10
T8 25W Replacing 28W, Lamp Only (2nd to 3rd gen retrofit) Δ3W	9	0.0034	Lamp	\$1.00	\$0.90	\$1.10
T8 4 ft 8 Lamp HO Electronic Ballast	2,996	0.7037	8 lamps and 2 ballast2	\$33.00	\$29.70	\$36.30
T8 8 ft 1 Lamp Electronic Ballast	47	0.0110	1 lamp and 1 ballast	\$19.00	\$17.10	\$20.90
T8 8 ft 2 Lamp Electronic Ballast	98	0.0229	2 lamps and 1 ballast	\$21.00	\$18.90	\$23.10
T8 8 ft 4 Lamp Electronic Ballast	105	0.0247	4 lamps and 1 ballast	\$33.00	\$29.70	\$36.30
T8 8 ft 1 Lamp HO Electronic Ballast	410	0.0962	1 lamp and 1 ballast	\$19.00	\$17.10	\$20.90



**Figure 19: Commercial and Industrial Energy Efficiency Program Eligible Measures (continued)**

Measure Name	Unit kWh	Unit kW	Units	Unit Incentive	Low Range Incentive	High Range Incentive
T8 8 ft 2 Lamp HO Electronic Ballast	527	0.1237	2 Lamps and 1 Ballast	\$23.00	\$20.70	\$25.30
T8 8 ft 4 Lamp HO Electronic Ballast	2,965	0.6963	4 lamps and 1 ballast	\$33.00	\$29.70	\$36.30
Remove 2 ft Linear Fluorescent Lamp	101	0.0238	Lamp	\$9.00	\$8.10	\$9.90
Remove 3 ft Linear Fluorescent Lamp	148	0.0348	Lamp	\$9.00	\$8.10	\$9.90
Remove 4 ft Linear Fluorescent Lamp	168	0.0394	Lamp	\$9.00	\$8.10	\$9.90
Remove 8 ft Linear Fluorescent Lamp	234	0.0550	Lamp	\$9.00	\$8.10	\$9.90
Metal Halide, Pulse-Start Fixture, Exterior, 175W-320W	346	0.0840	Fixture	\$57.00	\$51.30	\$62.70
Metal Halide, Pulse-Start Fixture, Exterior >320W	644	0.1570	Fixture	\$95.00	\$85.50	\$104.50
Metal Halide, Pulse-Start Fixture, Interior 175 W	293	0.0770	Fixture	\$48.00	\$43.20	\$52.80
Metal Halide, Pulse-Start Fixture, Interior 250 W	632	0.1660	Fixture	\$48.00	\$43.20	\$52.80
Metal Halide, Pulse-Start Fixture, Interior 300W	427	0.1120	Fixture	\$62.00	\$55.80	\$68.20
Metal Halide, Pulse-Start Fixture, Interior 320W	328	0.0860	Fixture	\$62.00	\$55.80	\$68.20
Metal Halide, Pulse-Start Fixture, Interior 350W	206	0.0540	Fixture	\$67.00	\$60.30	\$73.70
Metal Halide, Pulse-Start Fixture, Interior 750W	990	0.2600	Fixture	\$110.00	\$99.00	\$121.00
Occupancy Sensor, Ceiling or Wall Mounted, <500W Controlled	286	0.2500	Sensor	\$16.00	\$14.40	\$17.60
Occupancy Sensor, Ceiling or Wall Mounted, ≥500W Controlled	857	0.7500	Sensor	\$19.00	\$17.10	\$20.90
Occupancy Sensor, High Bay Fixture-Integrated	270	0.0760	Sensor	\$38.00	\$34.20	\$41.80
Dimming Electronic Ballast, for Daylighting	61	0.0130	Ballast	\$16.00	\$14.40	\$17.60
Photocell	106	0.0000	Photocell	\$19.00	\$17.10	\$20.90
Time Clock	474	0.0000	Time Clock	\$29.00	\$26.10	\$31.90
Single-Sided LED Exit Signs Replacing Incandescent Exit Signs	176	0.0240	Fixture	\$24.00	\$21.60	\$26.40
Dual-Sided LED Exit Signs Replacing Incandescent Exit Signs	353	0.0480	Fixture	\$24.00	\$21.60	\$26.40
Single-Sided LED Exit Signs Replacing Fluorescent Exit Signs	69	0.0090	Fixture	\$24.00	\$21.60	\$26.40
Dual-Sided LED Exit Signs Replacing Fluorescent Exit Signs	157	0.0210	Fixture	\$24.00	\$21.60	\$26.40
LED Channel Signage (red) Indoor ≤2 ft	44	0.0100	Ft	\$5.00	\$4.50	\$5.50
LED Channel Signage (red) Indoor >2 ft	87	0.0200	Ft	\$10.00	\$9.00	\$11.00
LED Channel Signage (red) Outdoor ≤ 2ft	22	0.0100	Ft	\$5.00	\$4.50	\$5.50
LED Channel Signage (red) Outdoor > 2ft	44	0.0200	Ft	\$10.00	\$9.00	\$11.00
LED Traffic Signal - Round 8" Red	299	0.0620	LED	\$22.00	\$19.80	\$24.20
LED Traffic Signal - Round 8" Yellow	10	0.0590	LED	\$22.00	\$19.80	\$24.20
LED Traffic Signal - Round 8" Green	226	0.0600	LED	\$22.00	\$19.80	\$24.20
LED Traffic Signal - Round 12" Red	694	0.1440	LED	\$22.00	\$19.80	\$24.20
LED Traffic Signal - Round 12" Yellow	24	0.1370	LED	\$22.00	\$19.80	\$24.20
LED Traffic Signal - Round 12" Green	520	0.1380	LED	\$22.00	\$19.80	\$24.20
LED Traffic Signal - Turn Yellow 12"	75	0.1070	LED	\$22.00	\$19.80	\$24.20
LED Traffic Signal - Turn Green 12"	76	0.1090	LED	\$22.00	\$19.80	\$24.20
LED Traffic Signal - Pedestrian Hand/Man 12"	946	0.1080	LED	\$24.00	\$21.60	\$26.40
LED PAR 20 7-9W	66	0.0156	LED	\$10.00	\$9.00	\$11.00
LED PAR 30 10-13W	160	0.0376	LED	\$14.00	\$12.60	\$15.40
LED PAR 38 10-21W	378	0.0889	LED	\$14.00	\$12.60	\$15.40
LED MR16 4-7W	99	0.0234	LED	\$8.00	\$7.20	\$8.80
LED A-Line 8-12W	224	0.0527	LED	\$8.00	\$7.20	\$8.80
LED Decoratives 2-4W	125	0.0293	LED	\$6.00	\$5.40	\$6.60
VFD - HVAC Pump Motor	variable	variable	HP	\$95.00	\$85.50	\$104.50
VFD - HVAC Fan Motor	variable	variable	HP	\$95.00	\$85.50	\$104.50
VFD - Air Compressor Motor	variable	variable	HP	\$2,430.00	\$2,187.00	\$2,673.00
Packaged Terminal AC Tier 1:11.0 EER	294	0.1420	Ton	\$43.00	\$38.70	\$47.30
Packaged terminal AC, Tier 2:12.0 EER	529	0.2560	Ton	\$57.00	\$51.30	\$62.70
Packaged terminal AC, Tier 3: 13.0 EER	706	0.3410	Ton	\$72.00	\$64.80	\$79.20
Boilerless Connectionless Steamers, 6 pan>10kW, efficiency >50%	11,166	2.5000	Steamer	\$715.00	\$643.50	\$786.50

**Figure 19: Commercial and Industrial Energy Efficiency Program Eligible Measures (continued)**

Measure Name	Unit kWh	Unit kW	Units	Unit Incentive	Low Range Incentive	High Range Incentive
Insulated Holding Cabinet, full size, <=0.4kW	2,190	0.4000	Cabinet	\$286.00	\$257.40	\$314.60
Insulated Holding Cabinet, 3/4 size, <=0.3kW	1,643	0.3000	Cabinet	\$238.00	\$214.20	\$261.80
Insulated Holding Cabinet, 1/2 size, <=0.2 kW	1,095	0.2000	Cabinet	\$191.00	\$171.90	\$210.10
Grill Production Line Equipment	variable	variable	System	\$1,430.00	\$1,287.00	\$1,573.00
Commercial Ice Machine, Air Cooled 101-200 lb/24 hrs	4,106	0.4700	Ice Machine	\$286.00	\$257.40	\$314.60
Commercial Ice Machine, Air Cooled 201-300 lb/24 hrs	3,012	0.3500	Ice Machine	\$286.00	\$257.40	\$314.60
Commercial Ice Machine, Air Cooled 301-400 lb/24 hrs	2,555	0.3000	Ice Machine	\$286.00	\$257.40	\$314.60
Commercial Ice Machine, Air Cooled 401-500 lb/24 hrs	3,449	0.4000	Ice Machine	\$286.00	\$257.40	\$314.60
Commercial Ice Machine, Air Cooled 501-1000 lb/24 hrs	4,654	0.5400	Ice Machine	\$381.00	\$342.90	\$419.10
Commercial Ice Machine, Air Cooled 1001-1500 lb/24 hrs	6,844	0.7900	Ice Machine	\$477.00	\$429.30	\$524.70
Commercial Ice Machine, Air Cooled >1500 lb/24 hrs	9,581	1.1000	Ice Machine	\$477.00	\$429.30	\$524.70
Night Cover for Open Refrigerated Display Case	148	0.0000	Linear ft	\$9.00	\$8.10	\$9.90
Night Cover for Open Freezer Case	53	0.0000	Linear ft	\$9.00	\$8.10	\$9.90
Strip Curtains, Walk-In Cooler - Supermarket	108	0.0123	Ft2	\$3.00	\$2.70	\$3.30
Strip Curtains, Walk-In Cooler - Convenience Store	11	0.0013	Ft2	\$5.00	\$4.50	\$5.50
Strip Curtains, Walk-In Cooler - Restaurant	18	0.0020	Ft2	\$5.00	\$4.50	\$5.50
Strip Curtains, Walk-In Freezer - Supermarket	349	0.0398	Ft2	\$5.00	\$4.50	\$5.50
Strip Curtains, Walk-In Freezer - Convenience Store	17	0.0020	Ft2	\$5.00	\$4.50	\$5.50
Strip Curtains, Walk-In Freezer - Restaurant	81	0.0092	Ft2	\$5.00	\$4.50	\$5.50
Strip Curtains, Refrigerated Warehouse	287	0.0327	Ft2	\$5.00	\$4.50	\$5.50
Repl Door Gasket on Main Door of Walk-in Cooler	11	0.0020	Linear ft	\$2.00	\$1.80	\$2.20
Repl Door Gasket on Main Door of Walk-in Freezer	11	0.0018	Linear ft	\$2.00	\$1.80	\$2.20
Repl Door Gasket on Reach-in Door of Walk-in Cooler	16	0.0007	Linear ft	\$2.00	\$1.80	\$2.20
Anti-Sweat Heat Controls Based on Humidity	519	0.0112	Circuit	\$334.00	\$300.60	\$367.40
ENERGY STAR Refrigerator Case w/Glass Door <15 ft3	722	0.0824	Linear ft	\$191.00	\$171.90	\$210.10
ENERGY STAR Refrigerator Case w/Glass Door ≥15 ft3 - <30 ft3	683	0.0779	Linear ft	\$191.00	\$171.90	\$210.10
ENERGY STAR Refrigerator Case w/Glass Door ≥30 ft3 - <50 ft3	763	0.0871	Linear ft	\$191.00	\$171.90	\$210.10
ENERGY STAR Refrigerator Case w/Glass Door ≥50 ft3	927	0.1058	Linear ft	\$191.00	\$171.90	\$210.10
ENERGY STAR Refrigerator Case w/Solid Door <15 ft3	268	0.0306	Linear ft	\$191.00	\$171.90	\$210.10
ENERGY STAR Refrigerator Case w/Solid Door ≥15 ft3 - <30 ft3	424	0.0484	Linear ft	\$191.00	\$171.90	\$210.10
ENERGY STAR Refrigerator Case w/Solid Door ≥30 ft3 - <50 ft3	838	0.0957	Linear ft	\$191.00	\$171.90	\$210.10
ENERGY STAR Refrigerator Case w/Solid Door ≥50 ft3	1,205	0.1427	Linear ft	\$191.00	\$171.90	\$210.10
ENERGY STAR Freezer Case w/Glass Door <15 ft3	1,901	0.2170	Case	\$191.00	\$171.90	\$210.10
ENERGY STAR Freezer Case w/Glass Door ≥15 ft3 - <30 ft3	1,992	0.2274	Case	\$191.00	\$171.90	\$210.10
ENERGY STAR Freezer Case w/Glass Door ≥30 ft3 - <50 ft3	4,417	0.5042	Case	\$191.00	\$171.90	\$210.10
ENERGY STAR Freezer Case w/Glass Door ≥50 ft3	6,680	0.7625	Case	\$191.00	\$171.90	\$210.10
ENERGY STAR Freezer Case w/Solid Door <15 ft3	814	0.0929	Case	\$191.00	\$171.90	\$210.10
ENERGY STAR Freezer Case w/Solid Door ≥15 ft3 - <30 ft3	869	0.0992	Case	\$191.00	\$171.90	\$210.10
ENERGY STAR Freezer Case w/Solid Door ≥30 ft3 - <50 ft3	1,988	0.2269	Case	\$191.00	\$171.90	\$210.10
ENERGY STAR Freezer Case w/Solid Door ≥50 ft3	3,405	0.3887	Case	\$191.00	\$171.90	\$210.10
Freezer Display Case with Double Pane Transparent Door(s)	1,471	0.5420	Linear ft	\$191.00	\$171.90	\$210.10
Auto-Closer for Walk-In Cooler Doors	944	0.1190	Closer	\$38.00	\$34.20	\$41.80
Auto-Closer for Walk-In Freezer Doors	2,294	0.2690	Closer	\$48.00	\$43.20	\$52.80
Door w/Anti-Sweat Heater - Vertical Frozen Food Display Case	749	0.0150	Linear ft	\$48.00	\$43.20	\$52.80
ECM Motor for Walk-in Freezer or Cooler	1,105	0.1335	Motor	\$24.00	\$21.60	\$26.40
ECM Motor for Reach-In Refrigerated Cases	474	0.0541	Motor	\$24.00	\$21.60	\$26.40
Insulation on Existing Bare Refrigeration Suction Pipes	11	0.0020	Linear ft	\$1.00	\$0.90	\$1.10
Evaporative Fan Controller for Walk-in Cooler	1,109	0.0000	Controller	\$72.00	\$64.80	\$79.20
Beverage Vending Machine Controller, can capacity <500	1,432	0.0000	Controller	\$86.00	\$77.40	\$94.60
Beverage Vending Machine Controller, can capacity ≥500	1,801	0.0000	Controller	\$86.00	\$77.40	\$94.60

**Figure 19: Commercial and Industrial Energy Efficiency Program Eligible Measures (continued)**

Measure Name	Unit kWh	Unit kW	Units	Unit Incentive	Low Range Incentive	High Range Incentive
Beverage Vending Machine Controller, can capacity ≥600	1,633	0.0000	Controller	\$86.00	\$77.40	\$94.60
Beverage Vending Machine Controller, can capacity ≥700	1,931	0.0000	Controller	\$86.00	\$77.40	\$94.60
Beverage Vending Machine Controller, can capacity ≥800	1,526	0.0000	Controller	\$86.00	\$77.40	\$94.60
ES Freezer with 1 Door and 19-30 cubic ft	1,201	0.1400	Freezer	\$95.00	\$85.50	\$104.50
ES Freezer, 2 Doors, 31-60 cubic ft	2,077	0.2400	Freezer	\$95.00	\$85.50	\$104.50
ES Freezer, 3 Doors, 61-90 cubic ft	3,303	0.3800	Freezer	\$143.00	\$128.70	\$157.30
ES Refrigerator with One Door, 19-30 cubic ft	650	0.0700	Refrigerator	\$215.00	\$193.50	\$236.50
ES Refrigerator with 2 Doors and 31-60 cubic ft	942	0.1100	Refrigerator	\$95.00	\$85.50	\$104.50
ES Refrigerator Replacement Public Agency - LI	1,205	0.1494	Refrigerator	\$132.00	\$118.80	\$145.20
Plug Load Occupancy Sensor	143	0.0510	Sensor	\$24.00	\$21.60	\$26.40
PC Network Power Management Enabling Software	200	0.0000	PC	\$14.00	\$12.60	\$15.40
ENERGY STAR Copier 1-25 ppm	73	0.0098	Copier	\$7.00	\$6.30	\$7.70
ENERGY STAR Copier 26-50 ppm	151	0.0203	Copier	\$14.00	\$12.60	\$15.40
ENERGY STAR Copier 51+ ppm	162	0.0218	Copier	\$14.00	\$12.60	\$15.40
ENERGY STAR Printer (laser, monochrome) 1-10 ppm	26	0.0035	Printer	\$5.00	\$4.50	\$5.50
ENERGY STAR Printer (laser, monochrome) 11-20 ppm	73	0.0098	Printer	\$7.00	\$6.30	\$7.70
ENERGY STAR Printer (laser, monochrome) 21-30 ppm	104	0.0140	Printer	\$10.00	\$9.00	\$11.00
ENERGY STAR Printer (laser, monochrome) 31-40 ppm	156	0.0210	Printer	\$14.00	\$12.60	\$15.40
ENERGY STAR Printer (laser, monochrome) 41-50 ppm	133	0.0179	Printer	\$14.00	\$12.60	\$15.40
ENERGY STAR Printer (laser, monochrome) 51+ ppm	329	0.0443	Printer	\$29.00	\$26.10	\$31.90
ENERGY STAR Multifunction (copier, printer, scanner, fax) 1-10 ppm	78	0.0105	Unit	\$8.00	\$7.20	\$8.80
ENERGY STAR Multifunction (copier, printer, scanner, fax) 11-20 ppm	147	0.0198	Unit	\$14.00	\$12.60	\$15.40
ENERGY STAR Multifunction (copier, printer, scanner, fax) 21-44 ppm	253	0.0341	Unit	\$19.00	\$17.10	\$20.90
ENERGY STAR Multifunction (copier, printer, scanner, fax) 45-99 ppm	422	0.0569	Unit	\$24.00	\$21.60	\$26.40
ENERGY STAR Multifunction (copier, printer, scanner, fax) 100+ ppm	730	0.0984	Unit	\$33.00	\$29.70	\$36.30
ENERGY STAR Computer	133	0.0180	Computer	\$24.00	\$21.60	\$26.40
ENERGY STAR Monitor	15	0.0020	Monitor	\$3.00	\$2.70	\$3.30
ENERGY STAR Fax Machine	78	0.0105	Fax	\$8.00	\$7.20	\$8.80
Smart Strip Plug Outlets	124	0.0101	Strip	\$10.00	\$9.00	\$11.00

### 3.3.2. Commercial Upstream Lighting Program – Small C&I

**Title:** The Commercial Sector Upstream Lighting Program will be implemented during program years 2013 through 2015.

**Objectives:** Increased uptake of energy efficient lighting technologies by C&I end-use customers. Successes of residential upstream lighting programs demonstrate “instant rebates” are an effective means to promote energy efficiency lighting products. For time-strapped C&I business customers, present onerous rebate application requirements and lengthy rebate processing lead times present significant and growing barriers to energy efficiency program participation.

Providing rebates, or customer incentives, directly to manufacturers and distributors addresses these significant barriers. The program will put in place processes required to satisfy C&I program documentary requirements to extend upstream lighting programs into the C&I sector.

**Target Market:** Small and large C&I customers that would ordinarily obtain lighting equipment through commercial, business-to-business, lighting equipment contractors and distributors. To facilitate the stated objectives, key high-volume lighting equipment distributors become targeted program participants.

Program Description: The program will provide incentives for efficient lighting products directly to technology manufacturer distributors to offset the higher cost, and thereby drive uptake of, the most efficient lighting equipment options.

Implementation Strategy: An implementation contractor will develop a distributor participation agreement, identify and enroll targeted lighting distributors, provide participating distributor training, process applications, track and report program activity, perform customer site inspections (as required) and provide program EM&V support.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts, and provides early warning regarding program under- or over-subscription. Provisions in CSP contract language provide for shifting funds from under-performing programs.

Anticipated Cost to Participating Customers: Incentive payments offset a portion of the incrementally greater cost of high-efficiency equipment. Incentive "levels" refer to the percentage of incremental measure cost offset by program incentives. Participating customers pay the remaining amounts.

Ramp-up Strategy: Implementation services RFPs will be issued, responses will be reviewed and contract statements of work will be executed according to the implementations schedules provided in Section 12.

Marketing Strategy: Duquesne Light will coordinate and conduct a marketing and advertising campaign in support of the program. The implementation contractor (CSP) will work closely with Duquesne Light to align overall marketing themes and messages with participating distributor engagement.

The CSP will develop and deliver distributor presentations through a combination of phone calls, webinars and office visits. Distributor presentations will demonstrate the financial benefits of promoting target high efficiency lighting measures, through increase sales revenue and program incentives.

Three to five weeks after program promotion begins, the CSP will reach out to targeted distributors to obtain signed participation agreements.

Eligible Measures and Incentives: Initially the program will focus on LED technology parabolic reflector lamp (PAR) 20, 30, 38 and MR16 lighting technologies. Eligible measures will be adopted going forward as indicated by savings impact potential and cost-effectiveness.

Program Start Date and Key Milestones: Refer to Section 12 Chart 2, Small Commercial/Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Participation (Small C&I): The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment, rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 20: Commercial Upstream Lighting Program – Small**

***Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$121,972	\$121,972	\$121,972	\$365,915
Admin	\$95,961	\$95,961	\$95,961	\$287,882

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	231	231	231	692
Energy Savings (kWh)	981,590	981,590	981,590	2,944,770

Cost-Effectiveness: TRC: 2.4

### 3.3.3. Commercial Sector Sub-Program: Small Commercial Direct Install

Title: The Commercial Sector Small Commercial Direct Install Program will be implemented during program years 2013 through 2015.

Objectives: PY2-3 small office building and small retail energy efficiency programs experienced low participation and savings impacts due to barriers to program participation associated with these customer segments: limited capital resources, high cost of capital (interest rates), lack of expertise and conflicting priorities. Additionally the segments are often subject to “split-incentives,” where electric bill paying customers are tenants, not property owners. Owners do not pay the electric bills, so they are not motivated to upgrade energy using equipment in order to save on electric bills; electric bill paying tenants are not motivated to upgrade landlord properties.

The direct install program design addresses these barriers by providing no cost efficiency upgrades, whereby landlords receive no cost building upgrades and tenants benefit from lower electric bills.

Target Market: The program targets Duquesne Light small retail and office building customer accounts with monthly demand less than 300 kW.

Program Description: By providing no-cost energy efficient equipment retrofits to small and business customers, the Small Commercial Direct Install Program will produce cost-effective, long-term peak demand and energy savings. The program will be delivered in a staged delivery approach to provide program services in specific geographic areas at different time periods. This approach will allow for a concentrated, directed and service area wide program.

Implementation Strategy: The primary delivery mechanism for the program will be equipment installation contractors that are selected through a competitive bidding process. Potential customer regions will be targeted for cost effective energy efficiency installations. Third party contractors will survey a customer’s site, obtain written approval from the customer and install energy efficiency equipment at their site. Used equipment will be properly disposed according to all state, local and federal regulations. Duquesne Light will conduct random inspections of completed sites.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light’s PMRS. The system provides comprehensive oversight of program budgets and impacts, and provides early warning regarding program under- or over-subscription. Provisions in CSP contract language provide for shifting funds from under-performing programs.

Anticipated Cost to Participating Customers: Program services will be provided at no cost to participating customers.

Ramp-up Strategy: Implementation services RFPs will be issued, responses reviewed and contract statements of work executed according to the implementations schedules provided in Section 12.

Marketing Strategy: The selected implementation CSP(s) will canvass project sites and propose projects to tenants and owners, as required, to obtain program enrollment.



Services will be posted on Duquesne Light's Act 129 website. Additionally, CSPs can conduct outreach through participation and membership in selected key trade associations, attendance at key trade shows and sponsorship of training events. CSPs will be expected to use their unique market segment expertise to craft compelling program participation messages for key customer decision makers.

Eligible Measures and Incentives: Initially Duquesne Light will deploy the following selected lighting measures:

- Screw-in CFLs
- LED reflector lamps and exit signs
- 3<sup>rd</sup> generation T8 lamps and ballasts
- T5HO high bay lighting

As indicated by customer base efficiency gain opportunity, the following refrigeration measures will be provided:

- LED refrigerated case lighting
- Display case night covers
- Walk-in cooler and freezer
  - Strip curtains
  - Door gaskets
  - Auto closers
- Electronically commutated evaporator motors

Program Start Date and Key Milestones: Refer to Section 12, Chart 2: Small Commercial/Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on the cost of the project (as no customer incentives are provided). Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation: The primary metrics for program participation will be completed projects. During the Phase II program period, Duquesne Light estimates

1,300 to 2,000 projects will be completed (based on 20 to 30 technology units per project site). Program activity cost and savings is reflected in the Projected Program Impacts table below:

**Figure 21: Small Commercial Direct Install Program**  
**Projected Program Budget**

Program Year	2013	2014	2015	Total
Incentives	\$0	\$0	\$0	\$0
Admin	\$1,138,853	\$1,138,853	\$1,138,853	\$3,416,560

**Projected Program Impacts**

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	343	343	343	1,029
Energy Savings (kWh)	2,042,025	2,042,025	2,042,025	6,126,074

Cost-Effectiveness: TRC: 1.4

3.3.4. Industrial Sector Umbrella Program - Small

Title: The Industrial Sector Umbrella Energy Efficiency Program Plan will be implemented during program years 2013 through 2015.

Objectives: The Industrial Sector Umbrella Program (“ISUP”) provides for the payment of incentives to offset the higher cost of high-efficiency equipment when compared to standard efficiency equipment. Importantly, the ISUP establishes the terms, conditions, and incentive levels for all Sub-Programs. This has two key functions: (1) Changes to incentive levels occurs once at the ISUP, thereafter referenced by all other programs, and (2) all program incentive offers are consistent, eliminating confusion and gaming (customers and/or contractors can participate in any program within the portfolio and receive exactly the same incentive). Incentive program tracking, reporting and



processing are performed under the structures and procedures established under the ISUP.

Additionally, Sub-Programs are structured to provide specialized services to customers consuming 92% of the sector energy use. The ISUP provides access to energy efficiency incentives by customers not served by the Sub-Programs.

Target Market: The ISUP is primarily an operations activity facilitating operation of the Sector Sub-Programs. The ISUP can serve to provide cash incentives to customers that lack service under one of the Sector Sub-Programs.

Program Description: The ISUP establishes the terms, conditions, and incentive levels for all Sub-Programs. Incentive program tracking, reporting and processing are performed under the structures and procedures established under the ISUP. The ISUP provides incentives to offset the higher cost of high-efficiency equipment when compared to standard efficiency equipment. Customers submit rebate applications via mail or fax.

Implementation Strategy: The ISUP is operated by the Duquesne Light Core Team or a designated CSP. Procedural guidelines for the ISUP define the processes for all incentive reservation, redemption as well as program activity and impact reporting.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warning regarding program under- or over-subscription.

Anticipated Cost to Participating Customers: Incentive payments offset a portion of the incrementally greater cost of high-efficiency equipment. Incentive "levels" refer to the percentage of incremental measure cost offset by program incentives. Participating customers pay the remaining amounts.

Ramp-up Strategy: This program was launched on December 1, 2009 and will continue through Phase II of Act 129.

Marketing Strategy: The ISUP is primarily an operational program. Customers will have access to ISUP incentive applications through a link on Duquesne Light's Act 129 website. In addition contacts can be made through the account representative.

Eligible Measures and Incentives: Prescriptive measure descriptions, unit savings, and incentive amounts are included in this Plan one time only at Section 3.3.1 CSUP Figure 19.

Program Start Date and Key Milestones: Refer to Section 12 Chart 2, Small Commercial/Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation (Small C&I): The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment, rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 22: Industrial Sector Umbrella Program - Small**

***Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$56,737	\$56,737	\$56,737	\$170,212
Admin	\$39,870	\$39,870	\$39,870	\$119,610

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	91	91	91	272
Energy Savings (kWh)	540,212	540,212	540,212	1,620,636

Cost-Effectiveness: TRC 2.0

- 3.4. Commercial/Industrial Large Sector (as defined by EDC Tariff) Programs include formatted descriptions of each program organized under the same headings as listed previously for residential programs.

Definition of Terms:

Sector Umbrella Programs: Umbrella Programs described in Sections 3.3 and 3.4 provide a level of service (incentives only) to all sector customers and establish the terms, conditions and incentive levels for all Sector Sub-Programs. Umbrella programs define prescriptive incentives (\$ per lamp, fixture, ton, square foot of insulation, etc) and custom incentives provide \$ per kWh saved for all Sector Sub-Programs. Prescriptive measure descriptions, unit savings, and incentive amounts are included in this Plan one time only at Section 3.3.1 CSUP Figure 19.

Sector Sub-Programs: Sub-sector programs described in Sections 3.3 and 3.4 are designed to mitigate segment specific barriers to program participation by providing segment specific energy efficiency audits and incentives. The manner of program delivery is aligned to segment characteristics and needs. Incentive levels for all Sector Sub-Programs are defined by Sector Umbrella Programs.

#### 3.4.1. Commercial Sector Umbrella Energy Efficiency Program Plan

See Section 3.3.1. for full program description.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation (Large C&I): The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 23: Commercial Sector Umbrella Program - Large*****Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$402,902	\$402,902	\$402,902	\$1,208,706
Admin	\$103,540	\$103,540	\$103,540	\$310,621

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	615	615	615	1,845
Energy Savings (kWh)	3,671,187	3,671,187	3,671,187	11,013,561

Cost Effectiveness: TRC 2.1

#### 3.4.2. Commercial Sector Sub-Program: Office Buildings

Title: The Commercial Sector Sub-program: Office Buildings program will be implemented during program years 2013 through 2015

Objectives: The office buildings segment program is tailored to assist the segment to overcome unique, segment specific barriers to energy efficiency program participation.

Target Market: Office building owners and operators of large buildings.

Program Description: The Office Buildings Program helps commercial customers to assess the potential for energy efficiency project implementation, cost and energy savings, and, for appropriate customers, provides follow-through by installing measures and verifying savings. Program components include auditing of energy use, provision of targeted financing and incentives, project management and installation of retrofit measures, training, and technical assistance. Incentive amounts for this program are consistent with the Commercial Sector Umbrella Program.

Energy audits provide business customers a readily available, reliable source of information about their energy use and outline ways to save energy that, when implemented, will result in energy savings, reduced operating costs, lowered carbon emissions, and improved air quality. Training and technical assistance is provided to facility managers on how to select vendors and retrofit strategies, and how to operate and maintain the energy efficiency equipment, upon installation.

Implementation Strategy: The Office Building program will be delivered by one or more CSPs. Programs implemented under contract to CSPs will conform to the Commercial Umbrella Program incentives structures, terms, conditions and operating procedures.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warning regarding program under- or over-subscription. Provisions in CSP contract language provide for shifting funds from under-performing programs.

Anticipated Cost to Participating Customers: Program incentive payments will offset a portion of the incrementally greater cost of recommended high-efficiency equipment. The incentive levels, or the percentage of incremental measure cost, offset by program incentives, is established under the Commercial Sector Umbrella Program. Participating customers pay the remaining amounts.

Ramp-up Strategy: This program was launched on December 1, 2009 and will continue through Phase II of Act 129.

Marketing Strategy: A marketing plan is part of the Program Management Plan that is included within the Commission approved CSP implementation contract statement of work. The successful contractor will raise target market awareness of program and service offerings to the commercial office building sector through strategies that include hosting and sponsoring of Webinars, and the development and dissemination of general and specific collateral marketing materials via direct mail, email and the Internet. Additionally, CSP's conduct outreach through participation and membership in selected key trade associations, attendance at key trade shows and sponsorship of training events. CSPs use their unique market segment expertise to craft compelling program participation messages for key customer decision makers.

Eligible Measures and Incentives: Prescriptive measure descriptions, unit savings, and incentive amounts are included in this Plan one time only at Section 3.3.1 CSUP Figure 19.

Program Start Date and Key Milestones: Refer to Section 12 Chart 3, Large Commercial/Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation (Large C&I): The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 24: Office Buildings Energy Efficiency Program**

***Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$795,691	\$795,691	\$795,691	\$2,387,072
Admin	\$204,482	\$204,482	\$204,482	\$613,445

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	1,215	1,215	1,215	3,644
Energy Savings (kWh)	7,250,219	7,250,219	7,250,219	21,750,658

Cost Effectiveness: TRC 2.1

Title: The Commercial Sector Sub-Program: Health Care Sector Segment program will be implemented during program years 2013 and 2015.

Objectives: The Health Care Segment program is tailored to assist the segment to overcome unique, segment specific, barriers to energy efficiency program participation.

Target Market: This program provides energy efficiency services to medical office buildings and acute care facilities. This represents 17% of commercial sector energy use.

Program Description: By working directly with regional health care system administrators, Duquesne's Health Care Energy Efficiency Program ("HEEP") establishes a permanent framework for a long-term energy management program for medical office buildings and acute care facilities. HEEP is a retrofit incentive program tailored to individual system administrator needs.

Implementation Strategy: Duquesne Light will leverage its existing business relationships with major regional health care systems to enroll these important customers in tailored energy efficiency programs. Duquesne Light's key account representatives, supported by specialized CSPs, will facilitate working group meetings with client energy and facility managers to identify and prioritize projects for inclusion in the HEEP. It is anticipated the working groups will focus on large scale projects and challenges facing this unique customer segment.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warning regarding program under- or over-subscription.

Anticipated Cost to Participating Customers: Program incentive payments will offset a portion of the incrementally greater cost of recommended high-efficiency equipment. The incentive levels, or the percentage of incremental measure cost offset by program incentives, is established under the Industrial Sector Umbrella Program. Participating customers pay the remaining amounts.

Ramp-up Strategy: This program was launched on December 1, 2009 and will continue through Phase II of Act 129.

Marketing Strategy: The marketing approach for this program is direct meetings with mid-level health care system energy and facility managers. Duquesne Light will continue its outreach through participation and membership in selected key trade associations, attendance at key trade shows and sponsorship of training events.

Eligible Measures and Incentives: Prescriptive measure descriptions, unit savings, and incentive amounts are included in this Plan one time only at Section 3.3.1 CSUP Figure 19.

Program Start Date and Key Milestones: Refer to Section 12 Chart 3, Large Commercial/Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities are

identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation (Large C&I): The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment rendering deemed savings estimates reflected in the Projected Program Impacts table below:



**Figure 25: Healthcare Energy Efficiency Program*****Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$450,891	\$450,891	\$450,891	\$1,352,674
Admin	\$115,873	\$115,873	\$115,873	\$347,619

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	688	688	688	2,065
Energy Savings (kWh)	4,108,458	4,108,458	4,108,458	12,325,373

Cost Effectiveness: TRC 2.1

#### 3.4.4. Commercial Sector Sub-Program: Retail Stores

Title: The Commercial Sector Sub-program: Retail Stores program will be implemented during program years 2013 and 2015.

Objectives: The retail stores segment program is tailored to assist the segment to overcome unique, segment specific, barriers to energy efficiency program participation.

Target Market: Retail Stores, grocery stores and restaurants

Program Description: The Retail Stores Program helps commercial customers to assess the potential for energy efficiency project implementation, cost and energy savings, and, for appropriate customers, provides follow-through by installing measures and verifying savings. Program components include auditing of energy use, provision of targeted financing and incentives, project management and installation of retrofit measures, training, and technical assistance. Incentive amounts for this program are consistent with the Commercial Sector Umbrella Program.

Energy audits provide business customers a readily available, reliable, source of information about their energy use and outline ways to save energy that, when implemented, will result in customers achieving energy savings, reduced operating costs, lowered carbon emissions, and improved air quality. Training and technical assistance is provided to facility managers on how to select vendors and retrofit strategies, and how to operate and maintain the energy efficiency equipment upon installation.

Implementation Strategy: The Retail Stores Program will be delivered by one or more CSPs. It is anticipated that separate RFPs may be issued for retail stores, grocery stores and restaurants. Characteristics of the segments vary, requiring different kinds of services traditionally provided by different types of CSPs. RFPs will solicit innovative approaches to providing the basic services described above. Programs implemented under contract to CSPs will conform to the Commercial Umbrella Program incentives structures, terms, conditions and operating procedures.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's Program Management and Reporting System (PMRS). The system provides comprehensive oversight of program budgets and impacts and provides early warning regarding program under- or over-subscription.

Anticipated Cost to Participating Customers: Program incentive payments will offset a portion of the incrementally greater cost of recommended high-efficiency equipment. The incentive levels, or the percentage of incremental measure cost, off-set by program incentives is established under the Commercial Sector Umbrella Program. Participating customers pay the remaining amounts.

Ramp-up Strategy: This program was launched on December 1, 2009 and will continue through Phase II of Act 129.

Marketing Strategy: A marketing plan is part of the Program Management Plan that is included within the Commission approved CSP implementation contract statement of work. The implementation CSP raises target market awareness of program and service offerings to the retail stores sector through strategies that include hosting and sponsoring of Webinars, and the development and dissemination of general and specific collateral marketing materials via direct mail, email and the Internet. Additionally, CSP conducts outreach through participation and membership in selected key trade associations, attendance at key trade shows and sponsorship of training events. The CSP uses its unique market segment expertise to craft compelling program participation messages for key customer decision makers.

Eligible Measures and Incentives: Prescriptive measure descriptions, unit savings, and incentive amounts are included in this Plan one time only at Section 3.3.1 CSUP Figure 19.

Program Start Date and Key Milestones: Refer to Section 12 Chart 3, Large Commercial/Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is

employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation (Large C&I): The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 26: Retail Stores Energy Efficiency Program**

***Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$365,563	\$365,563	\$365,563	\$1,096,688
Admin	\$93,945	\$93,945	\$93,945	\$281,834

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	558	558	558	1,674
Energy Savings (kWh)	3,330,955	3,330,955	3,330,955	9,992,864

Cost Effectiveness: TRC 2.1

### 3.4.5. Commercial Upstream Lighting Program – Large C&I

Title: The Commercial Sector Upstream Lighting Program will be implemented during program years 2013 through 2015.

Objectives: Increased uptake of energy efficient lighting technologies by C&I end-use customers. Successes of residential upstream lighting programs demonstrate “instant rebates” are an effective means to promote energy efficiency lighting products. For time-strapped C&I business customers, present onerous rebate application requirements as well as lengthy rebate processing lead times present significant, and growing, barriers to energy efficiency program participation.

Providing rebates, or customer incentives, directly to manufacturers and distributors addresses these significant barriers. The program will put in-place processes required to satisfy C&I program documentary requirements, to extend upstream lighting programs into the C&I sector.

Target Market: Small and large C&I customers that would ordinarily obtain lighting equipment through commercial, business-to-business, lighting equipment contractors and distributors. To facilitate the stated objectives, key high-volume lighting equipment distributors become targeted program participants.

Program Description: The program will provide incentives for efficient lighting products directly to technology manufacturer distributors to offset the higher cost, and thereby drive uptake of, the most efficient lighting equipment options.

Implementation Strategy: An implementation contractor will develop a distributor participation agreement, identify and enroll targeted lighting distributors, provide participating distributor training, process applications, track and report program activity; perform customer site inspections (as required) and provide program EM&V support.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light’s PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warning regarding program under- or over-subscription. Provisions in CSP contract language provide for shifting funds from under-performing programs.

Anticipated Cost to Participating Customers: Incentive payments offset a portion of the incrementally greater cost of high-efficiency equipment. Incentive “levels” refer to the percentage of incremental measure cost off-set by program incentives. Participating customers pay the remaining amounts.

Ramp-up Strategy: Implementation services RFPs will be issued, responses reviewed and contract statements of work executed according to the implementations schedules provided in Section 12.

Marketing Strategy: Duquesne Light will coordinate and conduct a marketing and advertising campaign in support of the program. The implementation contractor (CSP) will work closely with Duquesne Light to align overall marketing themes and messages with participating distributor engagement.

Three to five weeks after program promotion begins, the CSP will reach out to targeted distributors to obtain signed participation agreements. The CSP will develop and deliver distributor presentations through a combination of phone calls, webinars and office visits. Distributor presentations will demonstrate the financial benefits of promoting target high efficiency lighting measures, through increase sales revenue and program incentives.

Eligible Measures and Incentives: Initially the program will focus on LED technology parabolic reflector lamp (PAR) 20, 30, 38 and MR16 lighting technologies. Additional eligible measures may be adopted going forward as indicated by savings impact potential and cost-effectiveness.

Program Start Date and Key Milestones: Refer to Section 12 Chart 3, Large Commercial/Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation (Large C&I): The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 27: Commercial Upstream Lighting Program – Large  
Projected Program Budget**

Program Year	2013	2014	2015	Total
Incentives	\$294,314	\$294,314	\$294,314	\$882,943
Admin	\$231,550	\$231,550	\$231,550	\$694,651

**Projected Program Impacts**

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	556	556	556	1,669
Energy Savings (kWh)	2,368,547	2,368,547	2,368,547	7,105,641

Cost Effectiveness: TRC 2.4

#### 3.4.6. Industrial Sector Energy Efficiency Umbrella Program - Large

See Section 3.3.4. for full program description

Program Start Date and Key Milestones: Refer to Section 12 Chart 3, Large Commercial/Industrial Portfolio Program.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation (Large C&I): The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 28: Industrial Sector Umbrella Program - Large*****Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$136,906	\$136,906	\$136,906	\$410,717
Admin	\$96,205	\$96,205	\$96,205	\$288,616

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	219	219	219	657
Energy Savings (kWh)	1,303,515	1,303,515	1,303,515	3,910,546

Cost Effectiveness: TRC 2.0

#### 3.4.7. Industrial Sector Sub-Program: Primary Metals

Title: The Industrial Sector Sub-Program: Primary Metals Segment program will be implemented during program years 2013 and 2015.

Objectives: The primary metals segment program is tailored to assist the segment to overcome unique, segment specific, barriers to energy efficiency program participation.

Target Market: Primary Metals products manufacturing companies (SIC 33 / NAIC 331)

Program Description: The Primary Metals Segment Program helps industrial customers to assess the potential for energy efficiency project implementation, cost and energy savings, and, for appropriate customers, provides follow-through by installing measures and verifying savings. Program components include auditing of energy use, provision of targeted financing and incentives, project management and installation of retrofit measures, training, and technical assistance. Incentive amounts for this program are consistent with the Industrial Sector Umbrella Program.

Energy audits provide industry a readily available, reliable source of information about their energy use and outline ways to save energy that, when implemented, will result in energy savings, reduced operating costs, lowered carbon emissions, and improved air quality. Training and technical assistance is provided to facility managers on how to select vendors and retrofit strategies, and how to operate and maintain the energy efficiency equipment upon installation.

Implementation Strategy: The Primary Metals Segment Program will be delivered by one or more specialized CSPs with a track record of engaging primary metals companies in utility energy efficiency programs. RFPs will solicit innovative approaches to providing the services outlined above. Programs implemented under contract to CSPs will conform to the Industrial Sector Umbrella Program incentives structures, terms, conditions and operating procedures.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warning regarding program under- or over-subscription. Provisions in CSP contract language provide for shifting funds from under-performing programs.

Anticipated Cost to Participating Customers: Program incentive payments will offset a portion of the incrementally greater cost of recommended high-efficiency equipment. The incentive levels, or the percentage of incremental measure cost offset by program incentives, is established under the Industrial Sector Umbrella Program. Participating customers pay the remaining amounts.

Ramp-up Strategy: This program was launched on December 1, 2009 and will continue through Phase II of Act 129.

Marketing Strategy: A marketing plan is part of the Program Management Plan that is included within the Commission approved CSP implementation contract statement of work. The CSP raises target market awareness of program and service offerings to the primary metals sector through strategies that include hosting and sponsoring of Webinars, and the development and dissemination of general and specific collateral marketing materials via direct mail, email and the Internet. Additionally, the CSP conducts outreach through participation and membership in selected key trade associations, attendance at key trade shows and sponsorship of training events. The CSP uses its unique market segment expertise to craft compelling program

Eligible Measures and Incentives: Prescriptive measure descriptions, unit savings, and incentive amounts are included in this Plan one time only at Section 3.3.1 CSUP Figure19.

Program Start Date and Key Milestones: Refer to Section Chart 3, Large Commercial/Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.



Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation (Large C&I): The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 29: Primary Metals Energy Efficiency Program**

***Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$1,319,195	\$1,319,195	\$1,319,195	\$3,957,584
Admin	\$927,013	\$927,013	\$927,013	\$2,781,040

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	2,110	2,110	2,110	6,331
Energy Savings (kWh)	12,560,392	12,560,392	12,560,392	37,681,176

Cost Effectiveness: TRC 2.0

#### 3.4.8. Industrial Sector Sub-Program: Chemical Products

Title: The Industrial Sector Sub-Program: Chemical Products Segment program will be implemented during program years 2013 and 2015.

Objectives: The Chemical Products Segment Program is tailored to assist the segment to overcome unique, segment specific, barriers to energy efficiency program participation.

Target Market: Chemical Products manufacturing companies (SIC 28 / NAIC 325)

Program Description: The Chemical Products Segment Program helps industrial customers to assess the potential for energy-efficiency project implementation, cost and energy savings, and, for appropriate customers, provides follow-through by installing measures and verifying savings. Program components include auditing of energy use, provision of targeted financing and incentives, project management and installation of retrofit measures, training, and technical assistance. Incentive amounts for this program are consistent with the Industrial Sector Umbrella Program.

Energy audits provide industry a readily available, reliable source of information about their energy use and outline ways to save energy that, when implemented, will result in energy savings, reduced operating costs, lowered carbon emissions, and improved air quality. Training and technical assistance is provided to facility managers on how to select vendors and retrofit strategies, and how to operate and maintain the energy efficiency equipment upon installation.

Implementation Strategy: The Chemical Products Segment Program will be delivered by one or more specialized CSPs with a track record of engaging chemical products companies in utility energy efficiency programs. RFPs will solicit innovative approaches to providing the services outlined above. Programs implemented under contract to CSPs will conform to the Industrial Sector Umbrella Program incentives structures, terms, conditions and operating procedures.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warning regarding program under- or over-subscription. Provisions in CSP contract language provide for shifting funds from under-performing programs.

Anticipated Cost to Participating Customers: Program incentive payments will offset a portion of the incrementally greater cost of recommended high-efficiency equipment. The incentive levels, or the percentage of incremental measure cost, offset by program incentives, is established under the Industrial Sector Umbrella Program. Participating customers pay the remaining amounts.

Ramp-up Strategy: This program was launched on December 1, 2009 and will continue through Phase II of Act 129.

Marketing Strategy: A marketing plan is part of the Program Management Plan that is included within the Commission approved CSP implementation contract statement of work. The implementation contractor raises target market awareness of program and

service offerings to the sector through strategies that include hosting and sponsoring of Webinars, and the development and dissemination of general and specific collateral marketing materials via direct mail, email and the Internet. Additionally, the CSP conducts outreach through participation and membership in selected key trade associations, attendance at key trade shows and sponsorship of training events. The CSP uses its unique market segment expertise to craft compelling program participation messages for key customer decision makers.

Eligible Measures and Incentives: Prescriptive measure descriptions, unit savings, and incentive amounts are included in this Plan one time only at Section 3.3.1 CSUP Figure 19.

Program Start Date and Key Milestones: Refer to Section 12 Chart 3, Large Commercial/Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation (Large C&I): The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 30: Chemical Products Energy Efficiency Program*****Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$479,267	\$479,267	\$479,267	\$1,437,801
Admin	\$336,786	\$336,786	\$336,786	\$1,010,359

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	767	767	767	2,300
Energy Savings (kWh)	4,563,225	4,563,225	4,563,225	13,689,675

Cost Effectiveness: TRC 2.0

#### 3.4.9. Industrial Sector Sub-Program: Mixed Segments

Title: The Industrial Sector Mixed Segments Sub-program will be implemented during program years 2013 and 2015.

Objectives This program was developed through information provided to Duquesne at Act 129 Stakeholder Meetings wherein participants expressed interest in specialized programs for the chemicals and primary metals markets, which comprise 75% of Duquesne's industrial energy use. The industrial sector mixed segment program is tailored to assist smaller industrial customers in overcoming unique, segment specific barriers to energy efficiency program participation.

Target Market: The program provides energy audits and incentives to multiple industrial segments, including, but not limited to, food processing, rubber & plastics, stone/clay/glass, fabricated metals and electronics.

Program Description: The program is delivered by a single contractor that provides program outreach and energy audits to multiple industrial segments. The Industrial

Sector Mixed Segment Program helps smaller manufacturing entities to assess the potential for energy-efficiency project implementation, cost and energy savings, and, for appropriate customers, provides follow-through by installing measures and verifying savings. Program components include auditing of energy use, provision of targeted financing and incentives, project management and installation of retrofit measures, training, and technical assistance. Incentive amounts for this program are consistent with the Industrial Sector Umbrella Program.

Energy audits provide customers a readily available, reliable, source of information about their energy use and outline ways to save energy that, when implemented, will result in energy savings, reduced operating costs, lowered carbon emissions, and improved air quality. Training and technical assistance is provided to facility managers on how to select vendors and retrofit strategies, and how to operate and maintain the energy efficiency equipment upon installation.

Implementation Strategy: The Industrial Sector Mixed Segment Program will be delivered by a single CSP specializing in serving this diverse market. The RFP will solicit innovative approaches to providing the basic services described above. Programs implemented under contract to a CSP will conform to the Industrial Sector Umbrella Program incentives structures, terms, conditions and operating procedures.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warning regarding program under- or over-subscription. Provisions in CSP contract language provide for shifting funds from under-performing programs.

Anticipated Cost to Participating Customers: Program incentive payments will offset a portion of the incrementally greater cost of recommended high-efficiency equipment. The incentive levels, or the percentage of incremental measure cost, offset by program incentives, is established under the Industrial Sector Umbrella Program. Participating customers pay the remaining amounts.

Ramp-up Strategy: This program was launched on December 1, 2009 and will continue through Phase II of Act 129.

Marketing Strategy: A marketing plan is part of the Program Management Plan that is included within the Commission approved CSP implementation contract statement of work. The implementation contractor raises market awareness of program and service offerings to the multiple industrial sector segments through strategies that include hosting and sponsoring of Webinars, and the development and dissemination of general and specific collateral marketing materials via direct mail, email and the Internet. Additionally, the CSP conducts outreach through participation and membership in selected key trade associations, attendance at key trade shows and sponsorship of training events. The CSP uses its unique market segment expertise to craft compelling program participation messages for key customer decision makers.

Eligible Measures and Incentives: Prescriptive measure descriptions, unit savings, and incentive amounts are included in this Plan one time only at Section 3.3.1 CSUP Figure 19.

Program Start Date and Key Milestones: Refer to Section 12 Chart 3, Large Commercial/Industrial Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation (Large C&I): The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment rendering deemed savings estimates reflected in the following Projected Program Impacts table:

**Figure 31: Mixed Industrial Segments Energy Efficiency Program*****Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$428,436	\$428,436	\$428,436	\$1,285,307
Admin	\$301,067	\$301,067	\$301,067	\$903,200

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	685	685	685	2,056
Energy Savings (kWh)	4,079,247	4,079,247	4,079,247	12,237,740

Cost Effectiveness: TRC 2.0

- 3.5. Governmental/Non-Profit Sector (as defined by 66 Pa. C.S. § 2806.1) Programs - include formatted descriptions of each program organized under the same headings as listed above for residential programs. As well, provide and detail all plans for achieving compliance with 66 Pa. C.S. § 2806.1.

Governmental/Education/Nonprofit Sector Portfolio Programs:

- 1) Education Segment Energy Efficiency Program
- 2) Multifamily Housing Retrofit Program
- 3) Public Agency Partnership Program

3.5.1. Sector Sub-Program: Education Segment Energy Efficiency Program

Title: The Commercial Sector Education Segment Sub-program will be implemented during program years 2013 and 2015.

Objectives: The education segment program is tailored to help overcome unique, segment specific, barriers to energy efficiency program participation.

Target Market: Education sector energy efficiency programs are divided into two primary areas of focus: Higher Education (universities and community colleges) and Primary Schools (K-12).

Program Description: The Education Segment Program helps colleges and primary schools to assess the potential for energy-efficiency project implementation, cost and energy savings, and for appropriate customers, provides follow-through by installing measures and verifying savings. Program components include auditing of energy use, provision of targeted financing and incentives, project management and installation of retrofit measures, training, and technical assistance. Incentive amounts for this program are consistent with the Commercial Sector Umbrella Program.

Energy audits provide customers a readily available, reliable, source of information about their energy use and outline ways to save energy that, when implemented, will result in energy savings, reduced operating costs, lowered carbon emissions, and improved air quality. Training and technical assistance is provided to facility managers on how to select vendors and retrofit strategies, and how to operate and maintain the energy efficiency equipment, upon installation.

Implementation Strategy: The Education Segment Program will be delivered by the Duquesne Light Core Team with limited support by contracted service providers or CSPs. Additionally, RFPs may be issued for colleges and primary schools. Characteristics of the segments vary significantly requiring different kinds of services traditionally provided by different types of CSPs. Program implementation will conform to the Commercial Umbrella Program incentives structures, terms, conditions and operating procedures.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warning regarding program under- or over-subscription.

Anticipated Cost to Participating Customers: Program incentive payments will offset a portion of the incrementally greater cost of recommended high-efficiency equipment. The incentive levels, or the percentage of incremental measure cost, offset by program incentives, is established under the Commercial Sector Umbrella Program. Participating customers pay the remaining amounts.

Ramp-up Strategy: This program was launched on December 1, 2009 and will continue through Phase II of Act 129.

Marketing Strategy: The marketing approach for this program is to have direct meetings with mid level higher education system, and school district facility managers. Additionally school districts may be engaged as a gateway through the School Energy Pledge Program. Target market awareness of program and service offerings to the sector will be raised through strategies such as hosting and sponsoring of Webinars, and the development and dissemination of general and specific collateral marketing materials via direct mail, email and the Internet. Duquesne Light will continue its



outreach through participation and membership in selected key trade associations, attendance at key trade shows and sponsorship of training events.

Eligible Measures and Incentives: Prescriptive measure descriptions, unit savings, and incentive amounts are included in this Plan one time only at Section 3.3.1 CSUP Figure 19.

Program Start Date and Key Milestones: Refer to Section 12 Chart 4, Government/Non-profit Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation (Government/Education/Non-profit): The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment rendering deemed savings estimates reflected in the following Projected Program Impacts table:

**Figure 32: Education Segment Energy Efficiency Program*****Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$418,800	\$418,800	\$418,800	\$1,256,400
Admin	\$107,626	\$107,626	\$107,626	\$322,878

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	639	639	639	1,918
Energy Savings (kWh)	3,816,046	3,816,046	3,816,046	11,448,139

Cost Effectiveness: TRC 2.1

### 3.5.2. Multifamily Housing Retrofit Program

Title: The Governmental/Education/Nonprofit sector Multifamily Housing Retrofit Program will be implemented during program years 2013 and 2015.

Objectives: Increase multifamily owner/operator energy efficiency program participation by providing services tailored to address market segment specific barriers to entry.

Target Market: More than 26% of residential building stock in Duquesne Light's service territory is multifamily housing. The program targets a subset of this building stock comprised of dwelling units for income qualified occupants. The majority of the targeted building stock receives electric service under commercial tariff master-meter service accounts.

Program Description: Program services include the administration of energy efficiency audits, technical assistance for measure level project review and bundling, property

aggregation, contractor negotiation and equipment bulk purchasing. The Multifamily Market Manager will integrate funding sources to include program and agency co-funding, performance contracting, grant funding and available financing options. Services also include processing rebate applications and other funding source documentary requirements as well as applicable project TRC screening.

Implementation Strategy: The program is operated in conjunction with the Public Agency Partnership Program (PAPP) that serves as a conduit to housing authority property inventories.

Anticipated Cost to Participating Customers: PAPP partner with jurisdictional agencies, such as housing authorities, will fund portions of identified energy efficiency projects consistent with adopted project agreements.

Ramp-up Strategy: Implementation services RFPs will be issued, responses reviewed and contract statements of work executed according to the implementations schedules provided in Section 12.

Marketing Strategy: Local government agencies are engaged directly by Duquesne Light under the PAPP model. Each partnering agency assists in communicating with government departments and jurisdictional agencies, including targeted housing authorities. The multifamily market manager will work with housing authority representatives toward a systematic inventory of housing stock and provision of program services to affect building energy efficiency retrofits.

Eligible Measures and Incentives: Prescriptive measure descriptions, unit savings, and incentive amounts are included in this Plan one time only at Section 3.3.1 CSUP Figure 19. Measure cost based offsetting program incentives may be adjusted per program project agreements, as well as local government needs and resources.

Program Start Date and Key Milestones: Refer to Section 12 Chart 4, Governmental/Non-Profit Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission's Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff, as well as contracted CSP services.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation: The primary metrics for program participation will be processing incentive payments for the purchase and installation of energy efficiency equipment rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 33: Multifamily Housing Retrofit Program**

***Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$193,247	\$193,247	\$193,247	\$579,740
Admin	\$391,640	\$391,640	\$391,640	\$1,174,921

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	80	80	80	239
Energy Savings (kWh)	1,724,517	1,724,517	1,724,517	5,173,551

Cost Effectiveness: TRC 0.9

3.5.3. Public Agency Partnership Program

Title: The Public Agency Partnership Program (PAPP) will be implemented during program years 2013 through 2015.

Objectives: Engage local government in a partnership to implement an Energy Efficiency Action Plan. Systematically inventory efficiency gain potential is present in local government departments and jurisdictional agencies. Execute project agreements to co-fund identified energy efficiency projects.

Target Market: Federal, state and local government, including municipalities, school districts, institutions of higher education and nonprofits (per Act 129)

Program Description: Public Agency Partnerships are established through execution of a Memorandum of Understanding (MOU) by and between Duquesne and selected local governmental agencies. The MOU establishes working groups comprised of Duquesne and agency representatives that identify project areas within agency departments (and jurisdictional agencies). Working groups define project scopes of service and establish project agreements to co-fund agreed to projects. The project agreements between Duquesne Light and Partnership agencies contain the terms to leverage local agency staff to reach, pre-screen and enroll program participants. The utility and the agency split specified program costs. The Partnership MOU puts in place dedicated contacts and a working group structure to identify and evaluate energy efficiency project opportunities within all governmental departments and sub-agencies.

Implementation Strategy: Key elements of the implementation process follow (1) Duquesne Light executes a Partnership MOU with the Public Agency (2) Duquesne Light facilitates working group meetings with the Public Agency and jurisdictional agencies (3) the working group collaborates on the development proposed project concept papers (4) public agency working group members obtain feedback on the proposed projects and the working group makes necessary adjustments to the concept paper (5) Duquesne Light prepares a project agreement and resolution for approval by the public agency governing body (6) Duquesne Light and the public agency implement the project plan consistent with the terms of the project agreement.

Patterned after successful programs operating in other parts of the country, a key element of the PAPP is co-funding by Duquesne Light and the Partnership agency of energy efficiency audits and measure implementation. PAPP will utilize local contractors and/or other survey and installation entities based on availability, cost, and quality of service. Whenever possible, PAPP will utilize non-profit, community based organizations to perform the energy efficiency surveys and measure installation.

Program Risk and Risk Management Strategy: All portfolios and programs are operated through Duquesne Light's PMRS. The system provides comprehensive oversight of program budgets and impacts and provides early warning regarding program under- or over-subscription.

Anticipated Cost to Participating Customers: PAPP Partners will fund portions of identified energy efficiency projects consistent with adopted project agreements.

Ramp-up Strategy: This program was launched on December 1, 2009 and will continue through Phase II of Act 129.

Marketing Strategy: Local government agencies are engaged directly by Duquesne Light under the local government partnership model. Each partnering agency assists in communicating with all governmental departments and jurisdictional agencies.

Eligible Measures and Incentives: Prescriptive measure descriptions, unit savings, and incentive amounts are included in this Plan one time only at Section 3.3.1 CSUP Figure 19.

Program Start Date and Key Milestones: Refer to Section 12 Chart 4, Governmental/Non-Profit Portfolio Program.

Assumed EM&V Requirements to Document Savings by the Commission’s Statewide EE&C Evaluator: Detailed evaluation, measurement and verification activities will be identified in the Phase II EM&V Plan. Either enhanced or basic rigor verification is employed based on project scope, as identified in the EM&V Plan. Random samples shall comply with SWE Audit Plan confidence and precision levels.

Administrative Requirements: Program administrative costs are shown in the following Projected Program Budget table. In addition to overarching portfolio management, organizational planning includes provision for three dedicated full-time employees to perform management and coordination of all commercial and industrial programs (see Figure 2 or 36). Accordingly, this program is to be administrated by the three Duquesne Light employees on a shared basis with additional part-time support by engineering, marketing, purchasing, regulatory, data processing and clerical staff.

Estimated Percentage of Sector Budget: See Section 11, Table 6A for estimated percentage of sector budget.

Estimated Participation: The primary metrics for program participation are processing incentive payments for the purchase and installation of energy efficiency equipment rendering deemed savings estimates reflected in the Projected Program Impacts table below:

**Figure 34: Public Agency Partnership Program**

***Projected Program Budget***

Program Year	2013	2014	2015	Total
Incentives	\$606,717	\$606,717	\$606,717	\$1,820,150
Admin	\$155,918	\$155,918	\$155,918	\$467,754

***Projected Program Impacts***

Program Year	2013	2014	2015	Total
On-Peak Demand Reduction (kW)	926	926	926	2,779
Energy Savings (kWh)	5,528,317	5,528,317	5,528,317	16,584,950

Cost Effectiveness: TRC 2.1

#### 4. Program Management and Implementation Strategies (~5 to 10 pages)

*(The objective of this section is to provide detailed description of how EDC plans to manage and implement programs, including their approach to and use of Conservation Service Providers (CSPs).)*

##### 4.1. Overview of EDC Management and Implementation Strategies:

4.1.1. Describe the types of services to be provided by EDC as well as consultants, trade allies, and CSPs. Indicate which organizations will provide which services and the basis for such allocation. Reference reporting and EM&V information from Sections 5 and 6 below.<sup>20</sup>

The delivery organization size and function is largely driven by the portfolio of programs fielded. The portfolio proposed by Duquesne Light is structured under three broad programs: residential, commercial and industrial. Umbrella programs are offered in the commercial and industrials sectors.

The umbrella programs provide incentives for a full range of measures to assist commercial and industrial energy customers of all sizes and in all key market segments to overcome barriers to adopt energy efficiency measures. The umbrella programs put in place a baseline program design, with set incentive levels and measure content. The umbrella programs are designed as an overarching programmatic structure with calculated incentives for customized projects or itemized incentives for standard measures. Under the overarching umbrella programs, specialized sub-programs can promote specific technologies or target specific market segments while incorporating the umbrella program savings impacts and incentive levels. In this manner, sub-programs present a consistent and common offering. The umbrella programs comprise the operational structure for the implementation of all programs to be offered.

Duquesne Light implements programs effectively and economically. To achieve this, contractors known as CSPs with expertise and experience in program implementation and operations are deployed under agreements with Duquesne Light. Success depends on special services offered by CSPs to implement and overcome market segment specific barriers. Duquesne Light works together with CSPs and contractors to provide the services outlined in the table below.

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<sup>20</sup> Services to be offered by EDC or others may include marketing, customer recruiting, demonstration projects, audits and or installation of new efficiency measures, verification of installations and or baseline usage, response to customer concerns, program tracking and program evaluation.

**Figure 35: Program Implementation Responsibility**

<b>EE Sector</b>	<b>Program</b>	<b>Implementation</b>
<b>Residential</b>	Residential Energy Efficiency Program	Core Team (or Contractor)
	REEP Whole House Audit/Retrofit	Sub-program Contractor
	Residential Appliance Recycling	Sub-program Contractor
	Residential Behavioral Savings	Sub-program Contractor
	School Energy Pledge Program	Core Team (or Contractor)
	Low Income Energy Efficiency	Core Team (or Contractor)
<b>Commercial</b>	Commercial Sector Umbrella Program	Core Team (or Contractor)
	Office Building Energy Efficiency	Sub-program Contractor
	Healthcare Segment Energy Efficiency	Core Team (or Contractor)
	Retail Segment Energy Efficiency	Sub-program Contractor
	Commercial Upstream Lighting	Sub-program Contractor
	Small Commercial Direct Install	Sub-program Contractor
<b>Industrial</b>	Industrial Sector Umbrella Program	Core Team (or Contractor)
	Chemical Products Energy Efficiency	Sub-program Contractor
	Mixed Industrial Energy Efficiency	Sub-program Contractor
	Primary Metals Energy Efficiency	Sub-program Contractor
<b>Governmental</b>	Education Segment Energy Efficiency	Core Team (or Contractor)
	Multifamily Housing Retrofit	Core Team (or Contractor)
	Public Agency Partnership Program	Core Team (or Contractor)

The Core Team in Figure 35 refers to implementation directly by Duquesne Light staff and supported by limited services contractors or Conservation Service Providers (CSPs) at Duquesne Light's discretion. Program implementation requires significant planning and operation management functions. In addition to initiating the contracting process, each contractor is managed and integrated into an organized and cohesive operation. Program procedural guidelines are developed and followed. Documentation is maintained and electronic data structures are developed and managed.

Customers are engaged through at least three channels. First, Duquesne Light promotes the programs to its customers, through marketing approaches such as mass media advertising, direct marketing, events, conferences, account representatives and electronic media. Second, the Duquesne Light contractors and subcontractors have similar responsibilities, with specific focus on securing commitments for customers to participate in the programs. Third, trade allies, such as builders, architects, engineers, vendors, equipment installation contractors, retailers and others, are informed of the Duquesne Light programs, with the objective of securing their willingness to participate



and secure their customers and clients to participate. Trade allies are also engaged, primarily through direct marketing, events, conferences and account representatives.

The programs are designed to overcome key barriers to customer participation. In general the barriers to greater customer participation in energy efficiency are information, technical assistance, and financial assistance. The programs are also designed to encourage comprehensiveness in terms of including multiple measures, taking account of interactive savings between measures, and advancing new designs and technologies.

Depending on the specific program in the portfolio for Duquesne Light, available services are expected to include:

- Benchmarking of energy use based on utility bills
- Walk-through energy audits to pre-screen and qualify the facility to optimize measure selection and implementation
- Investment grade energy audits for specific measures and energy savings
- Life-cycle cost-benefit analysis
- Retro-commissioning
- Project and construction planning and management
- Project documentation and operator training
- Post installation quantification of savings
- Providing guidance about alternative financing assistance
- Quantifying environmental benefits

The CSP may offer a range of services to achieve program success including:

- Marketing to prospective customers based on leads from Duquesne Light as well as resources of the CSP
- Educating customers and recruiting participants
- Conducting walk-through or preliminary energy audits
- Securing customer approval to proceed with targeted or comprehensive investment grade energy audits
- Recommending measures with estimates of energy and demand savings
- Preparing benefit and cost analyses and identification of financing options
- Completing customer applications to reserve program incentive funds and submitting to Duquesne Light for approval
- Performing or assisting customer with equipment specification, vendor selection, bidding and project management
- Conducting post-installation inspections

- Verifying savings estimates
- Coordinating applications for incentive payments
- Conducting project completion and follow-up services
- Conducting customer satisfaction surveys

Reporting is conducted based on the requirements of the regulatory authorities, Duquesne Light management and CSPs. Section 5 below presents Duquesne Light's proposed reporting criteria and supporting information systems.

EM&V is conducted for each program. The scope and level will depend on the nature of the program and split of responsibilities between regulatory authorities, Duquesne Light management and CSPs. Section 6 below presents Duquesne Light's approach to EM&V.

4.1.2. Describe how the risk categories of performance, technology, market and evaluation can affect the programs and any risk management strategies that will be employed to mitigate those risks.<sup>21</sup>

Performance risk refers to the ability of programs to achieve their individual goals in the context of overall corporate goals for Duquesne Light relating to energy efficiency programs. This risk will be mitigated by offering a variety of programs addressing key customer classes and market segments within the customer classes. There are programs for each customer class and subprograms for market segments within the customer class. The programs allow both itemized and customized solutions in terms of measures for commercial and industrial sectors. Comprehensive solutions are encouraged. Performance risk is further mitigated through regular reporting and timely management to identify and resolve issues through the PMRS as described in Section 5. CSP payments as well as incentive reservations and payments are facilitated through PMRS which provides for real-time management of program budgets and progress towards goals.

Technology risk refers to the possibilities that energy conservation measures will not perform as well as expected in achieving expected savings. The risk is mitigated by designing programs to foster the installation of proven technologies for the specific energy conservation measure. The program design allows for certain technologies and not others. However, advanced technologies will be encouraged where greater energy savings and cost-effectiveness are expected. The risk is further mitigated by activities in EM&V to identify and resolve technology performance concerns.

Market risk refers to the ability to recruit sufficient participants for the programs. Mitigation of market risk is pursued through efforts by Duquesne Light, CSPs, and trade allies to encourage participation by end-use customers. Where barriers to

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<sup>21</sup> Performance risk is the risk that, due to design or implementation flaws, the program does not deliver expected savings. Technology risk is the risk that technologies targeted by a program fail to deliver the savings expected. Market risk is the risk that customers, or other key market players (e.g., contractors), choose not to participate in a program. Evaluation risk is the risk that independent EM&V will, based on different assumptions, conclude that savings fall short of what the implementers have estimated.

information, technical assistance and financial incentives are identified as continuing issues, adjustments to program designs have been and will continue to be considered to improve participation levels. Market risk is being mitigated during this process of planning and filing for program approval. In particular, Duquesne Light has initiated discussions with certain large customers in key market segments to encourage participation in energy efficiency projects to qualify for the proposed programs.

Evaluation risk refers to the possibilities that energy savings results are open to question. Mitigation of this risk is achieved by an open and transparent planning process for EM&V. Programs are planned and implemented in a manner to support verification and ensure availability of required evaluation data. The plan was developed in consultation with regulatory authorities. The plan should be based on policies and procedures that are widely accepted in the discipline. The risk is mitigated further by implementation of the plan in a collaborative manner and with careful documentation of significant deviations. Finally, issues will continue to be identified and solutions proposed where evaluation risks become real.

4.1.3. Describe how EDC plans to address human resource and contractor resource constraints to ensure that adequate personnel and contractors are available to implement the EE&C plan successfully.

Human resource constraints refer to the ability of Duquesne Light to recruit and retain qualified personnel to manage and implement the proposed programs. Duquesne Light has involved individuals within the organization in the planning process for the energy efficiency program. Several programs were specifically designed to leverage the resources of external governmental agencies and community engagement channels. Currently four positions are filled and Duquesne Light is seeking to fill two technical positions, one for residential, and one for the commercial and industrial sector. Duquesne Light will follow its normal recruitment process for internal and external applicants in filling the open positions.

Contractor resource constraints refer to the ability of Duquesne Light to secure sufficient support from CSPs. Duquesne Light has recruited CSPs on a competitive basis by sending requests for proposals to a significant pool of potential contractors. Prior to selecting contractors and signing agreements, Duquesne Light will confirm the ability of the CSPs to fulfill their responsibilities while adhering to the Commission approved CSP contract. RFPs are sent to the CSPs currently listed on the Commission registry and this process will continue for newly approved programs.

A broader issue could be the long-term availability of qualified technicians and professionals with skills such as energy auditing, energy savings analysis, project engineering and measures installation. Duquesne Light continues to cooperate with educational institutions and training organizations to increase the supply of qualified personnel in the Pittsburgh job market. One unique strategy with long-run potential is to stimulate interest in the field for energy efficiency via programs targeted to achieving energy savings in educational facilities and in the homes of students and staff at those facilities.

4.1.4. Describe “early warning systems” that will be utilized to indicate progress towards the goals and whether they are likely to be met. Describe EDC’s approach and process for shifting goals and funds, as needed, between programs and adding new measures/programs.

Progress toward goals is reported on a regular basis rather than waiting until the end of the program cycle. The progress reporting process has been developed by Duquesne Light in consultation with regulatory authorities. Furthermore, CSPs are directly involved through regular reporting, documentation of issues, and development of plans to resolve issues in meeting goals.

Duquesne Light implements programs in a manner to facilitate adjustments of individual programs funds and goals in order to achieve corporate goals. Each program is managed with a total budget as well as a budget for each year of implementation. This approach allows for at least an annual review and decision on the budget for the subsequent year.

As each year progresses, Duquesne Light anticipates allocating or reserving up to two-thirds of incentive payment funds for each program before committing the remaining funds for a program for that year. Funds are allocated on a project-by-project basis for large commercial and industrial customers as submitted for Duquesne Light approval. Then, when the project is completed the customer is more assured that funds to pay the incentive are available. For programs that are implemented through CSPs contract provisions, approximately 30% are held in reserve.

As further protection to help ensure funds are well managed, Duquesne Light pays for CSP performance in two steps. For applications submitted and approved by Duquesne Light, up to 30% of the pay for performance based on estimated savings is held. Applications include a signed project agreement wherein the customer commits to proceed with the installation. The remainder of the pay for performance is paid based on verified savings upon project completion and acceptance by the customer.

These plans provide flexibility to Duquesne Light to re-allocate program budgets. For example, some programs may be oversubscribed so that more funds could be added to meet customer demand for participation and shifted away from programs that are undersubscribed.

New programs may be added over time to reach underserved customers and market segments. In particular, CSPs with expertise and experience in certain market segments may be recruited to address specific opportunities.

Similarly, new technologies may be encouraged as programs are implemented. Duquesne Light is open to offering incentives for new technologies, whether as an existing program, new program or sub-program.

Finally, Duquesne Light expects to file as required with regulatory authorities when considering significant adjustments to program budgets or adding new programs and new technologies.

4.1.5. Provide implementation schedules with milestones.

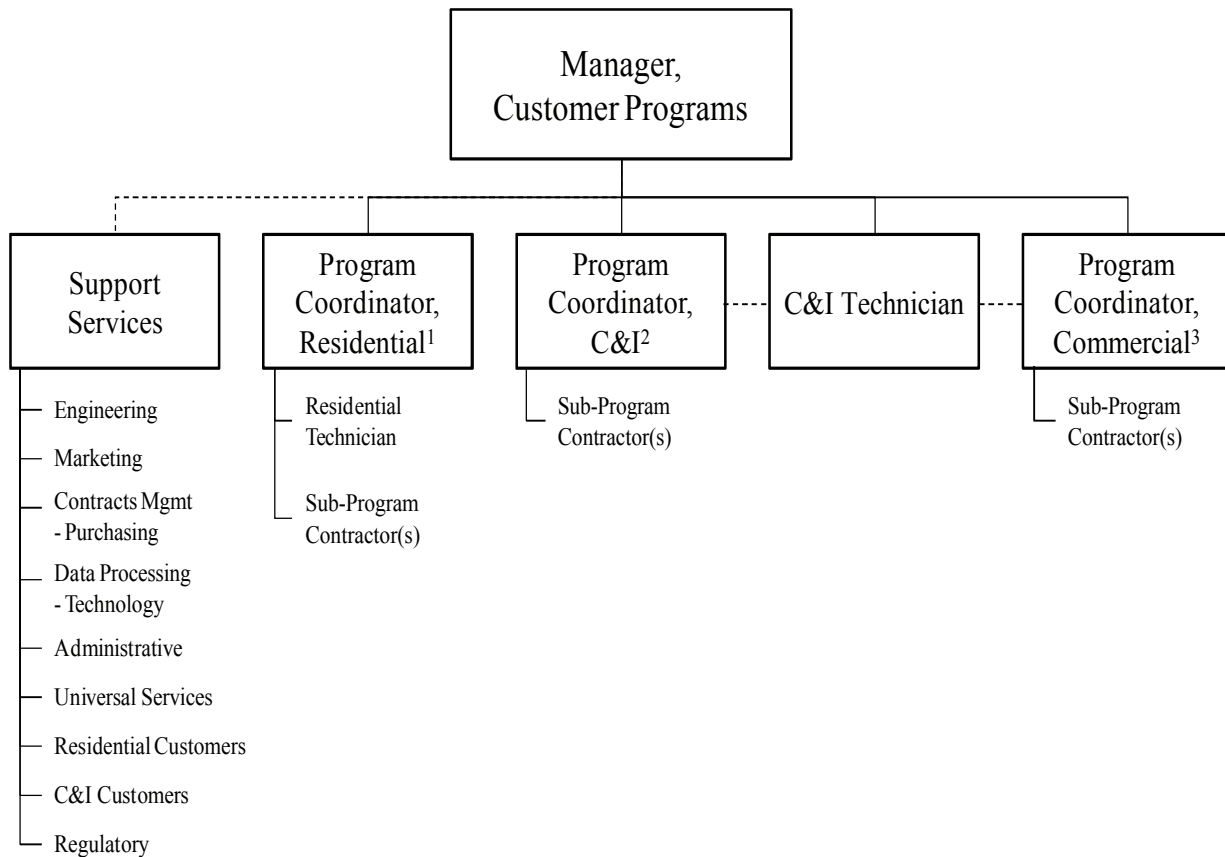
See Section 12, Charts 1 through 4.

4.2. Executive management structure:

4.2.1. Describe EDC structure for addressing portfolio strategy, planning, review of program metrics, internal and external communications, budgeting and financial management, program implementation, procurement, program tracking and reporting, and Quality Assurance/Quality Control (QA/QC). Include EDC organization chart for management team responsible for implementing EE&C plan.

The implementation organization for Duquesne Light is housed within the customer care function. The delivery organization size and function is driven by the portfolio of programs offered. The size and structure also reflects the use of contractors and subcontractors. The organization is headed by one manager who is responsible for the planning and implementation of the energy efficiency and conservation program. The manager is supported by several sector or segment specific program coordinators. There also is support staff for functions to include engineering, marketing, data processing, regulatory and contract management. The organizational chart pictured below represents the structure of the organization to implement the energy efficiency and conservation plan.

**Figure 36: Customer Programs Organizational Chart**



1 Residential Umbrella, Low Income  
 2 Industrial Umbrella, Office, Retail, Chemicals, Metals  
 3 Commercial Umbrella, Healthcare, Education, Public Agencies

Each program coordinator is responsible for overall program management, including planning, reporting progress on program metrics, internal communication, external communication, budgeting and financial management. The program coordinator will call upon staff support for assistance within the energy efficiency program. Support for the programs is available for procurement and contract management, marketing, and data tracking and reporting. Additionally, quality assurance and quality control functions performed by engineering and other support staff will support the program coordinator.

CSPs are expected to provide a quality control plan. The plan provides for quality control on projects, regulatory compliance processes and performance auditing. The plan allows for Duquesne Light to access files, data and related program operating information. The plan is designed to minimize customer service issues, protect confidential information and prevent duplicate applications for incentive payments.

4.2.2. Describe approach to overseeing the performance of sub-contractors and implementers of programs and how they can be managed to achieve results, within budget, and ensure customer satisfaction.

Contractors and implementers of programs are subject to detailed planning requirements. The detailed plans include tasks, milestones, schedules, budgets, metrics of performance and personnel assignments. Regular reports on progress are required with sufficient information to allow the identification of issues and planning for improvements. Each contractor is subject to specific policies and procedures to guide their activities. Both hard copy and electronic documentation methods are required as appropriate. Regarding customer satisfaction, contractors and implementers are expected to foster and participate in obtaining feedback from their clients; results will be provided to Duquesne Light, whether directly or through a third party.

4.2.3. Describe basis for administrative budget.

The administrative budget may be broadly defined to include all items other than incentive payments for measures installed by customers. These areas include planning, market research, sales and marketing communications, engineering, data management, contracting, and evaluation.

The basis for program administrative budgets is the tabulation of non-incentive costs. These non-customer incentive costs include portfolio (common) costs and direct implementation costs. Common costs are estimated at 10% of total administrative costs based on PY2-3 records that include 7-8% marketing plus overall portfolio management and continuous SWE engagement. Direct program implementation costs include labor, material, travel, insurance, etc., and are paid to implementation contractors. Approximately 25% of costs identified as direct program implementation costs are related measure material and labor which is provided participants at no cost. EDC contracted independent EM&V contractor costs are also included in "Admin" costs as are any other EM&V costs.

4.3. Conservation Service Providers (CSPs):

4.3.1. List any selected CSPs, describe their qualifications and basis for selection (include contracts in Appendix).

Duquesne Light developed RFPs for each program within the segments being implemented via a CSP for the approved Phase I plan. CSPs were asked to participate in a pre-bid meeting signifying their interest, and were required to respond to the formal



RFP. A team evaluated the responses and the top candidates were brought together for a face-to-face interview with the evaluation team. Selections were made based upon the firm possessing substantial qualifications in energy efficiency as it related to the particular segment under review.

The following registered CSPs were selected through the RFP process:

AllFacilities Energy Group: AllFacilities Energy Group is an energy efficiency analytics company with utility companies as their primary market. They were selected for the retail store and restaurants segments.

Roth Brothers and Enerlogics: Roth Brothers and Enerlogics have partnered together to work with electric utilities, and commercial and industrial customers to evaluate, administer, install, and validate energy efficiency projects. They were selected to implement the office segment program and primary metals program.

Global Energy Partners: Global Energy Partners, an EnerNOC Company, provides energy efficiency solutions and innovative technology applications to utilities, large commercial and industrial customers. Based upon their expertise, they were selected for the chemicals and mixed industrials segments.

JACO Environmental: JACO Environmental provides an effective way for consumers and utilities to responsibly recycle household appliances, resulting in improved energy conservation, lower utility bills, and a safer environment. They were selected for residential appliance recycling program.

Helgeson: Helgeson provides energy incentive processing services to electric and gas utilities. They offer utilities new and powerful technology, processes and the ability to pay for services. They were selected for rebate processing for residential and commercial customers.

ECOVA: Ecova assists utilities in creating impactful residential, commercial and industrial programs that increase customer satisfaction while providing verifiable savings to meet goals and manage regulatory, reputational and operational risks. They were selected to implement the residential rebate program through an upstream midstream lighting program.

OPower: OPower works with utilities to deliver an entirely new customer experience by helping utility partners transition from power companies to energy management services providers. This unique expertise provided this CSP an opportunity to offer a pilot program for a home energy reporting program.

Navigant Consulting Inc. (NCI): NCI provides evaluation of energy efficiency and demand response programs in North America. Their staff has led and/or contributed to the development of most of the major protocols for evaluation of energy efficiency and demand response programs including the International Protocols for Measurement and Verification of Performance and the protocols used in Ontario, California, New York, and New England. As experts in their field, NCI was selected as the internal EM&V implementation contractor.



MCR Performance Solutions (MCR): MCR provides management consulting services exclusively to the utility industry. The firm possesses substantial qualifications in energy efficiency business strategy, regulatory strategy, energy efficiency potential, and program design and implementation. The firm was selected to assist in development of a strategy and plan based on its in-depth experience with developing energy efficiency, conservation and demand response programs that were established over many years, clients and jurisdictions.

4.3.2. Describe the work and measures being performed by CSPs.

Contracts for each CSPs described in Section 4.3.1. were filed at the Commission and approved. These contracts include all the work, measures, and detailed requirements for each of the program segments for which they were selected. Once such CSP agreement is included as Section 13, CSP Binder.

4.3.3. Describe any pending RFPs to be issued for additional CSPs.

It is anticipated that CSPs may be sought for the following segments:

- Upstream appliances rebates
- Whole house retrofits
- Commercial umbrella
- Small commercial direct install
- Multifamily housing

**5. Reporting and Tracking Systems<sup>22</sup> (~5 pages)**

*(Objective of this section is to provide detailed description of reporting and the critical data management and tracking systems that EDCs need in order to implement programs and which Commission, and its statewide EE&C Plan Evaluator, need to access.)*

- 5.1. Indicate that the EDC will provide quarterly and annual reports as prescribed in the August 2, 2012 Implementation Order.

Duquesne Light’s Program Management and Reporting System (PMRS) provides information reported to the Commission’s appointed Act 129 EE&C Statewide Evaluator (SWE). Program activity reports are provided in form and format specified by the SWE pursuant to SWE monthly, quarterly, annual and numerous ad hoc data requests. Examples are provided below:

On July 1, 2010 SWE ordered EDCs to provide data transfers according to “Attachment A” Monthly Data Transfer of reporting metrics for 1) Program level activity and 2) Portfolio level activity.

Program level activity:

EDC Name (Select from dropdown list)
Month (Select from dropdown list)
Program Year (Select from dropdown list)
Program Name
Program Type (Select from dropdown list)
Total Number of Participants- Incremental Monthly
Total Energy Savings (MWh)- Reported Gross Incremental Monthly
Total Energy Savings (MWh)- Estimated for Projects in Progress
Total Demand Reduction (MW)- Reported Gross Incremental Monthly
Total Demand Reduction (MW)- Estimated for Projects in Progress
TRC Benefits (\$)
TRC Costs (\$)
Residential Total Number of Participants- Incremental Monthly
Residential Reported Energy Savings (MWh)- Incremental Monthly
Residential ReportedGross Demand Reduction (MW) - Incremental Monthly
Residential Low-Income Total Number of Participants- Incremental Monthly
Residential Low-Income Reported Energy Savings (MWh)- Incremental Monthly
Residential Low-Income Reported Gross Demand Reduction (MW) - Incremental Monthly
Small C&I Total Number of Participants- Incremental Monthly
Small C&I Reported Energy Savings (MWh)- Incremental Monthly

<sup>22</sup> This Section may be modified if the Commission’s statewide EE&C Plan Evaluator develops further reporting and tracking systems that are approved by the Commission.

Small C&I Reported Gross Demand Reduction (MW) - Incremental Monthly
Large C&I Total Number of Participants- Incremental Monthly
Large C&I Reported Energy Savings (MWh)- Incremental Monthly
Large C&I Reported Gross Demand Reduction (MW) - Incremental Monthly
Government & Non-Profit Total Number of Participants- Incremental Monthly
Government & Non-Profit Reported Energy Savings (MWh)- Incremental Monthly
Government & Non-Profit Reported Gross Demand Reduction (MW) - Incremental Monthly
EDC Incentives to Participants (\$) - Incremental Monthly
EDC Incentives to Trade Allies (\$) - Incremental Monthly
Participant Costs (\$) - Incremental Monthly

Portfolio level activity:

EDC Name (Select from dropdown list)
Month (Select from dropdown list)
Program Year (Select from dropdown list)
Portfolio Impacts
Total Energy Savings (MWh)- Reported Gross Incremental Monthly
Total Energy Savings (MWh)- Estimated for Projects in Progress
Total Demand Reduction (MW)- Reported Gross Incremental Monthly
Total Demand Reduction (MW)- Estimated for Projects in Progress
TRC Benefits (\$) - Reported Gross Incremental Monthly
TRC Benefits (\$) - Estimated for Projects in Progress
TRC Costs (\$) - Reported Gross Incremental Monthly
TRC Costs (\$) - Estimated for Projects in Progress
Summary of Finances
EDC Incentives to Participants (\$) - Incremental Monthly
EDC Incentives to Trade Allies (\$) - Incremental Monthly

5.2. Project Management Tracking Systems:

5.2.1. Provide brief overview of the data tracking system for managing and reporting measure, project, program and portfolio activities, status and performance as well as EDC and CSP performance and expenditures.

Duquesne Light has designed and developed a PMRS for tracking, managing and reporting measure, project, program and portfolio activities. The PMRS supports and facilitates program operation, management and reporting for use by umbrella program managers and sub-segment program managers. PMRS serves three primary purposes:

- 1) Enable CSPs and internal management to create and/or upload program activities
- 2) Provide the capability to review and approve activities
- 3) Provide comprehensive reporting to support Duquesne Light's internal and Commission reporting requirements, described above.

5.2.2. Describe the software format, data exchange format, and database structure you will use for tracking participant and savings data. Provide examples of data fields captured.

PMRS is a system using a web front-end which stores data in the back-end via a relational MS SQL Server database engine. Duquesne Light customer information is imported into PMRS from an IBM DB2 customer information system. Once imported into PMRS the data is managed within the system. The database is populated by uploading the measures and financial flat files from SSPMs/CSPs. The measures and financial flat files are comma separated values ("CSV") files. The PMRS reads and extracts the data from these files and stores the values in the PMRS database. The PMRS uses a reporting engine (Crystal Reports) to produce reports from the database. Reports and supporting data for Commission review and audit are provided in hard copy as well as published for download in a secured area on the Duquesne Light website.

5.2.3. Describe access and mechanism for access for Commission and statewide EE&C Plan Evaluator.

SWE members have real-time on-line access to Duquesne Light's PMRS where they can view projects from initiation through completion. Data elements tracked in PMRS address customer data, customer contact data, project and measure data; as well as financial rebate, CSP performance payment data, and measure/project (TRC) cost effectiveness screening. The following illustrative are two "screenshots" of an actual project viewed from inside PMRS and are provided as an example of online project access:

Figure 37: PMRS Screenshot - Project level View

PMRS - **WATT CHOICES**
Welcome: [REDACTED] from Duquesne Light! [\(LogOut\)](#)

Home
Customer Detail
Contact Events
Project
Payments
Comments
Admin

Project:  
 Account No: [REDACTED]    Program: Office Buildings - Small    Bill Image:  
 Project No: 6000535947.15.01    Participant Type: Small Commercial    Project Status: Project Completed

Project Detail
Measure 1
Measure 2
Measure 3
Measure 4
Add Measure

**Project Contact Information**

Contractor Company 1: <input type="text"/>	Contractor Company 2: <input type="text"/>
Contractor Contact Name 1: <input type="text"/>	Contractor Contact Name 2: <input type="text"/>
Contractor Contact Phone 1: <input type="text"/> <small>(Prefill My Info)</small>	Contractor Contact Phone 2: <input type="text"/>

[Save Contact Info](#)

**- Proposed Measure Summary**

Measure	Qty	Total kWh	Total kW	Total Incentive	TRC	Status
1 LE3 T5 4 ft 4 Lamp HO Electronic ballast	80	69888	15.2320	\$6,640.00	3.92	Approved
2 LE1 T5-4' 2 lamp HO electronic ballast	13	19363	5.0492	\$565.50	8.17	Approved
3 LE1 T5-4' 2 lamp HO electronic ballast	30	11466	2.4990	\$1,305.00	1.73	Approved
4 LE 16 T8 4 ft 4 lamp electronic ballast	4	671	0.1464	\$74.00	2.35	Approved

**- Installed Measure Summary**

Measure	Qty	Total kWh	Total kW	Total Incentive	TRC
1 LE3 T5 4 ft 4 Lamp HO Electronic ballast	80	69888	15.2320	\$6,640.00	3.92
2 LE1 T5-4' 2 lamp HO electronic ballast	13	19363	5.0492	\$565.50	8.17
3 LE1 T5-4' 2 lamp HO electronic ballast	30	11466	2.4990	\$1,305.00	1.73
4 LE 16 T8 4 ft 4 lamp electronic ballast	4	671	0.1464	\$74.00	2.35

**Project Summary**

	Total kWh	Total kW	Total Inc	Total Cost	TRC	Completion Dates	Action
Proposed	101388	22.9266	\$8,584.50	\$21,277.65	3.74	01/03/2012 (estimated)	
Installed	101388	22.9266	\$8,584.50	\$21,277.65	3.74	01/03/2012	

Figure 38: PMRS Screenshot – Measure Level View

Project: Account No: [REDACTED] Program: Office Buildings - Small Bill Image: [REDACTED]  
 Project No: 6000535947.15.01 Participant Type: Small Commercial Project Status: Project Completed

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Project Detail Measure 1 Measure 2 Measure 3 Measure 4 Add Measure

Performance Cost Incentive Summary

Note: No further changes can be made to this project because it has been: **Completed!**

**Existing/Base Case** ⓘ

Measure Quantity:  Measure Description:

Base Measure EFLH :  (Annual Hours)

Base Measure kW per unit:

---

**Retrofit** ⓘ

Measure Code: LE1 T5-4' 2 lamp HO electronic ballast Measure EFLH:  (Annual Hours)

Building Type: Warehouse Useful Life:  (Years)

End Use: Lighting - Inside Coincidence Factor:

Measure Description:  IF Demand:

IF Energy:

SVG:

---

	<b>Proposed</b> ⓘ	<b>Installed</b>
Measure Quantity:	<input type="text" value="13"/>	<input type="text" value="13"/>
Measure kW per unit:	<input type="text" value="0.1179"/> ⓘ	<input type="text" value="0.1179"/> ⓘ
kW Reduction per Unit:	0.3884	0.3884
kWh Savings per Unit:	1489.49	1489.49

## 6. Quality Assurance and Evaluation, Measurement and Verification (~5 pages)

*(Objective of this section is to provide detailed description of how the EDC's quality assurance/quality control, verification and internal evaluation process will be conducted and how this will integrate with the statewide evaluation activities)*

### 6.1. Quality Assurance/Quality Control:

#### 6.1.1. Describe overall approach to quality assurance and quality control.(QA/QC)

EE&C program QA/QC is incorporated into program planning and implementation as described below:

Program Planning: Program target markets and measure content are based on an energy efficiency potential forecast that is a systematic and comprehensive inventory of regional efficiency gain opportunities. Program approaches to deliver identified energy efficiency services are developed using benchmarked program approaches and best practices, tailored to Duquesne Light regional needs and opportunities.

Program Implementation: All CSPs under contract to implement Duquesne Light energy efficiency programs are required by contract statements of work to provide a Program Management Plan ("PMP"). The PMP presents the program rationale, assumptions, approach, processes, and other key material in an integrated form. The PMP addresses the following key sections:

- Program overview and assumptions
- Program policies and procedures
- Production plan
- Marketing plan
- Technical specifications
- Performance metrics and reporting
- Quality assurance plan
- Data management plan
- Invoice and measure reporting tools
- Appendices:
  - Program forms
  - Marketing materials
  - Subcontractor contracts

#### 6.1.2. Describe procedures for measure and project installation verification, quality assurance and control, and savings documentation.

### Procedures for Project Review, Approval and Processing

Procedures are in place to ensure prospective projects receive appropriate and consistent review prior to approval and incentive payment processing.

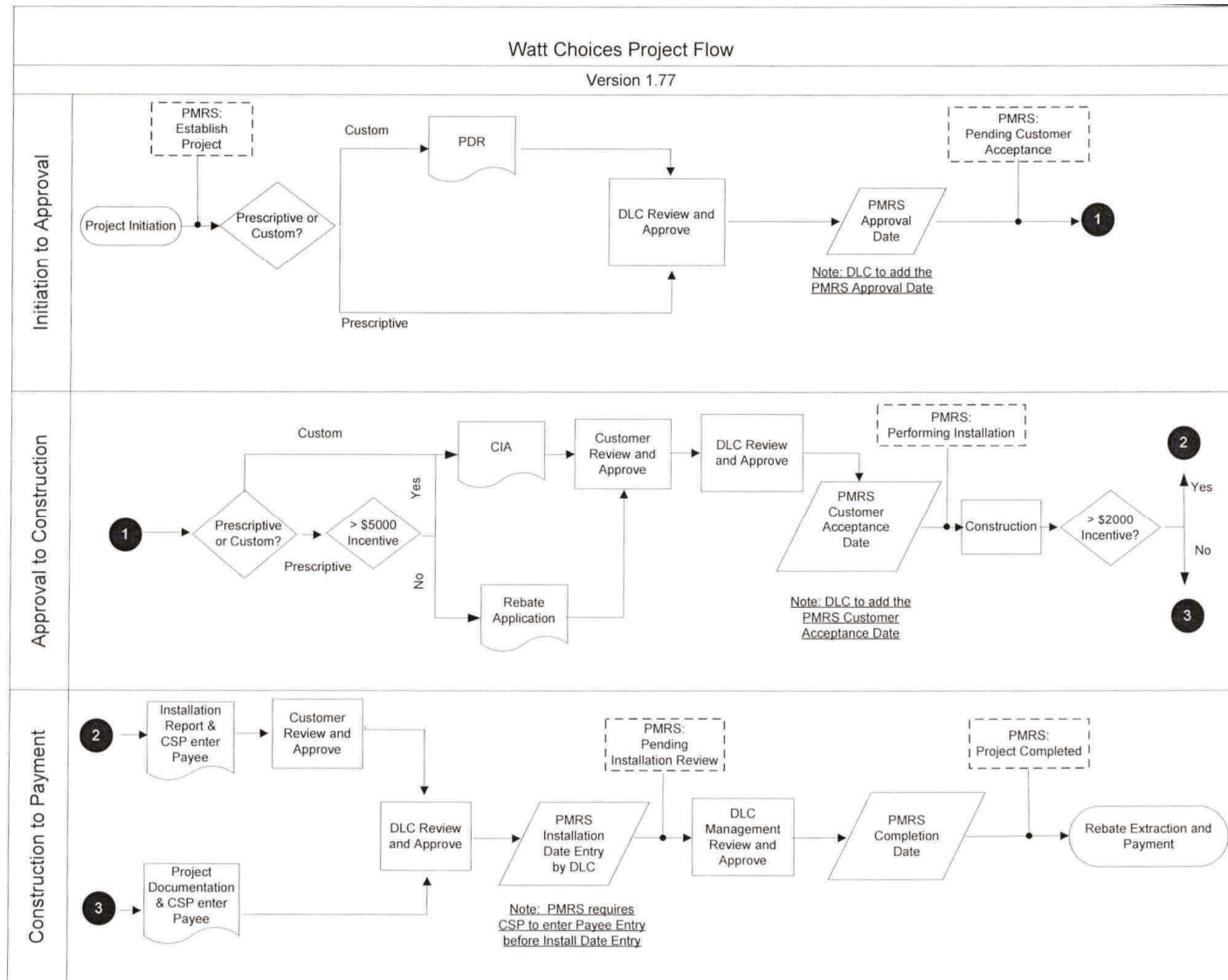
Residential incentive application processing is accomplished via fulfillment services provided by a fulfillment contractor. This is comprised of verification to ensure the customer is a Duquesne Light customer, the product information is correct, and the product is eligible under the program to receive incentives, and; invoices corroborate product identification and are dated within the program period.

Commercial and industrial (C&I) project and customer incentive processing varies depending upon the type and size of the project. Project development, review and approval processes are show below in the project review flow chart built upon the following three project phases:

- Initiation to Approval: Projects are established in the Program Management and Reporting System (PMRS). If the prospective project is a custom measure project, a Project Description Report (PDR) is required. Duquesne Light performs electronic as well as hardcopy review of submitted projects. If the project is approved for advancing Duquesne Light approves the project in PMRS and the project is advance to the participating customer for acceptance.
- Approval to Construction: Depending upon project type (prescriptive or custom) and amount of the incentive payment a Customer Incentive Agreement (CIA) or Rebate Application is required. A CIA or Rebate Application is presented to the customer for approval. Duquesne Light reviews and confirms customer acceptance and enters the Customer Acceptance Date into PMRS. The project is advanced in PMRS to “Performing Installation.”
- Construction to Payment: If the incentive amount is greater than \$2000 an installation report, customer review and approval is required; otherwise, project documentation is advanced to Duquesne Light and payee information is populated in PMRS. Duquesne Light reviews for approval submitted Installation Reports and other project documentation. Pending successful management review, the completion date is entered into PMRS and the customer incentive payment is prepared.



Figure 39: Watt Choices Project Review Process



Duquesne Light reviews project file content for completeness and accuracy. If the project is comprised of prescriptive measures, savings calculations are verified to be consistent with current PA TRM requirements. If the project is comprised of custom measures the project file is reviewed to ensure a measurement and verification plan has been developed and followed through project prosecution, and; the project file contains all applicable engineering reports, measurement and cost documentation. The following is a working document used in reviewing project file content:

**Figure 40: Project File Review List**

**PROJECT FILE REVIEW LIST**

**Implementation Contractor:**

**Project No:**

*One of the following are required from each section below (varies by implementer and project scope):*

**Customer Enrollment**

- Rebate Application
- Customer Incentive Agreement
- Customer Signed Project Package
- Memorandum of Understanding

**Project Definition**

- Project Description
- Electric bills/Audit Report/Studies
- Equipment Inventory (baseline)
- Equipment Inventory (retrofit)
- Savings calculations (Appendix C or Appendix D)
- Cost Estimates
- TRC Screening

**Installation Report**

- Site inspection documentation (reports/pictures)
- Cost documentation (invoices/purchase orders/supplier quotations)
- Specification sheets
- Other (Vendor provided installation verification)

**Measurement & Verification**

- PA TRM Algorithms & Inputs
- Pre- and Post-measurement
- Calibrated Simulation

**Memorandum & Correspondence**

NOTES: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Projects and measure reported savings are verified pursuant to the Duquesne Light Evaluation Measurement and Verification (EM&V) Plan. The EM&V Plan ensures customer projects are verified according to a consistent and systematic process that is consistent with the Statewide Evaluator's (SWE) Audit Plan and Evaluator's Framework for Pennsylvania Act 129 Energy Efficiency and Conservation Programs (Audit Plan). The Duquesne Light EM&V Plan specifies sample plans as well as applicable verification rigor consistent with the Audit Plan and is vetted with and approved by the SWE.

6.1.3. Describe process for collecting and addressing participating customer, contractor and trade ally feedback (e.g., suggestions and complaints).

All Conservation Service Providers (CSP) under contract to implement Duquesne Light energy efficiency programs are required by contract statements of work to perform customer feedback surveys. The CSP contracts have been submitted to, and approved by, the Commission. For contractor implemented programs, customers are provided Duquesne Light direct contact information along with an open solicitation for feedback and comments.

Trade associations were specifically invited to Duquesne Light's Act 129 stakeholder meetings. Additionally trade association engagement and leveraging is a priority element utilized by Duquesne Light for ranking CSP proposals to provide EE&C services to specific market segments. Active and direct engagement of customers, contractors and trade associations has and will continue to characterize Duquesne Light's EE&C program planning and implementation.

6.2. Describe any planned market and process evaluations and how results will be used to improve programs.

Process evaluation methods, research objectives, timing and frequency, quality control and evaluation components are provided under Section 3 of Duquesne Light's SWE approved EM&V Plan. The primary research issues center around assessing program design and operation. Specific researchable issues are briefly listed below:

- Document and review program operations (e.g. Program Management Plans) to provide baseline description of program operations and management to compare design and operational practices with the program theory.
- Design and utilize interview and survey techniques to describe and assess program operations, which can be compared to original design intent, and to measure participant satisfaction and program performance, which can be analyzed to identify gaps between program goals and results.
- Identify and recommend changes in a program's operational procedures or systems that can be expected to improve the program's efficiency or cost-effectiveness

Process evaluation content is incorporated into impact evaluation research activities; therefore it is conducted in the same frequency and timing as impact evaluation activities. The results of process evaluations are communicated with program planning and implementation team members on a semiannual basis.

- 6.3. Describe strategy for coordinating with the statewide EE&C Plan Evaluator (nature and type of data will be provided in a separate Commission Order).

Continuation of Phase I biweekly SWE conference calls, participation in monthly Program Evaluation Group meetings, response to continuous data requests and providing SWE pre-defined quarterly and annual program reporting.

**7. Cost-Recovery Mechanism (~5-10 pages with tables)**

*(Objective of this section is to provide detailed description and estimated values for cost recovery mechanism.)*

- 7.1. Provide the amount of total annual revenues as of December 31, 2006, and provide a calculation of the total allowable EE&C costs based on 2% of that annual revenue amount.<sup>23</sup>

**Figure 41: Total Revenues**

	<u><b>2006 Total</b></u>	<u><b>2% of Total</b></u>
DLC Revenue	\$723,299,451	\$14,465,989
EGS G&T	\$253,998,128	\$5,079,963
Act 129 Annual Budget		\$19,545,952

- 7.2. Description of plan in accordance with 66 Pa. C.S. §§ 1307 and 2806.1 to fund the energy efficiency and conservation measures, to include administrative costs.

The Act allows all EDCs to recover on a full and current basis from customers, through a reconcilable adjustment clause under 66 Pa. C.S. § 1307, all reasonable and prudent costs incurred in the provision or management of its plan. The Act also requires that each EDC's plan include a proposed cost-recovery tariff mechanism, in accordance with 66 Pa. C.S. § 1307 to fund all measures and to ensure full and current recovery of prudent and reasonable costs, including administrative costs, as approved by the Commission. To that end, Duquesne Light has designed a surcharge and reconciliation mechanism for all customer segments. The surcharge has been designed in a manner that recovers costs of the programs from the customers who have an opportunity to participate in and receive the benefits of those programs.

- 7.3. Provide data tables (see Tables 6A, 6B and 6C).

Tables 6A, 6B, and 6C are populated with all the appropriate data required by the PA PUC.

- 7.4. Provide and describe tariffs and a Section 1307 cost recovery mechanism that will be specific to Phase II Program costs. Provide all calculations and supporting cost documentation.

The Company proposes to revise the Phase I Rider No. 15, “Energy Efficiency and Conservation and Demand Response Surcharge,” to its tariff. The tariff sets forth the monthly surcharge rates by customer class to recover the program budgets. Since the

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<sup>23</sup> See also Commissioner Pizzingrilli’s January 15, 2009 Motion at Docket no. M-2008-2069887, allowing Duquesne Light to include the EGS G & T.

proposed cost recovery method is different for residential, small and medium C&I and large C&I customer classes, a formula and description of the formula is defined for each customer class surcharge. Five surcharges are defined to recover costs as reasonably close as possible for each customer class and segment within the class, i.e. commercial or industrial customers. The formulas are in accordance with the provisions of a Section 1307 cost recovery surcharge and include reconciliation of over or under collections and interest on the over or under recovery. Duquesne will not impose any interest on over or under collections, per the Commission's Implementation Order at 118.

- 7.5. Describe how the cost recovery mechanism will ensure that measures approved are financed by the same customer class that will receive the direct energy and conservation benefits.

The Company proposes to implement five surcharges to recover costs as close as reasonably possible to the customer class receiving the benefit. The costs are first defined for the three specific customer classes – residential, commercial and industrial. Commercial and industrial (“C&I”) customers were separated into small and medium C&I and large C&I customer segments because of the diversity in the size of C&I customers in the Company's service territory to allow for more reasonable cost recovery. Small and medium C&I customers are those customers with monthly metered billing demand 300 kW and less. Large C&I customers are those customers with monthly billing metered demand greater than 300 kW. This segmentation of customers is appropriate because it aligns programs and program costs with the current tariff and with the tariff charges for distribution, transmission and default service supply. C&I program costs were then assigned for recovery first based on program description (e.g. Office Buildings – Large). Duquesne adopted the use of the Peak Load Contribution demand measure in the application of its cost recovery mechanism for Large C&I customers. The tariff modification for the Phase I Plan was filed with the Commission on November 9, 2009 and was approved by a Secretarial Letter issued on November 24, 2009, at Docket No. M-2009-2093217. The Commission proposed a modification to the Large Commercial Surcharge and the Large Industrial Surcharge in an Opinion and Order dated February 2, 2010, at Docket No. M-2009-2093217. As a result of this modification, Duquesne Light implemented the rate design using a fixed customer charge to recover the administrative costs and a demand charge, using Peak Load Contribution, to recover the incentive costs for Large Commercial and Large Industrial customers. Duquesne filed a revised tariff supplement on February 22, 2010. The fixed customer charge component of the surcharge and the demand charge component of the surcharge are set forth as two separate line item charges on the customer bill. Duquesne Light will use the same surcharge structure in Phase II.

- 7.6. Describe how Phase II costs will be accounted for separate from Phase I costs.

All costs attributable to Phase I will be accounted for by May 31, 2013 with minor exceptions. Costs associated with projects completed but not paid for will be accrued in Phase I and will be paid based upon surcharge funding from Phase I. Costs incurred for Phase I after May 31, 2013 will be reconciled and identified separately in the next

reconciliation filing. From June 1, 2013, all costs associated with Phase II program plan will be identified and tracked in PMRS. As in prior Phase I program years, Duquesne Light has reconciled on an annual basis, filed with the Commission on July 1 for revised surcharge to be effective on September 1.

## 8. Cost Effectiveness (~5 pages)

*(Objective of this section is to provide detailed description of the cost-effectiveness criteria and analyses. It can refer to appendices with program data.)*

- 8.1. Explain and demonstrate how the proposed plan will be cost effective as defined by the Total Resource Cost Test (TRC) specified by the Commission.

Avoided electric energy and capacity costs are used for the purposes of determining the Phase II EE&C Plan cost-effectiveness and are developed in compliance with the Commission's 2011 TRC Order<sup>24</sup>. Duquesne Light developed the data inputs to support the avoided costs analysis. The following methodology was used to calculate energy and capacity price inputs to determine avoided costs:

### Energy Prices:

Energy prices for each of the calendar years 2012-2016 were calculated using futures prices quoted by the New York Mercantile Exchange ("NYMEX").<sup>25</sup> PJM Western Hub energy futures prices, both on-peak and off-peak, were used to calculate energy prices for 2012-2016. To provide for Locational Marginal Pricing (LMP) differentials between the Western Hub futures trading point and the Duquesne Light LMP Zone, the 2011 PJM State of the Market Report was utilized.<sup>26</sup>

For calendar years 2017-2021 Henry Hub natural gas futures<sup>27</sup> prices were utilized, adjusted by a basis differential Henry Hub-to-Tetco-M3 trading point, and converted into an estimated wholesale energy price using a heat rate derived from EIA's Annual Energy Outlook 2012. The heat rate (BTU/kWh) is based on the total natural gas fuel used for generation divided by the generation from natural gas (electric power and end use) for the MAAC region.<sup>28</sup>

Energy prices for calendar years 2022-2026 utilized EIA's Annual Energy Outlook 2012 forecast price for generation for the MAAC region.<sup>29</sup>

### Capacity Prices:

Capacity (generation) prices are based on the PJM Reliability Pricing Model (RPM) Base Residual Auction results for the Duquesne Light Zone for planning periods 2013-2014, 2014-2015 and 2015-2016. The last planning period result was escalated through 2026 using Producer Price Index Industry Data for electric power generation,

<sup>24</sup> PA PUC 2011 Total Resource Cost Test Order, July 28, 2011, at Docket No. M-2009-2108601

<sup>25</sup> CME NYMEX Data [http://www.cmegroup.com/trading/energy/electricity/pjm-western-hub-off-peak-calendar-month-real-time-lmp-swap-futures\\_quotes\\_settlements\\_futures.html](http://www.cmegroup.com/trading/energy/electricity/pjm-western-hub-off-peak-calendar-month-real-time-lmp-swap-futures_quotes_settlements_futures.html)

<sup>26</sup> Table 10-3 Zonal and PJM real-time, load weighted average LMP components (Dollars per MWh): Calendar years 2010 and 2011; "Western Hub" is not a reported LMP zone, Penelec was utilized as a proxy, based on location, for the Western Hub and Penelec-to-DLCO LMP differentials assessed.

<sup>27</sup> CME NYMEX Data [http://www.cmegroup.com/trading/energy/natural-gas/natural-gas\\_quotes\\_settlements\\_futures.html](http://www.cmegroup.com/trading/energy/natural-gas/natural-gas_quotes_settlements_futures.html)

<sup>28</sup> Source: EIA AEO 2012 Support Table 83 Rows 96,108, 144

<sup>29</sup> Source: EIA AEO 2012 Support Table 83 Row 134



transmission, and distribution. Capacity (T&D) prices are based on Duquesne Light’s transmission and distribution rates. Ancillary services are included in avoided costs based on costs incurred to provide ancillary services to Provider of Last Resort (POLR) customers, applied as a percentage of energy and capacity costs.

**Figure 42: Duquesne Light Act 129 EE&C Plan Phase II Avoided Costs**

Year	Electric Energy Seasonal Avoided Cost				Electric Capacity Avoided Cost		
	Winter	Winter	Summer	Summer	Generation \$/kW-yr	T&D ¢/kWh	A/S * ¢/kWh
	Peak ¢/kWh	Off-Peak ¢/kWh	Peak ¢/kWh	Off-Peak ¢/kWh			
2012	3.69	2.74	4.04	2.46	\$10.12	0.44	0.31
2013	4.01	2.83	4.48	2.82	\$45.99	0.46	0.32
2014	4.44	3.07	4.44	3.07	\$49.64	0.47	0.34
2015	4.66	3.29	4.66	3.29	\$51.66	0.49	0.35
2016	4.78	3.39	4.78	3.39	\$53.76	0.51	0.36
2017	4.02	4.02	3.87	3.87	\$55.95	0.53	0.38
2018	4.18	4.18	4.02	4.02	\$58.23	0.56	0.40
2019	4.34	4.34	4.16	4.16	\$60.59	0.58	0.41
2020	4.50	4.50	4.31	4.31	\$63.06	0.60	0.43
2021	4.58	4.58	4.42	4.42	\$65.63	0.63	0.45
2022	8.56	8.56	8.56	8.56	\$68.30	0.65	0.46
2023	8.77	8.77	8.77	8.77	\$71.08	0.68	0.48
2024	8.91	8.91	8.91	8.91	\$73.97	0.71	0.50
2025	9.08	9.08	9.08	9.08	\$76.98	0.74	0.52
2026	9.32	9.32	9.32	9.32	\$80.11	0.77	0.54

Costs are in nominal \$

\* A/S = Ancillary services, treated as a component of Capacity Generation

Avoided costs are applied at the measure level and are based upon individual measure estimated useful life (EUL) and energy savings seasonal profiles. Measure EULs are taken from the 2013 Draft TRM. Measure energy savings profiles were taken from the 2013 Draft TRM, when available; referenced to other industry sources, or developed from annual hourly savings profiles aggregated into time-of-use periods announced in 2013 Draft TRM table 1-1. Life-cycle measure avoided cost “streams” are brought to present value by applying a 6.9% discount rate and are the basis of program benefits quantified in this Plan.

Assessment of measure, project, program and ultimately portfolio cost-effectiveness requires development of both benefits (described above) and costs. The Total Resource Cost (TRC) test used to determine cost-effectiveness incorporates utility program implementation or administration costs, as well as measure costs. Projected administration costs are provided in Tables 1, 6A, 6B, and, 6C; measure costs are included in TRC summarized in Tables 7A through 7E. Consistent with the TRC Order, measure costs are either referenced to the California Database of Energy Efficient Resources (DEER), or to measure cost studies. These costs are reported on an annual basis in compliance with SWE prescribed EDC annual reporting requirements.

8.2. Provide data tables (see Tables 7A through 7E).

Tables 7A, 7B, 7C, 7D and 7E are populated with all the appropriate data required by the PA PUC.

## 9. Plan Compliance Information and Other Key Issues (~ 5–10 pages)

*(Objective of this section is to have specific areas in EE&C plan where the Commission can review miscellaneous compliance items required in legislation and address key issues in EE&C plan, portfolio, and program design.)*

### 9.1. Plan Compliance Issues.<sup>30</sup>

9.1.1. Describe how the plan provides a variety of energy efficiency and conservation measures and will provide the measures equitably to all classes of customers in accordance with the August 2, 2012 Implementation Order.

The initial measure mix was established based on exhaustive benchmarking of customer populations and building stocks. Phase II Plan measures (Figures 10 and 19) were selected based on the Phase I PY 2-3 program participation providing a record of what participants needed. Next, Plan measure content was reconciled with content of the 2013 Technical Reference Manual (TRM) and information provided in the SWE saturation studies and potential forecast.<sup>31</sup>

PY2-3 program performance as well as customer participant feedback supported retention of the portfolio of programs based on the Phase I market segmentation. Where programs underperformed, program design was revised. Specifically, introduction of a small commercial direct install program is incorporated to overcome barriers to participation demonstrated in the PY2-3 small office and small retail segment targeted programs. Additionally, language of the Commission's Implementation Order supported addition of the residential whole house audit/retrofit program as well as small commercial multifamily building retrofit program. Implementation Order at 20 and 49.

Program goal allocation, and associated program budgets, were adjusted to accommodate the Commission's Implementation Order which required segment carve-outs for the low income and governmental/nonprofit segments and identified program comprehensiveness requirements. Goal allocation into the remaining customer segments was based on segment energy use, previous delivery channel strengths and weaknesses, as well as requirements to achieve mandated reductions at authorized budgets.

9.1.2. Provide statement delineating the manner in which the EE&C plan will achieve the requirements of the program under 66 Pa. C.S. §§ 2806.1(c).

The following table shows the cumulative portfolio and program reductions in consumption (energy) for the program year ending May 31, 2016:

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<sup>30</sup> These sub-sections may reference other chapters of the plan as they may restate what was included elsewhere in the plan, and are collected here only for convenience of review.

<sup>31</sup> Ibid

**Figure 43: Cumulative Portfolio and Program Reductions in Consumption  
Energy (kWh) and Demand (kW) Savings**

Sector	Program Name	May 31, 2016	May 31, 2016
		kWh	kW
<b>Residential</b>	Residential Energy Efficiency Program	100,874,929	5,546
	REEP Whole House Audit/Retrofit	997,648	72
	Residential Appliance Recycling	4,774,947	591
	Residential Behavioral Savings	28,036,928	0
	School Energy Pledge Program	4,269,288	139
	Low Income Energy Efficiency	14,942,988	751
<b>Commercial</b>	Commercial Sector Umbrella Program	15,577,880	2,610
	Office Building Energy Efficiency	21,750,658	3,644
	Healthcare Segment Energy Efficiency	12,325,373	2,065
	Retail Segment Energy Efficiency	9,992,864	1,674
	Commercial Upstream Lighting	10,050,411	2,361
	Small Commercial Direct Install	6,126,074	1,029
<b>Industrial</b>	Industrial Sector Umbrella Program	5,531,182	929
	Chemical Products Energy Efficiency	13,689,675	2,300
	Mixed Industrial Energy Efficiency	12,237,740	2,056
	Primary Metals Energy Efficiency	37,681,176	6,331
<b>Governmental</b>	Education Segment Energy Efficiency	11,448,139	1,918
	Multifamily Housing Retrofit	5,173,551	239
	Public Agency Partnership Program	16,584,950	2,779
<b>Total EE&amp;C Plan Savings</b>		332,066,400	37,032
<b>Mandated Reductions</b>		276,722,000	N/A

*Note: Portfolio savings objective is 20% above the mandated reduction to provide for 80% measurement realization.*

9.1.3. Provide statement delineating the manner in which the EE&C plan will achieve the Low-Income requirements prescribed in the August 2, 2012 Implementation Order.

Consistent with Act 129 and the Commission's Implementation Order, Duquesne Light's Phase II EE&C Plan contains two provisions to provide EE&C Plan services to households at or below 150% of the federal poverty income guidelines. These provisions are: 1) In proportion to that sector's share of total energy usage in Duquesne Light's service territory, and 2) to obtain a minimum of four-and-one-half percent (4.5%) of the total EE&C Plan consumption reduction requirements.

- 1) Per the Report of the Act 129 Low-Income Working Group, Docket No. M-2009-2146801, March 19, 2010, Recommendations, subsection 2.  
 Proportionate Number of Measures: “EDCs will report the number of specific measures for low-income households and will be compliant with Act 129 if they have a number of measures that is consistent with the percentage of low-income household usage as shown in the last column on Table 1.” In the report Table 1, Duquesne Light’s “Percent of kWh Usage Low-Income Households vs. Total Consumption” is 7.88%. The total number of measures offered through the Phase II EE&C Plan is 67; 7.88% of 67 is 5.2 Duquesne Light’s Phase II EE&C Plan provides for 9 measures to be delivered through programs serving low income customers.
- 2) As shown in Figure 44, Duquesne Light’s Phase II EE&C Plan projects low income segment savings at 14,942,988 kWh, 20% above the required 4.5% savings requirement of 12,452,490 kWh.

**Figure 44: LIEEP Projected Energy Savings**

	<b>May 31, 2016</b>
	<b>kWh</b>
<b>Mandated Reductions</b>	276,722,000
<b>Low Income Requirement</b>	12,452,490
<b>Percentage</b>	4.5%
<b>EE&amp;C Plan Target</b>	14,942,988
<b>Required Number of Measures*</b>	5
<b>EE&amp;C Plan Number of Measures</b>	9

*Note: Portfolio savings objective is 20% above the mandated reduction to provide for 80% measurement realization.*

9.1.4. Provide statement delineating the manner in which the EE&C plan will achieve the Governmental/Educational/Non-profit requirements prescribed in the August 2, 2012 Implementation Order.

Act 129 requires governmental/educational/non-profit program energy savings be a minimum of 10% of the required reduction in consumption. As shown in the summary table in Section 9.1.2 and the table below, Public Agency Partnership program projected energy reduction exceeds the mandated amounts.

**Figure 45: Governmental/Education/Nonprofit Sector Savings**

<b>May 31, 2016</b>	
<b>kWh</b>	
<b>Mandated Reductions</b>	276,722,000
<b>Low Income Requirement</b>	27,672,200
<b>Percentage</b>	10.0%
 <b>EE&amp;C Plan Target</b>	 33,206,640

*Note: Portfolio savings objective is 20% above the mandated reduction to provide for 80% measurement realization.*

9.1.5. Describe how EDC will ensure that no more than two percent of funds available to implement the plan shall be allocated for experimental equipment or devices.

Funds to reach the goals associated with the Act are limited, such that experimental equipment or devices have not been planned in the program designs. In the event that customized programs are developed for customers who provide for the use of such equipment or devices, funding will be tracked to ensure that no more than two percent of funds are available for such equipment. Experimental equipment or devices were not an issue in Phase I.

9.1.6. Describe how the plan will be competitively neutral to all distribution customers even if they are receiving supply from an EGS.

The General Assembly intended Act 129 to be competitively neutral, and not disadvantage EDCs that had active retail electric markets. The Commission also notes that, in ascertaining legislative intent, the Commission is to presume that the General Assembly did not intend a result that was impossible to execute, unreasonable or unconstitutional.

Duquesne Light program designs for the customer segments, the implementation plans and tracking mechanisms have been developed regardless of the generation supply for the individual customers. The Plan does not discriminate on the basis of generation supply nor does it provide additional opportunities based on the specifics of a customer’s generation supply.

9.2. Other Key Issues:

9.2.1. Describe how this EE&C plan will lead to long-term, sustainable energy efficiency savings in the EDC’s service territory and in Pennsylvania.

Previous sections of this plan describe in detail the specific manner in which the program is designed to address specific consumption profiles and respond to diverse customer needs. Since the early 1970s, utility-sponsored energy efficiency programs have developed and refined a series of approaches to effectively reduce energy consumption in the residential, commercial and industrial sectors. Critical elements to program success have been identified, tested, and replicated by utilities nationwide. All of the measures that make up the EE&C plan for Duquesne Light will draw upon the lessons learned in these other initiatives and will focus on reducing kWh and kW savings within each specific customer sector.

Duquesne Light believes that all residential approaches (mass market/rebates, schools education program and whole home performance/retrofits) are appropriately focused on achieving long-term, sustainable energy efficiency savings. Likewise, programs focused on reducing kWh and kW savings in the commercial sector will primarily achieve reductions through rebates and loans, education and upstream partnerships. Finally, within the industrial sector, programs will focus on reducing kWh and kW savings through rebates and loans, direct install and technical assistance (comprehensive and custom measure-specific), and upstream partnerships. Simply stated, because the funding levels for each specific measure are evaluated on the level of savings that can be reasonably achieved over the useful life of the measure, the applicable screening methods strongly favor funding measures that provide longer-term savings.

The Plan will facilitate the selection and installation of energy efficient equipment, foster construction of energy efficient structures, and encourage and reward energy efficient behaviors.

9.2.2. Describe how this EE&C plan, and the EDC, will avoid possible overlaps between programs offered in different Pennsylvania EDC service territories as well as possibly programs offered in neighboring states.

Duquesne Light recognizes that certain opportunities and challenges exist because of the differences in programs that may be offered in adjacent or nearby service territories. Media markets overlap utility service territories, so messages that are intended for a particular utility's customers are likely to be received by (and potentially acted upon by) customers of other utility service providers. Such messages can raise awareness of, and interest in energy efficiency, therefore the customers of all affected utilities can benefit from such messages, even if they are not served by the sponsoring utility and are not eligible for the advertised programs. To lessen customer confusion, Duquesne Light has clearly identified itself in its sponsored messages through the development and use of the character, Wattley.

Creative and consistent marketing for Watt Choices through the development of a targeted marketing strategy has been key to the program's success during Phase I. A key component of that strategy was the early development of Wattley, an illustrated character of a smiling, CFL bulb that represents the Watt Choices brand and appears in all of the program's marketing. Wattley is also used as a costumed mascot for personal

appearances, including the Pittsburgh Home and Garden Show, community events and in-store events to promote energy-efficient lighting.

From the beginning, the Watt Choices philosophy believes that engaging, upbeat and colorful marketing will make the marketing more memorable for the audience and therefore, more effective. Wattley fits perfectly with the mood and style of that marketing philosophy. Another important element of the Watt Choices marketing strategy is media diversity. In order to reach the broadest range of consumers and businesses, Watt Choices uses a variety of marketing outlets, including television, radio, print, online (including banner ads), billboards, transit (including bus sides and bus shelters), coupon circulars, and theater program ads, which are creatively customized for each show (including *Around the World in 80 Days*, *Mary Poppins*, *How the Grinch Stole Christmas*, and many others). Despite the wide variety of media, the standards for Watt Choices marketing remains consistent, including messaging, colors and format.

Much of the Watt Choices marketing, including photos and videos from personal appearances, is shared via social media, including the Watt Choices Facebook page, Twitter feed and YouTube channel. Growing the Watt Choices social media presence will be an important focus of our marketing in Phase II. As more content has been added to the social media platforms and as the Wattley character has become more recognizable, the number of people following Watt Choices on social media has also increased. Continued and steady growth in this area is an important and cost-effective method of gaining additional exposure with customers and driving action. Phase II will also see continued use of a variety of media and expanding tactics that have been successful in Phase I, for example expanding the use of a coupon by applying them to other print, digital and broadcast media. The Watt Choices online marketing will be optimized with advanced technologies, like search retargeting and conversion retargeting. These approaches will enable us to carefully track customer response success rates in order to remain flexible in our marketing plan.

Duquesne Light also will ensure that resources devoted for the benefit of its customers are in fact used for its customers. The company will confirm customer accounts in PMRS prior to disbursing program funds and only pay for measures (whether installed by the customer or on behalf of the customer by a third party) for its customers.

9.2.3. Describe how this EE&C plan will leverage and utilize other financial resources, including funds from other public and private sector energy efficiency and solar energy programs.

Where funds are available to customers directly, the company will communicate the availability of other resources as part of the information it provides concerning its own program measures, and will facilitate customers qualifying for such funds, to the extent practicable. Finally, where other incentives are available to customers (such as tax deductions or credits), the company will provide customers with relevant information.

The multi-family housing audit/retrofit program provides services that include the administration of energy efficiency audits, technical assistance for measure level project review and bundling, property aggregation, contractor negotiation and



equipment bulk purchasing. Additionally funding sources will be integrated to include program and agency co-funding, performance contracting, grant funding and available financing options. Services also include processing rebate applications and other funding source documentary requirements.

Public Agency Partnerships systematically inventories efficiency gain potential present in local government departments and jurisdictional agencies. Working groups comprised of Duquesne and agency representatives are established to identify project areas within agency departments (and jurisdictional agencies). Working groups define project scopes of service and establish project agreements to co-fund agreed to projects. The project agreements between Duquesne Light and Partnership agencies contain the terms to leverage local agency staff to reach, pre-screen and enroll program participants. The utility and the agency split specified program costs. The partnership puts in place dedicated contacts and a working group structure to identify and evaluate energy efficiency project opportunities within all governmental departments and sub-agencies.

#### 9.2.4. Describe how the EDC will address consumer education for its programs.

Effective customer education is essential to successfully implementing this initiative. Indeed, comprehensive consumer marketing campaigns will generate increased understanding of energy efficiency benefits and demand for energy efficiency measures. Duquesne's customers are diverse. Because the available measures range from simple to comprehensive, no single means of customer communication is likely to succeed in isolation. The benefits of some measures (for instance, consumer-installed efficient lighting) are easily communicated and easily achieved by customers. Benefits of some other measures (for instance, the life-cycle benefits of industrial process measures) are considerably more complex to calculate and installation requires involvement of highly skilled contractors or vendors. Moreover, sustainable energy savings ultimately are best optimized by combining state-of-the-art equipment and materials with modified personal behaviors. Consequently, Duquesne Light will use an extensive combination of means to ensure that appropriate customer education is achieved.

At the threshold level, customer education begins by raising general awareness of energy efficiency. Duquesne Light believes that this threshold goal is best accomplished by repeatedly exposing its customers to short, positive messages that emphasize the general benefits of embracing energy efficiency. The second step involves contemporaneously communicating the array of measures that are available to customers, coupled with messages encouraging customer participation. These customer education initiatives are best accomplished through repeated communications in mass media as well as through existing channels of customer contacts, such as billing messages, bill inserts, messages on hold, and other existing customer communications.

All communications designed to raise awareness and encourage participation should also provide a means for customers to learn more. As the assortment of available measures and the benefits of customer participation are effectively communicated, customers will want to learn more. A primary method of communicating the program



details is interactive web-based communications. Websites offer one of the most cost-effective means of communicating the details in a manner that is easily accessible to a substantial portion of the customer base. In addition to the cost advantage, web-based information is easily updated, and can provide links to extensive existing information. Because a portion of customers are not web-active, printed materials will also be available to customers who request more information.

The School Energy Pledge (SEP) program provides information about energy efficiency at school assemblies and classroom curricula linked to state curriculum standards. The SEP program targets approximately 73,000 primary school students (grades K-5) and provides hands-on lessons linking scientific concepts with practical applications. Students take home what they've learned at school where families implement energy efficiency measures provided through the SEP program.

Finally, dedicated Watt Choices customer service representatives and commercial and industrial major account representatives are trained to respond to customers who have become aware of the available measures and who respond positively to the participation opportunities. Customers can call in on the dedicated toll free number, 1-888-WATTLEY to directly reach the specialized trained representatives.

As a supplement to communications between the company and its customers, it is essential that reliable customer information is available from material and equipment vendors, contractors and installers. The company will work with suppliers, trade associations, community based organization, faith based organizations, contractors, and vendors in the service territory to ensure that accurate, reliable program information is available from these sources as well.

9.2.5. Indicate that the EDC will provide a list of all eligible federal and state funding programs available to ratepayers for energy efficiency and conservation.

The federal and state funding sources available to the Duquesne Light customers for energy efficiency and conservation have been, and are expected to be, changing rapidly. Consequently, the most effective listing of eligible funding sources is available on the company's website. Listing the eligible programs on the website not only allows the list to be updated rapidly, but can also provide links directly to the websites maintained by the federal and state programs for ease of use by customers.

9.2.6. Describe how the EDC will provide the public with information about the results from the programs.

Since the inception of the Phase I Act 129 Plan, Duquesne Light has had biannual stakeholder meetings where results from the programs are communicated and feedback is solicited from the participants. The stakeholders' presentations are then posted to the Watt Choices website where any interested party can also see the results from the programs. Significant data concerning the results from the programs will also be available to the public on the company's website. This data will include (but not be limited to) information concerning the level of customer participation, the calculated energy savings, description of the associated environmental benefits and other significant program milestones and information.

## 10. Appendices

- A. Commission approved electricity consumption forecast for the period of June 1, 2009 through May 31, 2010.
- B. Approved CSP contract(s).
- C. Program by program calculation of savings and costs for each program year. Include separate sections for each program with sub-sections for each year describing savings and costs information. Cost data should include for each program (and for General Administrative Cost Areas of Planning, Evaluation and Other) and each program year separate budgets for (see Example Tables 6A, 6B, and 6C):
  - Direct Program Costs
    - EDC labor
    - EDC materials and supplies
    - CSP labor
    - CSP materials and supplies
    - Other outside services (define)
    - Customer incentives
    - Other (define)
  - Administrative Costs, including but not limited to costs relating to plan and program development, cost-benefit analysis, measurement and verification, and reporting.
  - Total costs.
  - Cost effectiveness calculations by program and by program year, indicating benefits by category (see Example Table 7A – 7E).
- D. Calculation methods and assumptions. Describe methods used for estimating all program costs, including administrative, marketing, and incentives costs; include key assumptions. Describe assumptions and present all calculations, data and results in a consistent format. Reference Appendix D.

Appendix A

Exhibit A-1: Monthly Control Area KWh Forecast (2009)

DUQUESNE LIGHT COMPANY							
Page 1 of 2							
Monthly Control Area KWh Forecast							
	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09
RA	4,274,548	5,411,401	5,328,593	3,645,078	3,406,966	3,760,545	4,553,532
RS	354,805,375	451,458,006	444,543,953	297,577,740	257,697,785	271,130,256	321,326,266
RH	18,467,397	23,285,137	23,415,411	18,055,756	21,157,031	30,475,366	47,515,428
GS	7,577,150	8,269,995	8,564,124	7,235,214	6,784,496	6,574,172	6,798,115
GM < 25 COM	71,070,342	77,492,048	78,331,989	65,785,815	61,248,624	59,221,579	61,194,749
GM < 25 IND	233,505	245,541	249,515	217,930	223,427	216,933	231,137
GM > 25 COM	170,995,579	186,166,670	188,822,118	158,765,204	148,180,728	143,301,101	148,071,612
GM > 25 IND	21,301,687	22,188,099	22,775,216	19,949,952	20,475,788	19,880,049	21,182,454
GMH < 25 COM	4,977,387	5,553,167	5,455,957	4,683,522	4,693,477	5,023,158	6,427,600
GMH < 25 IND	11,669	12,936	13,453	11,437	12,618	13,304	15,385
GMH > 25 COM	16,899,279	18,505,075	18,461,091	15,889,104	15,893,514	17,019,222	21,807,294
GMH > 25 IND	698,150	756,151	772,296	660,748	725,299	761,539	871,322
GL COM	216,257,247	229,525,936	233,747,673	207,377,440	190,552,279	173,713,538	168,181,790
GL IND	75,815,039	75,507,970	78,080,638	71,361,504	71,654,778	68,593,077	69,101,480
GLH COM	41,130,927	44,015,032	44,599,234	38,209,342	37,412,689	39,018,509	40,645,780
GLH IND	5,019,198	5,181,734	5,208,722	4,610,346	4,750,066	4,587,986	4,861,779
L COM	74,598,959	81,343,073	83,298,218	70,920,884	69,822,399	64,792,339	66,059,114
L IND	50,755,994	52,073,076	51,797,279	46,893,700	46,878,874	44,912,186	45,423,805
HVPS	97,680,355	105,357,986	102,983,248	102,481,414	100,031,541	100,043,708	99,767,635
AL COM	6,603	7,053	7,309	7,820	9,524	9,228	11,249
SE	2,326,184	2,290,440	2,125,384	2,361,575	2,213,035	2,339,442	2,304,430
SM RES	32,556	29,774	30,697	31,657	28,112	31,326	29,290
SM COM	101,738	89,657	100,683	91,024	94,501	96,506	90,075
SM LIT	2,328,254	2,402,467	2,367,183	2,281,467	2,385,394	2,340,751	2,504,002
SH	79,096	85,779	78,362	80,999	81,055	73,764	81,861
MTS/UMS (LIT)	835,134	857,194	837,979	852,180	843,710	817,152	859,069
PAL (RES)	5,895	6,343	6,267	6,322	6,200	5,807	5,842
PAL (COM)	110,122	112,164	112,003	109,150	114,500	112,140	116,946
UMS (COM)	1,314,961	1,302,176	1,299,795	1,310,277	1,481,842	1,242,249	1,452,154
<b>Total</b>	<b>1,239,710,330</b>	<b>1,399,532,081</b>	<b>1,403,414,391</b>	<b>1,141,464,601</b>	<b>1,068,860,253</b>	<b>1,060,106,930</b>	<b>1,141,491,196</b>
Residential	377,585,771	480,190,662	473,324,921	319,316,553	282,296,094	305,403,300	373,430,357
Commercial	610,608,961	658,017,926	668,209,103	575,961,017	541,811,768	515,694,848	526,605,841
Industrial	251,515,598	261,323,493	261,880,367	246,187,031	244,752,391	239,008,781	241,454,998

Appendix A

Exhibit A-2: Monthly Control Area KWh Forecast (2010)

DUQUESNE LIGHT COMPANY						
						Page 2 of 2
Monthly Control Area KWH Forecast						
	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Total
RA	3,804,544	3,266,177	3,222,480	2,714,057	2,921,450	46,309,369
RS	274,343,140	235,424,135	231,242,278	201,866,501	234,518,585	3,575,934,019
RH	121,282,498	107,369,610	88,564,708	57,320,187	44,967,106	601,875,635
GS	13,819,499	12,442,082	13,202,476	12,044,887	12,982,280	116,294,490
GM < 25 COM	54,751,048	49,593,955	53,072,385	49,456,543	54,709,796	735,928,873
GM < 25 IND	15,653,268	16,027,917	16,526,234	14,454,899	14,627,608	78,907,915
GM > 25 COM	129,716,391	117,799,919	125,417,218	117,322,621	129,723,441	1,764,282,601
GM > 25 IND	42,006,069	42,708,300	44,238,574	38,920,080	39,322,001	354,948,269
GMH < 25 COM	10,697,509	9,295,725	8,653,697	6,823,017	6,646,966	78,931,181
GMH < 25 IND	2,039,127	1,668,415	1,675,231	1,395,412	1,243,481	8,112,469
GMH > 25 COM	20,500,469	17,777,304	16,467,002	13,026,609	12,715,180	204,961,143
GMH > 25 IND	5,087,392	4,386,637	4,432,511	3,673,797	3,360,042	26,185,884
GL COM	153,749,590	142,927,502	155,983,528	151,039,188	169,244,433	2,192,300,145
GL IND	89,545,133	87,976,337	93,155,544	86,022,751	93,063,742	959,877,992
GLH COM	51,940,634	46,985,539	45,925,302	40,339,712	42,912,377	513,135,078
GLH IND	12,296,817	11,132,864	11,494,670	10,824,436	11,487,346	91,455,963
L COM	56,239,013	52,061,511	56,613,240	56,354,720	61,565,911	793,669,381
L IND	46,573,625	45,941,136	49,565,265	49,275,040	51,251,270	581,341,252
HVPS	97,256,485	87,804,991	101,143,020	92,090,736	94,842,145	1,181,483,264
AL COM	24,224,459	18,549,603	19,476,411	16,956,698	15,654,752	94,920,710
SE	1,633,814	2,077,471	1,872,104	1,956,693	1,851,871	25,352,443
SM RES	439,022	403,065	389,677	454,554	400,108	2,299,839
SM COM	86,879	83,045	86,180	79,882	78,618	1,078,787
SM LIT	1,959,125	1,868,077	2,106,009	1,933,208	2,102,120	26,578,057
SH	443,092	474,541	449,623	430,024	485,429	2,843,626
MTS/UMS (LIT)	703,670	736,595	717,691	687,409	733,548	9,481,330
PAL (RES)	120,938	129,563	127,531	130,087	144,685	695,479
PAL (COM)	90,373	90,714	97,389	93,813	99,263	1,258,578
UMS (COM)	1,179,653	1,032,223	1,183,699	1,131,885	1,137,020	15,067,935
<b>Total</b>	<b>1,232,183,273</b>	<b>1,118,034,954</b>	<b>1,147,101,679</b>	<b>1,028,819,445</b>	<b>1,104,792,574</b>	<b>14,085,511,707</b>
Residential	399,990,141	346,592,549	323,546,675	262,485,386	282,951,933	4,227,114,341
Commercial	521,735,216	473,795,808	501,323,955	469,676,908	512,643,005	6,576,084,357
Industrial	310,457,917	297,646,598	322,231,049	296,657,151	309,197,635	3,282,313,009

**Appendix A**

**Appendix B**

**CSP SERVICES AGREEMENT**

This CSP Services Agreement, dated \_\_\_\_\_, 2009, is made by and between Duquesne Light Company (“DLC” or “Company”) and \_\_\_\_\_ (“CSP” or \_\_\_).

WHEREAS, CSP is in the business of providing information and technical assistance on measures to enable a person to increase energy efficiency or reduce energy consumption services in the utility industry; and

WHEREAS, DLC is an electric distribution company (“EDC”) in Pennsylvania; and

WHEREAS, Act 129 of House Bill 2200 was signed into law by Governor Rendell on October 15, 2008, requiring each EDC to create and submit an energy efficiency and conservation plan by July 1, 2009, and the Pennsylvania Public Utility Commission (“Commission”) is developing procedures to implement a process for review of EDC filings; and

WHEREAS, CSP has prepared and submitted to DLC proposals, CSP’s Proposal for Energy Efficiency and Conservation and Demand Side Response Initiative, dated \_\_\_\_\_, a copy of which is attached hereto as Exhibit A (the “Proposals”), to provide services regarding the implementation of an EE/Conservation Plan as required for the energy efficiency and conservation and demand side response initiatives recently mandated in the Commonwealth of Pennsylvania by Act 129 of House Bill 2200 (the “Plan”); and

WHEREAS, CSP certifies that it was approved by and is a member of the Commission’s Registry of Conservation Service Providers and will maintain such registration with the Commission for the term of the contract; and

WHEREAS, DLC is relying upon the skill and expertise of CSP to implement the Plan as identified in the Proposals and to meet the needs of DLC and to provide the services necessary for the proper and effective energy efficiency and conservation plan compliance.

## Appendix B

NOW, THEREFORE, in consideration of the premises and of the mutual benefits and covenants contained herein, the parties hereto, intending to be legally bound hereby, agree as follows:

### 1. DEFINITIONS

**“Applicable Law”** means any applicable constitution, charter, act, statute, law, ordinance, code, rule regulation, judgment, decree, writ, order, permit, approval or the like of any Governmental Authority.

**“Company”** shall mean Duquesne Light Company.

**“Company’s Site”** shall mean 411 Seventh Avenue, Pittsburgh, PA 15219.

**“Price”** shall mean the purchase price or prices stated in Exhibit C of the CSP Agreement.

**“CSP Agreement”** shall mean this Agreement, along with Exhibits dated \_\_\_\_\_).

**“Services”** shall mean CSP services, Work Product and any other work performed by CSP necessary to fulfill CSP’s obligations under the CSP Agreement.

**“Subcontractor”** shall mean vendors, suppliers and subcontractors of any tier and any other persons or entities contracting directly or indirectly with CSP for or in regard to the CSP Agreement.

**“Work”** shall mean CSP services. Work Product and other work performed by Contractor as necessary to fulfill CSP’s obligations under the CSP Agreement.

**“Work Product”** shall mean studies, reports, evaluations, designs, drawings, procedures, specifications, plans and all other documentation and deliverables which are prepared,

## Appendix B

produced or acquired by CSP for the Work or at the request or direction of Company in connection with the Plan's requirements for reduction in demand and consumption.

### 2. **ENGAGEMENT OF CSP; CSP'S WORK**

Subject to the terms and conditions of this CSP Agreement, DLC hereby engages CSP to properly and completely design, submit and assist with the implementation of an energy efficiency and conservation plan in compliance with Act 129 of House Bill 2200. CSP shall perform the Work in a professional and workmanlike manner and with accuracy and reasonable care and skill. Specifically, the Services to be provided are shown on Exhibit C.

### 3. **CSP'S ACKNOWLEDGMENT**

CSP, by performing the Work and/or delivering the Work Product, by any performance under this CSP Agreement and/or by written acknowledgement, accepts the offer contained in this Agreement and such acceptance of the offer is expressly limited to the terms and conditions as set forth herein. Any term or condition proposed by CSP, in the Proposals or otherwise, which is different from, conflicts with or adds to any of the provisions of this CSP Agreement, shall be deemed to materially alter the provisions of this CSP Agreement and is hereby objected to and rejected by DLC. Except as expressly provided herein, under no circumstances shall any term and/or condition of the Proposal or CSP's sales documents or otherwise become part of this CSP Agreement.

### 4. **PROJECT SCHEDULE**

(a) CSP shall design, submit and assist with the implementation of an energy efficiency and conservation plan to meet all the needs and requirements of DLC, applicable laws and applicable standards, to achieve all the requirements identified in the Proposals and to allow DLC to properly and efficiently implement a Plan as defined in the Scope and Exhibit C. Company shall be entitled to implement adequate provisions and procedures for monitoring performance quality and rate of progress. Such is set forth in more detail in Exhibit C.

(b) (i) Except as expressly set forth herein, CSP is authorized to commence the Work and shall perform the Work in accordance with and within the time schedule contained in the project schedule attached hereto as Exhibit B (the "Project Schedule").



## Appendix B

(ii) If at any time CSP determines that it is behind schedule or is unable to meet any milestone set forth in the Project Schedule, CSP shall, within five (5) days of its knowledge of such delay, promptly notify DLC, in writing, of any anticipated material departure from the Project Schedule and if CSP has reason to believe that a milestone or the Completion Date will not be met and shall specify in said notice corrective action planned by CSP to timely complete the Work or any portion thereof; provided, however, that such notice shall not relieve Vendor of any of its obligations under the CSP Agreement or its obligations to take all actions necessary to achieve the timely and proper completion of the Work. At all times, CSP shall take such actions as may be necessary to facilitate the timely and proper completion of the Work on or prior to any applicable milestones set forth in the Project Schedule or by the Completion Date.

(iii) CSP understands and agrees that time is of the essence with respect to the dates and times set forth in the Project Schedule, including, but not limited to, the Completion Date, and for performance of the Work.

### 5. **PRICE AND PAYMENT**

The price or compensation to be paid to CSP shall be as was bid by CSP Provider and accepted herein by Company upon acceptable performance of the Services. Those payment arrangements are shown in Exhibit D. Compensation shall be performance based, and rewards are provided for achieving successful results and deductions are made for not achieving successful results, as agreed to in Exhibit D.

Unless otherwise agreed upon, statements must be submitted monthly, within 30 days after the end of a billing month. Itemized statements for services and expenses should be submitted directly to David Defide, Duquesne Light Company, 411 Seventh Avenue, Mail Drop 15-1, Pittsburgh, PA 15219. If any (portion) of the Work does not conform to the requirements of the CSP Agreement upon inspection by Company, a corresponding portion of the Price may be withheld by Company until the nonconformity is corrected. Invoices shall be paid within 45 days.

### 6. **WARRANTIES**

CSP represents, warrants and guarantees that the Work provided under the CSP Agreement shall be: (a) provided in accordance with, and conform to, the requirements of the CSP

## Appendix B

Agreement; (b) provided in accordance with the standard of care consistent with generally accepted industry practices and procedures in CSP's particular area of expertise; and (c) suitable for the specified purposes.

CSP represents, warrants and guarantees that it is not an affiliate of Duquesne or any other Pennsylvania EDC. If CSP should merge with a Pennsylvania EDC during the term of the CSP Agreement, then the CSP shall immediately notify Duquesne and provide for automatic termination of the CSP Agreement.

CSP represents, warrants and guarantees that it will conduct criminal background checks for all employees of the CSP that will enter a customer's premises or otherwise have personal contact with an EDC customer.

If, during the sixty-day period following completion of the Work, it is shown there is an error in the Work caused solely by CSP's failure to meet such standards and Company has notified CSP in writing of such error within that period, CSP shall re-perform, at no additional cost to Company, such Work as may be necessary to remedy such error.

Company shall have no liability for defects in the Work attributable to CSP's reliance upon or use of data, design criteria, drawings, specifications or other information furnished by Company.

### 6. **OWNERSHIP RIGHTS**

CSP warrants that the Work shall not infringe or misappropriate the intellectual property rights of any third parties. Company shall have exclusive use of and own title, rights and interests in and to all Work. All Work shall be considered "work made for hire."

At all times, each party shall retain all of its rights in its drawings details, designs, specifications, databases, computer software, copyrights, trade and service marks, patents, trade secrets, and any other proprietary property.

### 7. **FACILITIES, SUPPLIES AND EQUIPMENT**

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To the extent that CSP's Work must be performed at Company's Site, Company shall furnish the facilities, supplies and equipment which Company determines are reasonably required for CSP to perform Work under the CSP Agreement.

### 8. TERMINATION

Company may terminate all or part of the CSP Agreement if CSP: performs below acceptable standards, abandons the work; becomes bankrupt or insolvent; is unable to obtain a bond, if required; assigns the CSP Agreement or subcontracts any portion thereof without Company's written consent; or otherwise breaches or fails to comply with the CSP Agreement; provided, however, that prior to such termination, Company must have notified CSP in writing of its intent to terminate the CSP Agreement and the reasons therefore, and CSP must have failed to cure such non-compliance within ten (10) days after receipt of such notice. If Company so terminates the CSP Agreement, Company may complete or contract with a third party to complete all or part of the Work, and CSP shall be liable to Company for the excess costs to complete all or such part of the Work and any other damage resulting from CSP's non-compliance or breach. Company may suspend all payments to CSP in order to protect ratepayer funds pursuant to Commission order.

Company may, at any time, also terminate by written notice all or part of the CSP Agreement due to modification of its Energy Efficiency/Conservation plan. Upon receipt of such notice, CSP shall bring the work to a prompt conclusion. Company shall pay CSP a proportionate amount of the price due to CSP for the portion of the Work completed up to the effective date of the termination plus costs necessarily incurred directly as a result of the termination, subject to Company's right to audit CSP's books and records. Such payment by Company, however, shall not exceed the total price for the Work set forth in the CSP Agreement.

In all cases, Company may require CSP to transfer title and deliver to Company any contracts, rights, goods, equipment or Work Product produced, received or acquired by CSP for the performance of the CSP Agreement.

### 9. INDEMNIFICATION

CSP shall defend, indemnify and hold harmless Company, its directors, officers, employees, agents, successors and assigns and customers and users of the goods, equipment and services, from and against, and shall pay, all losses, damages (including consequential, indirect and punitive), costs, liabilities, suits, claims and actions, and all related expenses (including attorneys' fees and expenses and the actual costs of litigation) by reason of injury or death to any person or damage to any property or any accident or event arising or relating to the performance of the CSP Agreement or arising from or relating to the goods,

## **Appendix B**

equipment or services or from any other cause to the extent not attributable to the negligence or willful misconduct of Company.

### **10. INTELLECTUAL PROPERTY INDEMNIFICATION**

CSP represents and warrants that all goods, equipment and services shall not and do not infringe any United States or foreign patent, trademark, copyright or other intellectual property right of any third party. CSP shall defend, indemnify and hold harmless Company and its directors, officers, employees, agents, successors and assigns from and against, and shall pay, all losses, damages (including consequential, indirect and punitive), costs, liabilities, suits, claims and actions, and all related expenses (including attorneys' fees and expenses and the actual costs of litigation) based on or arising from an allegation or claim that any goods, equipment or services or parts thereof furnished by CSP infringe or misappropriate the rights of others; and/or if their use by Company is enjoined, CSP shall at Company's option and CSP 's expense either: (a) procure for Company the right to continue using the goods, equipment and services or parts thereof; (b) replace the same with substantially equivalent goods, equipment or services or parts thereof that do not infringe or misappropriate the rights of others; (c) modify the same so they no longer infringe or misappropriate the rights of others; or (iv) refund the price and the transportation and installation costs to Company.

CSP shall obtain from all Subcontractors similar indemnity protection for Company.

### **11. LIMITATION OF LIABILITY**

Company shall not be liable to CSP for any indirect, incidental, special, liquidated, punitive or consequential damages or damages for delay in performance and/or failure to perform, irrespective of whether claims or actions for such damages are based upon contract, tort, negligence, strict liability, warranty or otherwise. CPS's liability for performance shall be limited as set forth in the compensation section except for acts of negligence, misconduct, or intentional acts.

### **12. CHANGES**

Company may, at any time by a written change order, make changes to the scope of the CSP Agreement ("Change Order"). If any change results in a increase or decrease in the quantity

## **Appendix B**

or cost of the goods, equipment or services or otherwise materially affects the CSP Agreement, the Change Order will include an equitable adjustment in the price, the schedule and/or any other affected provisions. Any objection by CSP to the equitable adjustment set forth in a Change Order must be asserted within seven (7) business days after receipt of the Change Order by CSP. Notwithstanding such objection, if directed by Company, CSP shall proceed with the change and performance of the Work.

### **13. SUSPENSION OR INTERRUPTION OF WORK**

Company may direct CSP, in writing, to suspend or interrupt all or any part of the Work for such period of time as Company may determine to be appropriate. CSP shall mitigate the costs of such suspension or interruption. Company agrees to reimburse CSP for those expenses necessarily and directly incurred as a result of such suspension or interruption, subject to Company's right to audit CSP's books and records.

### **14. CONFLICTS, ERRORS AND OMISSIONS**

In the event CSP becomes aware of any conflict, error or omission in the documents comprising the CSP Agreement, CSP shall promptly bring the discrepancy to the attention of Company. Such discrepancy shall be resolved by Company in its sole discretion.

### **15. INSPECTIONS; MONITORING PERFORMANCE QUALITY AND RATE OF PROGRESS**

Company may inspect, at all reasonable times, the progress of the Work, including work performed at CSP's or Subcontractor's facilities. Also, if the CSP Agreement, laws, ordinances, rules, regulations or orders of any governmental authority require any portion of the Work to be inspected, tested or approved, CSP shall give Company reasonable notice to permit Company to observe such inspection, testing or approval. CSP shall provide Company with periodic status reports during the course of the Work.

### **16. COST ACCOUNTS AND INFORMATION/AUDITS**

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CSP shall maintain detailed separate cost data for each CSP Agreement in accordance with generally accepted accounting principles. CSP's records pertaining to the cost of the Work (other than fixed prices agreed to prior to performance of the Work) and CSP's tax records shall be open at all reasonable times for inspection or audit by Company or its representative(s). Company or its representative(s) shall, at all reasonable times, have access to the premises, materials, instructions, working papers, plans, drawings, specifications, memoranda and other information of CSP pertaining to the Work. All CSP's purchase orders or contracts with Subcontractors shall provide that Company or its representative(s) shall have the right to audit Subcontractors' charges to CSP. Company's rights under this Article shall terminate five (5) years after expiration of the warranty periods.

### **17. INSURANCE**

Prior to commencing any portion of the Work, CSP shall properly maintain the following coverage: Statutory Workers' Compensation Insurance in full compliance with the Workers' Compensation and Occupational Disease Acts of each and every state in which Work is to be performed and U.S. Longshoremen's and Harbor Workers' Compensation Acts, if applicable; Employer's Liability Insurance with a limit of not less than \$500,000; Comprehensive General Liability Insurance including Premises-Operation Independent Contractor's Protective, Products, Completed Operation, and Blanket Contractual Liability coverages with a combined single limit of not less than \$1,000,000 per occurrence and \$2,000,000 aggregate; Excess Umbrella Liability Insurance with a single limit of not less than \$2,000,000; and Automobile Liability Insurance covering all owned, hired and non-owned vehicles with a combined single limit of not less than \$1,000,000 per occurrence. CSP shall provide Company with a certificate of insurance specifically evidencing the coverages required above, naming the Company as an additional insured, except under the Workers' Compensation Policy, and stating the policy numbers and the inception and expiration dates of all policies. The certificate of insurance shall also provide for thirty (30) days' prior written notice to Company in the event of cancellation or any material alteration of any policy. The certificate of insurance shall be furnished to Company prior to commencement of any portion of the Work. The Property Damage Liability Insurance shall include the Broad Form Comprehensive General Liability coverage.

### **18. TAXES**

The price set forth in the CSP Agreement shall include, unless otherwise expressly set forth in the CSP Agreement, all federal state and local sales and use taxes applicable to the manufacture and/or sale of the goods and equipment and/or the performance of the services.

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Company will provide to CSP, upon CSP 's request, a tax exemption certificate for taxes for the Work that are exempt under Pennsylvania's Sales and Use Tax laws.

Upon Company's request, CSP shall provide evidence satisfactory to Company of the payment of any taxes which CSP is required to pay. CSP shall also provide to Company such additional information as Company may request to facilitate the determination of taxes for which Company is responsible, if any.

### 19. **CONFIDENTIAL/PROPRIETARY INFORMATION**

CSP agrees to treat as confidential and proprietary any of Company's information which is not generally known to the public and to exercise the same care to prevent the disclosure of such information as CSP exercises to prevent disclosure of its own proprietary and confidential information; however, CSP may disclose such information as required by law or court order. Furthermore, Company's information shall be utilized by CSP only in connection with performance of CSP's obligations under the CSP Agreement.

### 20. **PUBLICITY**

CSP shall not use Company's name nor issue any publicity releases, including but not limited to, news releases and advertising, relating to the CSP Agreement and Services without the prior written consent of Company.

### 21. **FORCE MAJEURE**

Neither party shall be liable for any failure or delay in performing its obligations under the CSP Agreement, or for any loss or damage resulting therefrom, due to causes beyond its reasonable control, including but not limited to, acts of God, public enemy or government, riots, fires, natural catastrophe, strikes or epidemics. In the event of such failure or delay, the date of delivery or performance shall be extended for a period not to exceed the time lost by reason of the failure or delay; provided that Company may terminate the CSP Agreement if the period of failure or delay exceeds fifteen (15) days. Company shall have no obligation to make any payments to CSP during the period of failure or delay. Each

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party shall notify the other promptly of any failure or delay in, and the effect on, its performance.

### 22. ASSIGNMENT

CSP shall not assign the CSP Agreement, in whole or in part, nor contract with any Subcontractor for the performance of the same or any of its parts, without first obtaining Company's written consent. Company's consent shall not be construed as discharging or releasing, nor shall it discharge or release, CSP in any way from the performance of the Work or the fulfillment of any obligation under the CSP Agreement.

### 23. NOTICES

Any notice required under the CSP Agreement shall be in writing and sent to the CSP and Company at their respective addresses identified below:

If to DLC:      c/o David Defide  
                          Duquesne Light Company  
                          411 Seventh Avenue, Mail Drop 15-1,  
                          Pittsburgh, PA 15219.  
                          Via e-mail: ddefide@duqlight.com

If to CSP:



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### 24. **INDEPENDENT CONTRACTOR**

CSP shall operate as an independent contractor in the performance of the CSP Agreement and not as an agent or employee of Company. CSP shall ensure that neither it nor its agents or employees shall act or hold themselves out as agents or employees of Company. CSP shall have complete control of its agents and employees engaged in the performance of the Work.

### 25. **PRIORITY OF DOCUMENTS**

In the event of conflict among the various documents comprising the CSP Agreement, the conflict shall be resolved according to the priority given to the documents in the Purchase Order. If no priority is indicated in the Purchase Order, the conflict shall be resolved according to Article 16, Conflicts, Errors and Omissions.

### 26. **SEVERABILITY**

If any provision(s) of the CSP Agreement is prohibited by law or held to be invalid, illegal or unenforceable, the remaining provisions thereof shall not be affected, and the CSP Agreement shall continue in full force and effect as if such prohibited, illegal or invalid provisions had never constituted a part thereof, with the remaining provisions of the CSP Agreement being enforced to the fullest extent possible.

### 27. **SURVIVAL**

The obligations and rights of the parties pursuant to the Warranties, Liens, Indemnification, Intellectual Property Indemnification, Limitation of Liability, Cost Accountants and Information/Audits and Confidential/Proprietary Information shall survive the expiration or early termination of the CSP Agreement.

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### 28. MBE/WBE

It is the policy of Company to stimulate the growth of Certified Minority, Women and Disabled Business Enterprises (MBEs, WBEs and DBEs) by encouraging their participation in Company's procurement activities and by affording them an equal opportunity to compete for Company's procurements. CSP agrees to carry out this policy to the fullest extent consistent with the requirements of the CSP Agreement (a) through the award of subcontracts to MBEs, WBEs and DBEs or (b) if CSP is a MBE, WBE or DBE, through the use of its own forces. CSP shall include this policy as a provision in all subcontracts.

### 29. LAWS, CODES, RULES, REGULATIONS

CSP and its Subcontractors, at their own expense, shall obtain all necessary licenses and permits and shall comply with all applicable federal, state and local laws, statutes, ordinances, codes, rules and regulations relating to performance of the Work and the CSP Agreement, including but not limited to, safety, products liability, environment, labor standards and workers' compensation laws.

CSP and its Subcontractors shall also comply with Company's policies, rules and procedures.

### 30. HAZARDOUS AND DANGEROUS GOODS

For any goods or equipment provide by CSP pursuant to the CSP Agreement which are defined as hazardous or dangerous under any applicable law, rule or regulation, CSP shall provide Company with hazardous warning and safety handling information, including Material Safety Data Sheets, and appropriate labeling for all such goods and equipment.

### 31. ELECTRIC COMMERCE

At Company's request, Company and CSP may facilitate business transactions for the CSP Agreement by electronically transmitting data. Any data digitally signed pursuant to this Article and electronically transmitted shall be as legally sufficient as a written and signed

## **Appendix B**

paper document exchanged between the parties, notwithstanding any legal requirement that the document be in writing or signed.

### **32. GOVERNING LAW/JURISDICTION**

The CSP Agreement shall be governed by and interpreted in accordance with the laws of the Commonwealth of Pennsylvania, excluding the choice of law and conflicts of law provisions. Any litigation arising from or relating to the CSP Agreement shall only be filed in state or federal court in and for Allegheny County, Pennsylvania and CSP hereby consents and submits to the exclusive jurisdiction of such courts.

### **33. ENTIRE AGREEMENT**

The CSP Agreement contains the entire understanding and agreement of Company and CSP with respect to the subject matter hereof and supersedes and replaces all prior agreements and commitments with respect thereto. There are no oral understandings, terms or conditions and neither Company nor CSP has relied upon any representation, express or implied, not contained in the CSP Agreement.

### **34. AMENDMENT**

Except as expressly set forth herein, no provision of the CSP Agreement may be changed, modified, waived, terminated or amended except by written instrument executed as appropriate by Company and/or CSP.

### **35. WAIVER**

Any failure of Company to enforce any of the provisions of the CSP Agreement or to require compliance with any of its terms at any time during the term of the CSP Agreement shall in no way affect the validity of the CSP Agreement, or any part thereof, and shall not be deemed a waiver of the right of Company thereafter to enforce any and each such provision.

**Appendix B**

**36. CAPTIONS**

The captions contained in the CSP Agreement are for convenience and reference only and in no way define, describe, extend or limit the scope or intent of the CSP Agreement or the intent of any provision contained therein.

IN WITNESS WHEREOF, the parties have executed this Agreement on the respective dates entered below.

DUQUESNE LIGHT COMPANY

CSP

By: \_\_\_\_\_ By: \_\_\_\_\_

Name: \_\_\_\_\_ Name: \_\_\_\_\_

Title: \_\_\_\_\_ Title: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

**Appendix B**

**Exhibit B-1: Bid Materials Sent, Received and Accepted**

**Appendix B**

**Exhibit B-2: Project Schedule**

**Phase 1 -**

**Phase 2 -**

**Phase 3 -**

**Phase 4 -**

**Appendix B**

**Exhibit B-3: Scope of Work**

**Appendix B**

**Exhibit B-4: Compensation**



## **Appendix C**

Program by program calculation of savings and costs for each program year. Include separate sections for each program with sub-sections for each year describing savings and costs information. Cost data should include for each program (and for General Administrative Cost Areas of Planning, Evaluation and Other) and each program year separate budgets for (see Example Tables 6A, 6B, and 6C):

- Direct Program Costs
  - EDC labor
  - EDC materials and supplies
  - CSP labor
  - CSP materials and supplies
  - Other outside services (define)
  - Customer incentives
  - Other (define)
- Administrative Costs, including but not limited to costs relating to plan and program development, cost-benefit analysis, measurement and verification, and reporting.
- Total costs.
- Cost effectiveness calculations by program and by program year, indicating benefits by category (see Example Table 7A – 7E).

## Appendix D

Calculation methods and assumptions. Describe methods used for estimating all program costs, including administrative, marketing, and incentives costs; include key assumptions. Describe assumptions and present all calculations, data and results in a consistent format. Reference Appendix D.

The Phase I EE&C Plan was based on detailed information about utility customer populations, building stock and regional energy use contained in Duquesne Light's filed energy efficiency potential forecast.<sup>32</sup> Duquesne Light's Phase II EE&C Plan incorporates needed updates provided through the use and application of information contained in the Pennsylvania Public Utilities Commission adopted statewide energy efficiency potential study<sup>33</sup> and supporting end-use saturation studies<sup>34,35</sup>. Based on the statewide energy efficiency potential study, the Commission adopted EDC-specific energy efficiency reduction targets and approved EDC-specific acquisition costs.<sup>36</sup>

Given the aforementioned information and an understanding about building stock-specific technology applications capable of rendering the targeted reductions, the project team identified optimal delivery mechanisms. Energy efficiency delivery mechanisms or "programs" described in this Plan were adopted from Phase I benchmarking<sup>37</sup> as well as an assessment of past program performance. Portfolio program content is responsive to requirements of Act 129 with regard to carve-outs for the Governmental/Education/Nonprofit entities, the Low Income segment, and; the Commission's Implementation Order requirements for at least one "comprehensive measure" for residential and small commercial rate classes in EE&C Plans going forward.<sup>38</sup> The aforementioned are the bases for EE&C Plan goals, budgets and programs.

The remaining, unaddressed, EE&C Plan design element is definition of program measures to be promoted and the proportion of Plan savings to be contributed by each identified measure (measure mix). Adoption of an assumed measure mix is required to project Plan savings, benefits, costs and cost-effectiveness.

Phase II EE&C Plan measure content and measure level savings impacts reflect 1) Phase I EE&C planning, 2) measure activity documented during two full years of program operation (program years 2010 and 2011), and; 3) measures contained in, and deemed savings specified by, the 2013 PA Technical Reference Manual. Projected savings impacts include EISA 2007 adjustments to base efficiencies for general service incandescent lamps effective 2013 and 2014. Duquesne Light also adjusted Phase II EE&C Plan measure content to reflect demonstrated needs to promote evolving energy efficient technologies.

Given Commission structured Plan design elements that include savings impact mandates, pre-authorized acquisition costs (budgets), program selection and measure deemed savings, program planning is a fairly formulaic exercise.

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<sup>32</sup> Petition of Duquesne Light Company for Approval of its Energy Efficiency and Conservation and Demand Response Plan Docket No. M-2009-2093217, June 30, 2009; Part (3) Energy Efficiency and Demand Side Response Study, MCR Performance Solutions, LLC, June 26, 2009

<sup>33</sup> Electric Energy Efficiency Potential for Pennsylvania, GDS Associates, Inc, May 10, 2012

<sup>34</sup> Pennsylvania Statewide Residential End-Use and Saturation Study, GDS Associates, Inc, April 18, 2012

<sup>35</sup> Pennsylvania Statewide Commercial & Industrial End-Use & Saturation Study, GDS Associates, April 18, 2012

<sup>36</sup> August 2, 2012 PA PUC adopted Implementation Order at Docket No. M-2012-2289411, M-2008-2069887

<sup>37</sup> *ibid*, footnote 4

<sup>38</sup> Implementation Order Section A, subsection 1. Evaluation of the EE&C Program and Market Potential, subsection b) Market Potential Assessment, page 20

## Appendix D

### Summary of key assumptions:

EE&C Plan Targets: 20% over mandated reductions to account for prospective evaluation, measurement and verification (EM&V), impact study realization rates. Assuming achievement of 100% realization rates is not conservative planning but, hugely optimistic (historically, an 80% realization rate is fair-to-good program performance).

Measure Savings: Per 2013 PA TRM and use of demonstrated net savings impacts for non-TRM “CUSTOM” measures. Figures 10 and 19, provide a listing of residential and commercial/industrial prescriptive measure unit energy savings, respectively.

### Program costs:

Customer Incentives: The Phase II Plan budget allocates \$28,163,550 to the provision of customer incentives promoting energy efficiency measures. Figures 10 and 19, is a listing of residential and commercial/industrial prescriptive measure unit incentives, respectively.

Program Administrative Costs: Duquesne Light’s Phase II EE&C Plan anticipates Plan administrative costs at \$30.3 million, approximately 52% of the authorized budget. Review of these “administrative” costs shows nearly \$7.8 million are material and labor costs to provide energy efficient measures at no cost to hard-to-reach residential and small commercial markets provided through the implementation of “comprehensive” programs, such as whole house audits/retrofit and small commercial direct install programs. Further review of projected administrative budgets will show that Duquesne Light “portfolio” or common management costs to implement the Plan are approximately \$3 million or approximately 5.2% of the Plan budget (see Table 6A). The remaining \$19.5 million administrative costs, approximately 33% of the authorized budget, are for CSP performance payment fees and other direct program implementation costs.

Avoided costs: Duquesne Light’s Phase II EE&C Plan avoided costs are calculated per the Commission’s TRC Order<sup>39</sup>. Avoided costs are developed at the measure level based on TRM specified estimated useful life in years, energy savings profiles, and time-of- use forecast avoided costs. Avoided costs, or program benefits, are expressed as total present value life-cycle avoided costs, using a discount rate of 6.9%. Since Duquesne Light’s Phase I EE&C Plan filing its energy efficiency avoided costs declined 25%, negatively effecting measure, program, portfolio and Plan cost-effectiveness. Duquesne Light Phase II EE&C Plan savings impact, costs and cost-effectiveness are provided in Appendix D.

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<sup>39</sup> PA PUC 2011 Total Resource Cost Test Order, July 28, 2011, at Docket No. M-2009-2108601

Appendix D

Residential Programs	Savings kWh	Savings kW	Portfolio Administration	Direct Program Costs		Total Program Cost	TRC Cost	Program Benefits	Capacity Benefits		Energy Benefits		TRC
				Administration	Incentives				Generation	Trans/Dist	Peak	Off Peak	
Residential Energy Efficiency Program	100,874,929	5,546	\$906,008	\$8,154,075	\$8,451,017	\$17,511,100	\$33,090,031	\$46,245,682	\$12,003,488	\$4,778,219	\$16,151,074	\$13,312,901	1.4
REEP Whole House Audit/Retrofit	997,648	72	\$37,500	\$337,500	\$375,000	\$750,000	\$1,063,620	\$377,207	\$95,366	\$37,962	\$133,685	\$110,193	0.4
Residential Appliance Recycling	4,774,947	591	\$22,414	\$201,723	\$181,600	\$405,737	\$686,439	\$1,925,399	\$494,603	\$196,886	\$676,385	\$557,526	2.8
Residential Home Energy Reporting	28,036,928	0	\$253,646	\$2,282,812	\$0	\$2,536,458	\$2,536,458	\$4,432,509	\$1,042,444	\$414,965	\$1,630,841	\$1,344,259	1.7
School Energy Pledge Program	4,269,288	139	\$102,759	\$924,830	\$257,742	\$1,285,330	\$1,329,391	\$1,967,418	\$703,620	\$280,089	\$539,233	\$444,476	1.5
<b>Program Total</b>	<b>138,953,740</b>	<b>6,347</b>	<b>\$1,322,327</b>	<b>\$11,900,940</b>	<b>\$9,265,358</b>	<b>\$22,488,625</b>	<b>\$38,705,939</b>	<b>\$54,948,215</b>	<b>\$14,339,521</b>	<b>\$5,708,121</b>	<b>\$19,131,218</b>	<b>\$15,769,355</b>	<b>1.4</b>
Low Income Energy Efficiency	14,942,988	751	\$395,685	\$3,561,169	\$185,359	\$4,142,214	\$4,458,866	\$5,119,837	\$1,515,886	\$603,428	\$1,644,777	\$1,355,746	1.1
<b>Total</b>	<b>153,896,728</b>	<b>7,098</b>	<b>\$1,718,012</b>	<b>\$15,462,109</b>	<b>\$9,450,718</b>	<b>\$26,630,839</b>	<b>\$43,164,805</b>	<b>\$60,068,052</b>	<b>\$15,855,407</b>	<b>\$6,311,549</b>	<b>\$20,775,995</b>	<b>\$17,125,101</b>	<b>1.4</b>

Small C&I	Savings kWh	Savings kW	Portfolio Administration	Direct Program Costs		Total Program Cost	TRC Cost	Program Benefits	Capacity Benefits		Energy Benefits		TRC
				Administration	Incentives				Generation	Trans/Dist	Peak	Off Peak	
Commercial Sector Umbrella Program	4,564,319	765	\$12,873	\$115,857	\$500,921	\$629,651	\$1,662,079	\$3,456,374	\$812,255	\$323,334	\$1,272,170	\$1,048,616	2.1
Commercial Upstream Lighting	2,944,770	692	\$28,788	\$259,094	\$365,915	\$653,798	\$888,693	\$2,170,261	\$514,176	\$204,678	\$795,608	\$655,799	2.4
Small Commercial Direct Install	6,126,074	1,029	\$341,656	\$3,074,904	\$0	\$3,416,560	\$3,416,560	\$4,838,901	\$1,120,250	\$445,937	\$1,793,982	\$1,478,731	1.4
Industrial Sector Umbrella Program	1,620,636	272	\$11,961	\$107,649	\$170,212	\$289,823	\$603,307	\$1,200,077	\$282,427	\$112,426	\$441,395	\$363,830	2.0
<b>Total</b>	<b>15,255,800</b>	<b>2,758</b>	<b>\$395,278</b>	<b>\$3,557,504</b>	<b>\$1,037,049</b>	<b>\$4,989,831</b>	<b>\$6,570,639</b>	<b>\$11,665,613</b>	<b>\$2,729,109</b>	<b>\$1,086,374</b>	<b>\$4,303,154</b>	<b>\$3,546,976</b>	<b>1.8</b>

Large C&I	Savings kWh	Savings kW	Portfolio Administration	Direct Program Costs		Total Program Cost	TRC Cost	Program Benefits	Capacity Benefits		Energy Benefits		TRC
				Administration	Incentives				Generation	Trans/Dist	Peak	Off Peak	
Commercial Sector Umbrella Program	11,013,561	1,845	\$31,062	\$279,559	\$1,208,706	\$1,519,328	\$4,010,544	\$8,340,124	\$1,959,947	\$780,194	\$3,069,706	\$2,530,277	2.1
Office Building Energy Efficiency	21,750,658	3,644	\$61,345	\$552,101	\$2,387,072	\$3,000,517	\$7,920,415	\$16,470,893	\$3,870,694	\$1,540,804	\$6,062,356	\$4,997,039	2.1
Healthcare Segment Energy Efficiency	12,325,373	2,065	\$34,762	\$312,857	\$1,352,674	\$1,700,293	\$4,488,235	\$9,333,506	\$2,193,393	\$873,122	\$3,435,335	\$2,831,655	2.1
Retail Segment Energy Efficiency	9,992,864	1,674	\$28,183	\$253,651	\$1,096,688	\$1,378,522	\$3,638,862	\$7,567,191	\$1,778,306	\$707,889	\$2,785,217	\$2,295,780	2.1
Commercial Upstream Lighting	7,105,641	1,669	\$69,465	\$625,185	\$882,943	\$1,577,593	\$2,144,389	\$5,236,772	\$1,240,692	\$493,881	\$1,919,778	\$1,582,422	2.4
Industrial Sector Umbrella Program	3,910,546	657	\$28,862	\$259,754	\$410,717	\$699,333	\$1,455,762	\$2,895,750	\$681,488	\$271,279	\$1,065,072	\$877,911	2.0
Chemical Products Energy Efficiency	13,689,675	2,300	\$101,036	\$909,323	\$1,437,801	\$2,448,161	\$5,096,196	\$10,137,173	\$2,385,689	\$949,669	\$3,728,506	\$3,073,308	2.0
Mixed Industrial Energy Efficiency	12,237,740	2,056	\$90,320	\$812,880	\$1,285,307	\$2,188,507	\$4,555,690	\$9,062,018	\$2,132,662	\$848,947	\$3,333,058	\$2,747,351	2.0
Primary Metals Energy Efficiency	37,681,176	6,331	\$278,104	\$2,502,936	\$3,957,584	\$6,738,624	\$14,027,407	\$27,902,825	\$6,566,670	\$2,613,989	\$10,262,807	\$8,459,359	2.0
<b>Total</b>	<b>129,707,232</b>	<b>22,241</b>	<b>\$723,139</b>	<b>\$6,508,247</b>	<b>\$14,019,493</b>	<b>\$21,250,879</b>	<b>\$47,337,501</b>	<b>\$96,946,252</b>	<b>\$22,809,541</b>	<b>\$9,079,775</b>	<b>\$35,661,834</b>	<b>\$29,395,103</b>	<b>2.0</b>

Large C&I	Savings kWh	Savings kW	Portfolio Administration	Direct Program Costs		Total Program Cost	TRC Cost	Program Benefits	Capacity Benefits		Energy Benefits		TRC
				Administration	Incentives				Generation	Trans/Dist	Peak	Off Peak	
Multifamily Housing Retrofit	5,173,551	239	\$117,492	\$1,057,429	\$579,740	\$1,754,661	\$2,210,171	\$2,094,048	\$522,146	\$207,850	\$747,724	\$616,329	0.9
Public Agency Partnership Program	16,584,950	2,779	\$46,775	\$420,979	\$1,820,150	\$2,287,904	\$6,039,343	\$12,559,111	\$2,951,417	\$1,174,868	\$4,622,567	\$3,810,259	2.1
Education Segment Energy Efficiency	11,448,139	1,918	\$32,288	\$290,590	\$1,256,400	\$1,579,278	\$4,168,794	\$8,669,213	\$2,037,283	\$810,980	\$3,190,832	\$2,630,118	2.1
<b>Total</b>	<b>33,206,640</b>	<b>4,935</b>	<b>\$196,555</b>	<b>\$1,768,998</b>	<b>\$3,656,290</b>	<b>\$5,621,843</b>	<b>\$12,418,308</b>	<b>\$23,322,371</b>	<b>\$5,510,846</b>	<b>\$2,193,698</b>	<b>\$8,561,122</b>	<b>\$7,056,706</b>	<b>1.9</b>

<b>Grand Total</b>	<b>332,066,400</b>	<b>37,032</b>	<b>\$3,032,984</b>	<b>\$27,296,858</b>	<b>\$28,163,550</b>	<b>\$58,493,392</b>	<b>\$109,491,253</b>	<b>\$192,002,289</b>	<b>\$46,904,903</b>	<b>\$18,671,395</b>	<b>\$69,302,105</b>	<b>\$57,123,886</b>	<b>1.8</b>
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## **11. Tables for Pennsylvania EDC Energy Efficiency and Conservation Plans**

To be submitted by EDCs by November 1, 2012

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### **Contents**

- The tables attached on this word document are for illustrative purposes only.
  - A master excel spreadsheet is uploaded on the Commission website. Each EDC is directed to use the master spreadsheet when populating the following tables.
1. Portfolio Summary of Lifetime Costs and Benefits
  2. Summary of Portfolio Energy and Demand Savings
  3. Summary of Portfolio Costs
  4. Program Summaries
  5. Budget and Parity Analysis Summary
  6. Cost Recovery
    - A. Portfolio-Specific Assignment of EE&C Costs
    - B. Allocation of Common Costs to Applicable Customer Sector
    - C. Summary of Portfolio EE&C Costs
  7. TRC Benefits Table (7A – 7E)

**Table 1: Portfolio Summary of Lifetime Costs and Benefits****Notes:**

- o Net Lifetime Benefits and TRC per the August 30, 2012 TRC Test Order.
- o Includes only savings from measures installed and operable between June 1, 2013, and May 31, 2016, and excludes and carryover of Phase I savings.

<b>Portfolio</b>	<b>Discount Rate</b>	<b>Total Discounted Lifetime Costs (\$000)</b>	<b>Total Discounted Lifetime Benefits (\$000)</b>	<b>Total Discounted Net<sup>1</sup> Lifetime Benefits (\$000)</b>	<b>Cost-Benefit Ratio (TRC)</b>
<b>Residential (exclusive of Low-Income)</b>	6.9%	38,705,939	54,948,215	16,242,276	1.4
<b>Residential Low-Income</b>	6.9%	4,458,866	5,119,837	660,971	1.1
<b>Commercial/Industrial Small</b>	6.9%	6,570,639	11,665,613	5,094,974	1.8
<b>Commercial/Industrial Large</b>	6.9%	47,337,501	96,946,252	49,608,752	2.0
<b>Governmental/Educational/Non-Profit</b>	6.9%	12,418,308	23,322,371	10,904,063	1.9
<b>Total</b>		109,491,253	192,002,289	82,511,035	1.8

<sup>1</sup>“Net” refers to the arithmetic difference between the previous two columns. It does not refer to net verified savings.

**Table 2: Summary of Portfolio Energy and Demand Savings**

Notes:

- o Program Year is June 1 – May 31.
- o MWh saved are on a gross-verified basis.

MWh and kW Cumulative Projected Portfolio Savings <sup>2</sup>	Program Year 2013		Program Year 2014		Program Year 2015		Total	
	MWh Saved	kW Saved	MWh	kW	MWh	kW	MWh	kW
Baseline <sup>1</sup>					14,085,512		14,085,512	
Residential Sector (w/o Low	46,318	2,115.7	92,636	4,231.4	138,954	6,347.1	138,954	6,347.1
Residential Low-Income Sector –	4,981	250.3	9,962	500.7	14,943	751.0	14,943	751.0
Commercial/Industrial Small <sup>2</sup>	5,085	919.3	10,171	1,838.6	15,256	2,757.9	15,256	2,757.9
Commercial/Industrial Large	43,236	7,413.8	86,471	14,827.5	129,707	22,241.3	129,707	22,241.3
Governmental/Non-Profit <sup>2</sup>	11,069	1,645.1	22,138	3,290.1	33,207	4,935.2	33,207	4,935.2
EE&C Plan Total – Cumulative	110,689	12,344	221,378	24,688	332,066	37,032	332,066	37,032
Estimated Phase I Carryover								
Total Cumulative Projected								
Percentage of Target to be Met <sup>3</sup>	33.3%		66.7%		100.0%		100.0%	
Percent Reduction from Baseline					2.4%		2.4%	
Commission-Identified Goal <sup>1</sup>					276,722		276,722	
Percent Goal Savings					120.0%		120.0%	

<sup>1</sup> As defined in the August 2, 2012 Implementation Order.

<sup>2</sup> Adjusted for weather and extraordinary load, as applicable.

<sup>3</sup> The August 2, 2012 Implementation Order directed that at least 25% of an EDC’s target amount in each program year.

**Table 3: Summary of Portfolio Costs**

**Notes:**

- o Program Year is June 1 – May 31.

Portfolio Annual Budget	Program Year 2013		Program Year 2014		Program Year 2015	
	Budget	%	Budget	%	Budget	%
<b>Residential Portfolio</b>	\$7,496,208	33.3%	\$7,496,208	33.3%	\$7,496,208	33.3%
<b>Residential Low-Income Portfolio</b>	\$1,380,738	33.3%	\$1,380,738	33.3%	\$1,380,738	33.3%
<b>Commercial/Industrial Small Portfolio</b>	\$1,663,277	33.3%	\$1,663,277	33.3%	\$1,663,277	33.3%
<b>Commercial/Industrial Large Portfolio</b>	\$7,083,626	33.3%	\$7,083,626	33.3%	\$7,083,626	33.3%
<b>Governmental/Educational/Non-Profit Portfolio</b>	\$1,873,948	33.3%	\$1,873,948	33.3%	\$1,873,948	33.3%
<b>Total Portfolio Annual Budget</b>	\$19,497,797	33.3%	\$19,497,797	33.3%	\$19,497,797	33.3%



**Table 4: Program Summaries**

Notes:

- o Includes only savings from measures installed and operable between June 1, 2013, and May 31, 2016, and excludes and carryover of Phase I savings.

Portfolio	Program Name	Program Market	Program Two-Sentence Summary	Plan Period Years	Savings MWh	Savings kW	Portfolio Savings %	Plan Savings %
Residential	Residential Energy Efficiency Program	All Residential	Reduces cost barrier of residential customers to adopting energy efficiency upgrades. Provides prescriptive rebates as well as upstream (manufacturer and distributor) instant rebates and online audit tools.	3	100,875	5,546	72.6%	30.4%
	Whole House Audit/Retrofit Program	All Residential	Provides access to comprehensive home energy audits, direct install measures, education and information about available retrofit resources, including applicable energy efficiency rebates. Home energy audits and direct-install measures are provided at no cost for income qualifying participants.	3	998	72	0.7%	0.3%
	Residential Appliance Recycling Program	All Residential	The program is offered as a cooperative effort between West Penn Power and DLCo using a single contractor to provide recycling services in the territories.	3	4,775	591	3.4%	1.4%
	Residential Home Energy Reporting Program	All Residential	The program educates residential participants about electricity consumption to affect changes in behavior leading to less electricity usage. Home energy reports provide comparisons with peer group energy use to achieve 1.5-3.5% savings.	3	28,037	0	20.2%	8.4%
	School Energy Pledge Program	All Residential	Energy savings take place at home when families adopt energy efficiency measures promoted at school. Offers curriculum, measures and school incentives.	3	4,269	139	3.1%	1.3%
	Totals for Residential Sector					138,954	6,347	100.0%

Table 4: Program Summaries (continued)

Portfolio	Program Name	Program Market	Program Two-Sentence Summary	Plan Period Years	Savings MWh	Savings kW	Portfolio Savings %	Plan Savings %
<b>Residential Low-Income</b>	Low Income Energy Efficiency Program	Low Income Residential	Provides energy efficiency education, kits, whole house audits and contractor installed energy efficiency measures. Leverages the nonresidential Public Agency Partnership Program and Multifamily Housing Retrofit Program.	3	14,943	751	100.0%	4.5%
	Totals for Low-Income Sector					14,943	751	100.0%
<b>Commercial / Industrial Small</b>	Commercial Sector Umbrella Program	Small Commercial	Serves all commercial customers and establishes the terms, conditions and incentive levels for the remaining commercial sub-programs.	3	4,564	765	29.9%	1.4%
	Commercial Upstream Lighting	Small Commercial	The program provides incentives for efficient lighting products directly to technology manufacturer distributors to offset the higher cost, and thereby drive uptake of, the most efficient lighting equipment options.	3	2,945	692	19.3%	0.9%
	Small Commercial Direct Install	Small Commercial	Provides no-cost energy efficient equipment retrofits to small business customers. Installation contractors implement concentrated, directed, service area wide program measures and measure installation services.	3	6,126	1,029	40.2%	1.8%
	Industrial Sector Umbrella Program	Small Industrial	Serves all industrial customers and establishes the terms, conditions and incentive levels for the remaining industrial sub-programs.	3	1,621	272	10.6%	0.5%
	Totals for C&I Small Sector					15,256	2,758	100.0%

Table 4: Program Summaries (continued)

Portfolio	Program Name	Program Market	Program Two-Sentence Summary	Plan Period Years	Savings MWh	Savings kW	Portfolio Savings %	Plan Savings %
Commercial / Industrial Large	Commercial Sector Umbrella Program	Large Commercial	Serves all commercial customers and establishes the terms, conditions and incentive levels for the remaining commercial sub-programs.	3	11,014	1,845	8.5%	3.3%
	Office Building Energy Efficiency	Large Commercial	CSP serves the office building segment by providing energy audits, program assistance and incentives per the commercial sector umbrella program.	3	21,751	3,644	16.8%	6.6%
	Healthcare Segment Energy Efficiency	Large Commercial	Engages regional health care systems, provides framework for comprehensive energy management at medical office buildings and acute care facilities.	3	12,325	2,065	9.5%	3.7%
	Retail Segment Energy Efficiency	Large Commercial	CSP provides energy audits and incentives for retail stores, grocery stores and restaurants; incentives per the commercial sector umbrella program.	3	9,993	1,674	7.7%	3.0%
	Commercial Upstream Lighting	Large Commercial	The program provides incentives for efficient lighting products directly to technology manufacturer distributors to offset the higher cost, and thereby drive uptake of, the most efficient lighting equipment options.	3	7,106	1,669	5.5%	2.1%
	Industrial Sector Umbrella Program	Large Industrial	Serves all industrial customers and establishes the terms, conditions and incentive levels for the remaining industrial sub-programs.	3	3,911	657	3.0%	1.2%
	Chemical Products Energy Efficiency	Large Industrial	Specialized CSP provides audits and incentives for chemical products manufacturing; incentive levels per the industrial umbrella program.	3	13,690	2,300	10.6%	4.1%
	Mixed Industrial Energy Efficiency	Large Industrial	Program provided pursuant to stakeholder request, provides CSP services and incentives to an array of industrial segment customers; incentive levels per the industrial umbrella program.	3	12,238	2,056	9.4%	3.7%
	Primary Metals Energy Efficiency	Large Industrial	Specialized contractor/CSP services and incentives for primary metals product manufacturing. Incentive levels per the industrial umbrella program.	3	37,681	6,331	29.1%	11.3%
	Totals for C&I Large Sector					129,707	22,241	100.0%

Table 4: Program Summaries (continued)

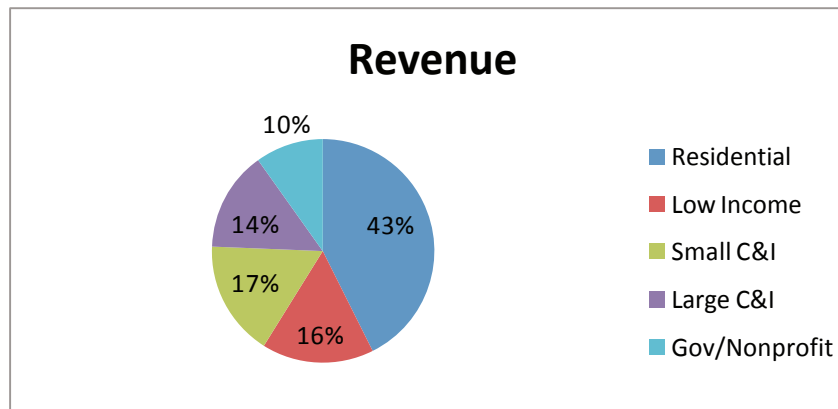
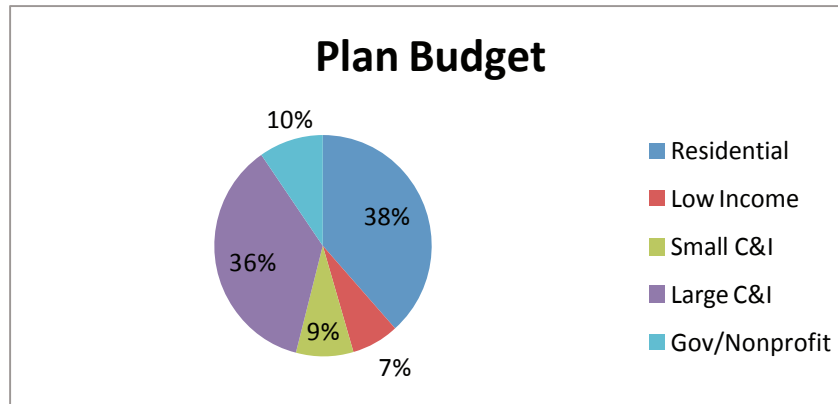
Portfolio	Program Name	Program Market	Program Two-Sentence Summary	Plan Period Years	Savings MWh	Savings kW	Portfolio Savings %	Plan Savings %
Governmental / Non-Profit	Multifamily Housing Retrofit	Master-Metered Residential	Program services include the administration of energy efficiency audits, technical assistance for measure level project review and bundling, property aggregation, contractor negotiation and equipment bulk purchasing. Integrates co-funding, performance contracting, grant funding and available financing options.	3	5,174	239	15.6%	1.6%
	Public Agency Partnership Program	Local Government	Partnerships are formed via MOU with local governmental agencies. Working groups develop project agreements to co-fund agreed to projects.	3	16,585	2,779	49.9%	5.0%
	Education Segment Energy Efficiency	Colleges/Schools	Energy audits, program assistance and incentives for universities, community colleges and primary schools; incentives per the commercial sector umbrella program.	3	11,448	1,918	34.5%	3.4%
	Total for G/E/NP Sector					33,207	4,935	100.0%
<b>Total for Plan</b>					332,066	37,032		100.0%

**Table 5: Budget and Parity Analysis Summary**

Through program year 2015

Customer Class	Budget	% Total EE&C Plan Budget	Budget w/o Other Expenditures	% of Total Customer Revenue	Difference
Residential	\$22,488,625	38.4%	38.4%	42.6%	
Residential Low Income	\$4,142,214	7.1%	7.1%	16.4%	
Residential Subtotal	\$26,630,839	45.4%	45.5%	59.0%	-13.4%
C&I Small	\$4,989,831	8.5%	8.5%	16.7%	
C&I Large	\$21,250,879	36.2%	36.3%	14.4%	
C&I Subtotal	\$26,240,710	44.8%	44.9%	31.0%	13.8%
Governmental/Nonprofit	\$5,621,843	9.6%	9.6%	10.0%	-0.4%
Subtotal	\$58,493,392	99.8%	100.0%	100.0%	
Other Expenditures*	\$144,000	0.2%			
EDC Total	\$58,637,392	100.0%			

\* Costs to maintain elements of the Phase I residential demand response program



**Table 6A: Portfolio-Specific Assignment of EE&C Plan Costs**

Residential Portfolio (including Low Income)					
EE&C Program	Cost Elements			Totals	% Sector Budget
	Portfolio Administration	Program Administration	Incentives		
Residential Energy Efficiency Program	\$906,008	\$8,154,075	\$8,451,017	\$17,511,100	65.8%
REEP Whole House Audit/Retrofit	\$37,500	\$337,500	\$375,000	\$750,000	2.8%
Residential Appliance Recycling	\$22,414	\$201,723	\$181,600	\$405,737	1.5%
Residential Home Energy Reporting	\$253,646	\$2,282,812	\$0	\$2,536,458	9.5%
School Energy Pledge Program	\$102,759	\$924,830	\$257,742	\$1,285,330	4.8%
Low Income Energy Efficiency	\$395,685	\$3,561,169	\$185,359	\$4,142,214	15.6%
<b>Totals</b>	<b>\$1,718,012</b>	<b>\$15,462,109</b>	<b>\$9,450,718</b>	<b>\$26,630,839</b>	<b>100.0%</b>

Small Commercial/Industrial Portfolio					
EE&C Program	Cost Elements			Totals	% Sector Budget
	Portfolio Administration	Program Administration	Incentives		
Commercial Sector Umbrella Program	\$12,873	\$115,857	\$500,921	\$629,651	12.6%
Commercial Upstream Lighting	\$28,788	\$259,094	\$365,915	\$653,798	13.1%
Small Commercial Direct Instal	\$341,656	\$3,074,904	\$0	\$3,416,560	68.5%
Industrial Sector Umbrella Program	\$11,961	\$107,649	\$170,212	\$289,823	5.8%
<b>Total</b>	<b>\$395,278</b>	<b>\$3,557,504</b>	<b>\$1,037,049</b>	<b>\$4,989,831</b>	<b>100.0%</b>

Large Commercial/Industrial Portfolio					
EE&C Program	Cost Elements			Totals	% Sector Budget
	Portfolio Administration	Program Administration	Incentives		
Commercial Sector Umbrella Program	\$31,062	\$279,559	\$1,208,706	\$1,519,328	7.1%
Office Building Energy Efficiency	\$61,345	\$552,101	\$2,387,072	\$3,000,517	14.1%
Healthcare Segment Energy Efficiency	\$34,762	\$312,857	\$1,352,674	\$1,700,293	8.0%
Retail Segment Energy Efficiency	\$28,183	\$253,651	\$1,096,688	\$1,378,522	6.5%
Commercial Upstream Lighting	\$69,465	\$625,185	\$882,943	\$1,577,593	7.4%
Industrial Sector Umbrella Program	\$28,862	\$259,754	\$410,717	\$699,333	3.3%
Chemical Products Energy Efficiency	\$101,036	\$909,323	\$1,437,801	\$2,448,161	11.5%
Mixed Industrial Energy Efficiency	\$90,320	\$812,880	\$1,285,307	\$2,188,507	10.3%
Primary Metals Energy Efficiency	\$278,104	\$2,502,936	\$3,957,584	\$6,738,624	31.7%
<b>Total</b>	<b>\$723,139</b>	<b>\$6,508,247</b>	<b>\$14,019,493</b>	<b>\$21,250,879</b>	<b>100.0%</b>

Governmental/Education/Nonprofit Portfolio					
EE&C Program	Cost Elements			Totals	% Sector Budget
	Portfolio Administration	Program Administration	Incentives		
Multifamily Housing Retrofit	\$117,492	\$1,057,429	\$579,740	\$1,754,661	31.2%
Public Agency Partnership Program	\$46,775	\$420,979	\$1,820,150	\$2,287,904	40.7%
Education Segment Energy Efficiency	\$32,288	\$290,590	\$1,256,400	\$1,579,278	28.1%
<b>Total</b>	<b>\$196,555</b>	<b>\$1,768,998</b>	<b>\$3,656,290</b>	<b>\$5,621,843</b>	<b>100.0%</b>

All Customer Class Portfolios				
EE&C Program	Cost Elements			Totals
	Portfolio Administration	Program Administration	Incentives	
<b>Total</b>	<b>\$3,032,984</b>	<b>\$27,296,858</b>	<b>\$28,163,550</b>	<b>\$58,493,392</b>

**Table 6B: Allocation of Common Costs to Applicable Customer Sector**

Common Cost Element	Total Cost	Basis for Cost Allocation	Class Cost Allocation			
			Residential (including low income)	Commercial/Industrial Small	Commercial/Industrial Large	Governmental/ Nonprofit
Portfolio Administration	\$3,032,984	PY2&3 marketing costs were 7-9% of total administration costs. Other cost to report cost-effectiveness; participation in regulatory oversight processes, and response to non-program specific data requests are estimated at 1-3% of total administration costs. Estimated common admin costs 10%.	\$1,718,012	\$395,278	\$723,139	\$196,555

**Table 6C: Summary of Portfolio EE&C Costs**

<b>Portfolio</b>	<b>Total Sector Portfolio-specific Costs*</b>	<b>Total Common Costs</b>	<b>Total of All Costs</b>
Residential (Including Low Income)	\$24,912,827	\$1,718,012	\$26,630,839
Commercial/Industrial - Small	\$4,594,553	\$395,278	\$4,989,831
Commercial/Industrial - Large	\$20,527,740	\$723,139	\$21,250,879
Governmental/Educational/Nonprofit	\$5,425,288	\$196,555	\$5,621,843
<b>Total</b>	<b>\$55,460,408</b>	<b>\$3,032,984</b>	<b>\$58,493,392</b>



**Table 7A: TRC Benefits Table**

o Submit yearly projections for each program thru final year of that program for TRC evaluation.

Residential	TRC Costs and Benefits By Program Year (\$000)												
	Program	Program Year	TRC <sup>1</sup>	TRC Costs	Avoided Cost Benefits	Benefits Capacity		Benefits Energy		Load Reductions in kW		MWh Saved	
						Generation	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime
Residential Energy Efficiency Program	1		\$11,030	\$15,415	\$4,001	\$1,593	\$5,384	\$4,438	1,849	1,849	33,625	293,826	
	2		\$11,030	\$15,415	\$4,001	\$1,593	\$5,384	\$4,438	1,849	1,849	33,625	293,826	
	3		\$11,030	\$15,415	\$4,001	\$1,593	\$5,384	\$4,438	1,849	1,849	33,625	293,826	
<i>Program Total</i>		1.4	\$33,090	\$46,246	\$12,003	\$4,778	\$16,151	\$13,313	5,546	5,546	100,875	881,479	
Whole House Audit/Retrofit Program	1		\$355	\$126	\$32	\$13	\$45	\$37	24	24	333	2,465	
	2		\$355	\$126	\$32	\$13	\$45	\$37	24	24	333	2,465	
	3		\$355	\$126	\$32	\$13	\$45	\$37	24	24	333	2,465	
<i>Program Total</i>		0.4	\$1,064	\$377	\$95	\$38	\$134	\$110	72	72	998	7,396	
Residential Appliance Recycling	1		\$229	\$642	\$165	\$66	\$225	\$186	197	197	1,592	12,595	
	2		\$229	\$642	\$165	\$66	\$225	\$186	197	197	1,592	12,595	
	3		\$229	\$642	\$165	\$66	\$225	\$186	197	197	1,592	12,595	
<i>Program Total</i>		2.8	\$686	\$1,925	\$495	\$197	\$676	\$558	591	591	4,775	37,786	
Residential Home Energy Reporting	1		\$845	\$1,478	\$347	\$138	\$544	\$448	0	0	9,346	28,037	
	2		\$845	\$1,478	\$347	\$138	\$544	\$448	0	0	9,346	28,037	
	3		\$845	\$1,478	\$347	\$138	\$544	\$448	0	0	9,346	28,037	
<i>Program Total</i>		1.7	\$2,536	\$4,433	\$1,042	\$415	\$1,631	\$1,344	0	0	28,037	84,111	
School Energy Pledge Program	1		\$443	\$656	\$235	\$93	\$180	\$148	46	46	1,423	8,215	
	2		\$443	\$656	\$235	\$93	\$180	\$148	46	46	1,423	8,215	
	3		\$443	\$656	\$235	\$93	\$180	\$148	46	46	1,423	8,215	
<i>Program Total</i>		1.5	\$1,329	\$1,967	\$704	\$280	\$539	\$444	139	139	4,269	24,645	
<b>Total</b>			\$38,706	\$54,948	\$14,340	\$5,708	\$19,131	\$15,769	6,347	6,347	138,954	1,035,417	

**Table 7B: TRC Benefits Table**

o Submit yearly projections for each program thru final year of that program for TRC evaluation.

Low Income	TRC Costs and Benefits By Program Year (\$000)												
	Program	Program Year	TRC <sup>1</sup>	TRC Costs	Avoided Cost Benefits	Benefits Capacity		Benefits Energy		Load Reductions in kW		MWh Saved	
						Generation	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime
Low Income Energy Efficiency	1		\$1,486	\$1,707	\$505	\$201	\$548	\$452	\$250	\$250	\$4,981	\$27,865	
	2		\$1,486	\$1,707	\$505	\$201	\$548	\$452	250	250	4,981	27,865	
	3		\$1,486	\$1,707	\$505	\$201	\$548	\$452	250	250	4,981	27,865	
<i>Program Total</i>		1.1	\$4,459	\$5,120	\$1,516	\$603	\$1,645	\$1,356	751	751	14,943	83,596	

**Table 7C: TRC Benefits Table**

o Submit yearly projections for each program thru final year of that program for TRC evaluation.

Small C&I	TRC Costs and Benefits By Program Year (\$000)											
	Program Year	TRC <sup>1</sup>	TRC Costs	Avoided Cost Benefits	Benefits Capacity		Benefits Energy		Load Reductions in kW		MWh Saved	
					Generation	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime
Commercial Sector Umbrella Program	1		\$554	\$1,152	\$271	\$108	\$424	\$350	255	255	1,521	21,419
	2		\$554	\$1,152	\$271	\$108	\$424	\$350	255	255	1,521	21,419
	3		\$554	\$1,152	\$271	\$108	\$424	\$350	255	255	1,521	21,419
Program Total		2.1	\$1,662	\$3,456	\$812	\$323	\$1,272	\$1,049	765	765	4,564	64,256
Commercial Upstream Lighting	1		\$296	\$723	\$171	\$68	\$265	\$219	231	231	982	13,819
	2		\$296	\$723	\$171	\$68	\$265	\$219	231	231	982	13,819
	3		\$296	\$723	\$171	\$68	\$265	\$219	231	231	982	13,819
Program Total		2.4	\$889	\$2,170	\$514	\$205	\$796	\$656	692	692	2,945	41,456
Small Commercial Direct Install	1		\$1,139	\$1,613	\$373	\$149	\$598	\$493	343	343	2,042	28,747
	2		\$1,139	\$1,613	\$373	\$149	\$598	\$493	343	343	2,042	28,747
	3		\$1,139	\$1,613	\$373	\$149	\$598	\$493	343	343	2,042	28,747
Program Total		1.4	\$3,417	\$4,839	\$1,120	\$446	\$1,794	\$1,479	1,029	1,029	6,126	86,242
Industrial Sector Umbrella Program	1		\$201	\$400	\$94	\$37	\$147	\$121	91	91	540	7,605
	2		\$201	\$400	\$94	\$37	\$147	\$121	91	91	540	7,605
	3		\$201	\$400	\$94	\$37	\$147	\$121	91	91	540	7,605
Program Total		2.0	\$603	\$1,200	\$282	\$112	\$441	\$364	272	272	1,621	22,815
<b>Total</b>		1.8	\$6,571	\$11,666	\$2,729	\$1,086	\$4,303	\$3,547	2,758	2,758	15,256	214,768

**Table 7D: TRC Benefits Table**

o Submit yearly projections for each program thru final year of that program for TRC evaluation.

Large C&I	TRC Costs and Benefits By Program Year (\$000)												
	Program	Program Year	TRC <sup>1</sup>	TRC Costs	Avoided Cost Benefits	Benefits Capacity		Benefits Energy		Load Reductions in kW		MWh Saved	
						Generation	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime
Commercial Sector Umbrella Program	1		\$1,337	\$2,780	\$653	\$260	\$1,023	\$843	615	615	3,671	51,682	
	2		\$1,337	\$2,780	\$653	\$260	\$1,023	\$843	615	615	3,671	51,682	
	3		\$1,337	\$2,780	\$653	\$260	\$1,023	\$843	615	615	3,671	51,682	
<i>Program Total</i>		2.1	\$4,011	\$8,340	\$1,960	\$780	\$3,070	\$2,530	1,845	1,845	11,014	155,047	
Office Building Energy Efficiency	1		\$2,640	\$5,490	\$1,290	\$514	\$2,021	\$1,666	1,215	1,215	7,250	102,067	
	2		\$2,640	\$5,490	\$1,290	\$514	\$2,021	\$1,666	1,215	1,215	7,250	102,067	
	3		\$2,640	\$5,490	\$1,290	\$514	\$2,021	\$1,666	1,215	1,215	7,250	102,067	
<i>Program Total</i>		2.1	\$7,920	\$16,471	\$3,871	\$1,541	\$6,062	\$4,997	3,644	3,644	21,751	306,201	
Healthcare Segment Energy Efficiency	1		\$1,496	\$3,111	\$731	\$291	\$1,145	\$944	688	688	4,108	57,838	
	2		\$1,496	\$3,111	\$731	\$291	\$1,145	\$944	688	688	4,108	57,838	
	3		\$1,496	\$3,111	\$731	\$291	\$1,145	\$944	688	688	4,108	57,838	
<i>Program Total</i>		2.1	\$4,488	\$9,334	\$2,193	\$873	\$3,435	\$2,832	2,065	2,065	12,325	173,514	
Retail Segment Energy Efficiency	1		\$1,213	\$2,522	\$593	\$236	\$928	\$765	558	558	3,331	46,892	
	2		\$1,213	\$2,522	\$593	\$236	\$928	\$765	558	558	3,331	46,892	
	3		\$1,213	\$2,522	\$593	\$236	\$928	\$765	558	558	3,331	46,892	
<i>Program Total</i>		2.1	\$3,639	\$7,567	\$1,778	\$708	\$2,785	\$2,296	1,674	1,674	9,993	140,677	
Commercial Upstream Lighting	1		\$715	\$1,746	\$414	\$165	\$640	\$527	556	556	2,369	33,344	
	2		\$715	\$1,746	\$414	\$165	\$640	\$527	556	556	2,369	33,344	
	3		\$715	\$1,746	\$414	\$165	\$640	\$527	556	556	2,369	33,344	
<i>Program Total</i>		2.4	\$2,144	\$5,237	\$1,241	\$494	\$1,920	\$1,582	1,669	1,669	7,106	100,032	
Industrial Sector Umbrella Program	1		\$485	\$965	\$227	\$90	\$355	\$293	219	219	1,304	18,351	
	2		\$485	\$965	\$227	\$90	\$355	\$293	219	219	1,304	18,351	
	3		\$485	\$965	\$227	\$90	\$355	\$293	219	219	1,304	18,351	
<i>Program Total</i>		2.0	\$1,456	\$2,896	\$681	\$271	\$1,065	\$878	657	657	3,911	55,052	
Chemical Products Energy Efficiency	1		\$1,699	\$3,379	\$795	\$317	\$1,243	\$1,024	767	767	4,563	64,240	
	2		\$1,699	\$3,379	\$795	\$317	\$1,243	\$1,024	767	767	4,563	64,240	
	3		\$1,699	\$3,379	\$795	\$317	\$1,243	\$1,024	767	767	4,563	64,240	
<i>Program Total</i>		2.0	\$5,096	\$10,137	\$2,386	\$950	\$3,729	\$3,073	2,300	2,300	13,690	192,720	
Mixed Industrial Energy Efficiency	1		\$1,519	\$3,021	\$711	\$283	\$1,111	\$916	685	685	4,079	57,427	
	2		\$1,519	\$3,021	\$711	\$283	\$1,111	\$916	685	685	4,079	57,427	
	3		\$1,519	\$3,021	\$711	\$283	\$1,111	\$916	685	685	4,079	57,427	
<i>Program Total</i>		2.0	\$4,556	\$9,062	\$2,133	\$849	\$3,333	\$2,747	2,056	2,056	12,238	172,280	
Primary Metals Energy Efficiency	1		\$4,676	\$9,301	\$2,189	\$871	\$3,421	\$2,820	2,110	2,110	12,560	176,823	
	2		\$4,676	\$9,301	\$2,189	\$871	\$3,421	\$2,820	2,110	2,110	12,560	176,823	
	3		\$4,676	\$9,301	\$2,189	\$871	\$3,421	\$2,820	2,110	2,110	12,560	176,823	
<i>Program Total</i>		2.0	\$14,027	\$27,903	\$6,567	\$2,614	\$10,263	\$8,459	6,331	6,331	37,681	530,468	
<b>Total</b>		2.0	\$47,338	\$96,946	\$22,810	\$9,080	\$35,662	\$29,395	22,241	22,241	129,707	1,825,992	

**Table 7E: TRC Benefits Table**

o Submit yearly projections for each program thru final year of that program for TRC evaluation.

<i>Governmental/Nonprofit</i>	<b>TRC Costs and Benefits By Program Year (\$000)</b>											
Program	Program Year	TRC <sup>1</sup>	TRC Costs	Avoided Cost Benefits	Benefits Capacity		Benefits Energy		Load Reductions in kW		MWh Saved	
					Generation	Trans/Dist	Peak	OffPeak	Annual	Lifetime	Annual	Lifetime
					<i>Multifamily Housing Retrofit</i>	1		\$737	\$698	\$174	\$69	\$249
	2		\$737	\$698	\$174	\$69	\$249	\$205	80	80	1,725	24,277
	3		\$737	\$698	\$174	\$69	\$249	\$205	80	80	1,725	24,277
<i>Program Total</i>		0.9	\$2,210	\$2,094	\$522	\$208	\$748	\$616	239	239	5,174	72,832
<i>Public Agency Partnership Program</i>	1		\$2,013	\$4,186	\$984	\$392	\$1,541	\$1,270	926	926	5,528	77,826
	2		\$2,013	\$4,186	\$984	\$392	\$1,541	\$1,270	926	926	5,528	77,826
	3		\$2,013	\$4,186	\$984	\$392	\$1,541	\$1,270	926	926	5,528	77,826
		2.1	\$6,039	\$12,559	\$2,951	\$1,175	\$4,623	\$3,810	2,779	2,779	16,585	233,479
<i>Education Segment Energy Efficiency</i>	1		\$1,390	\$2,890	\$679	\$270	\$1,064	\$877	639	639	3,816	53,722
	2		\$1,390	\$2,890	\$679	\$270	\$1,064	\$877	639	639	3,816	53,722
	3		\$1,390	\$2,890	\$679	\$270	\$1,064	\$877	639	639	3,816	53,722
<i>Program Total</i>		2.1	\$4,169	\$8,669	\$2,037	\$811	\$3,191	\$2,630	1,918	1,918	11,448	161,165
<b>Total</b>		1.9	\$12,418	\$23,322	\$5,511	\$2,194	\$8,561	\$7,057	4,935	4,935	33,207	467,476
<b>Grand Total</b>		1.8	\$109,491	\$192,002	\$46,905	\$18,671	\$69,302	\$57,124	37,032	37,032	332,066	3,627,249

## **12. Gantt Charts of Program Schedule Summary**

Chart 1: Gantt Chart of Program Schedule Summary (For Section 1.4)

Chart will be formatted to fit on one 8½ - 11 page

It will use color to differentiate schedule items

Provide a separate chart for each Portfolio that includes:

- Start and completion dates for the launch and close of Residential Portfolio programs for Program Years 2013, 2014, and 2015
- Start and completion dates for the launch and close of Commercial/Industrial Small portfolio programs for Program Years 2013, 2014, and 2015
- Start and completion dates for the launch and close of Commercial/Industrial Large portfolio programs for Program Years 2013, 2014, and 2015
- Start and completion dates for the launch and close of Governmental/Non-Profit Small portfolio programs for Program Years 2013, 2014, and 2015

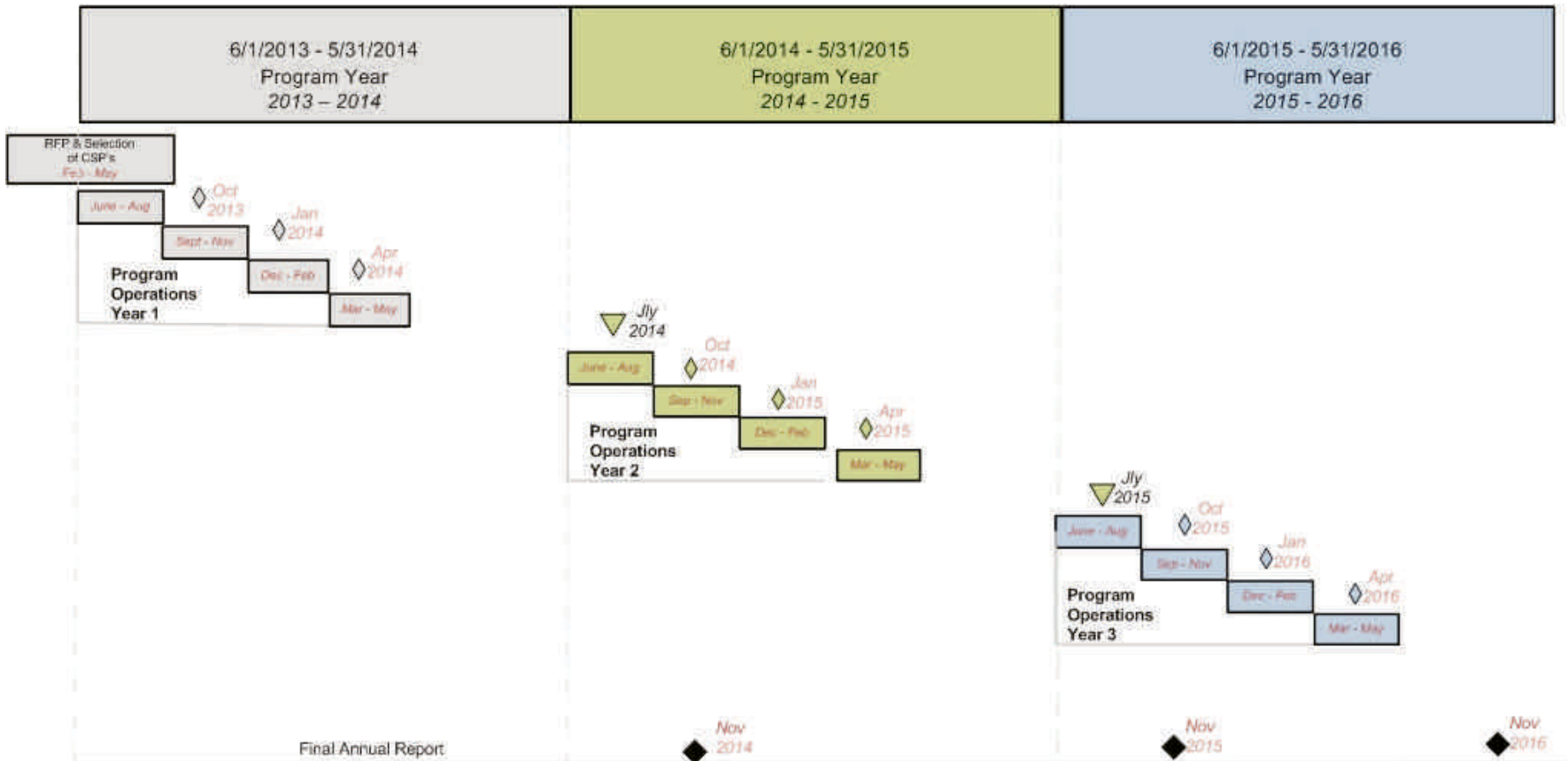
As well, include the following for each chart:

- Start and completion dates for design of each Program Year
- Dates at which CSPs will be selected and placed under contract for each portfolio
- Dates at which EDC will provide annual program reports to Commission



### Energy Efficiency and Conservation Plans Gantt Chart of Program Schedule Summary Residential Portfolio Programs

Chart 1



Reports will be filed with the Commission Secretary, SWE and posted to Duquesne Light's Watt Choices Website.

**Key**

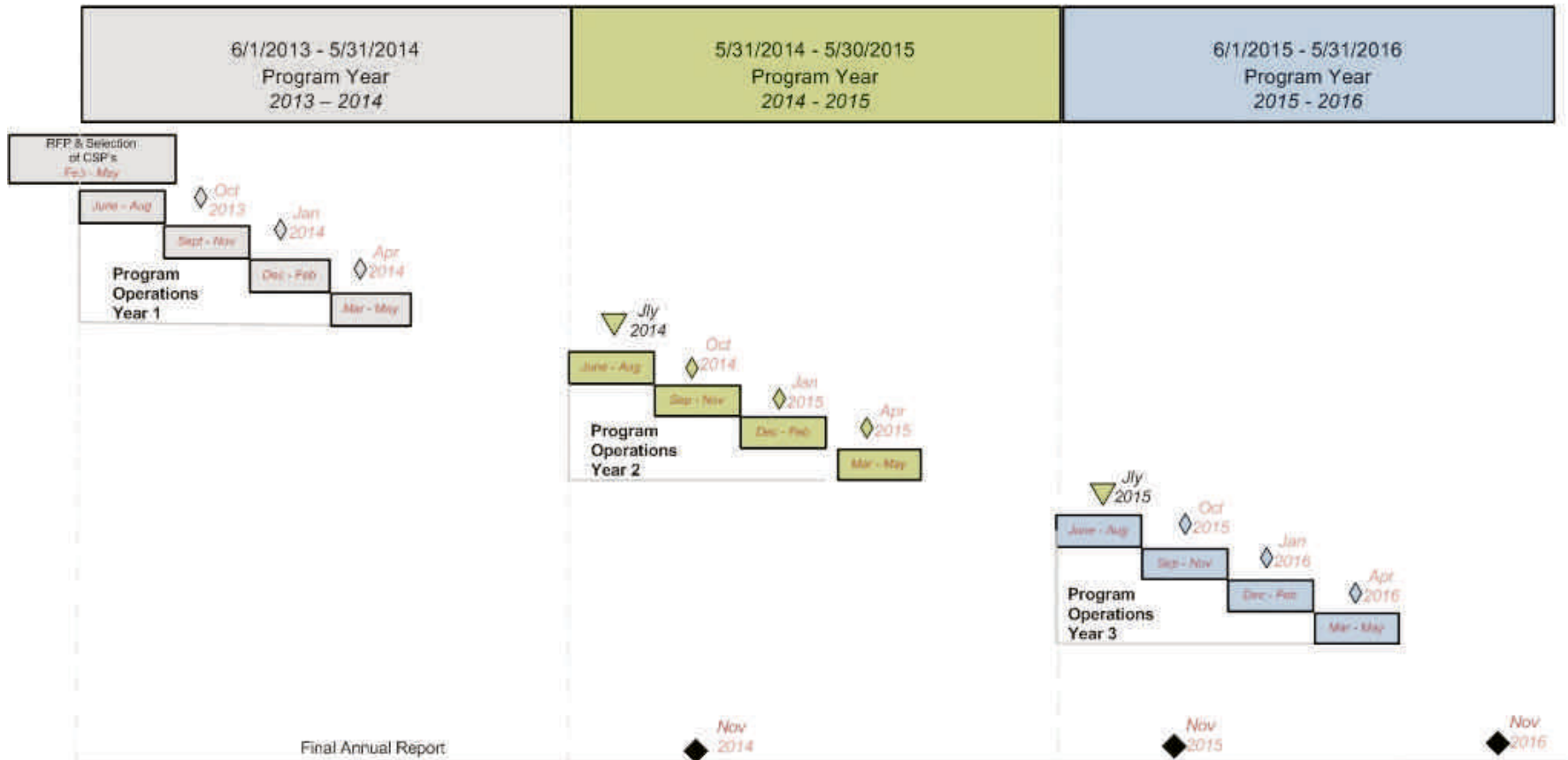
- ◇ Quarterly Report
- ▽ Preliminary Annual Report
- ◆ Final Annual Report

Note: Program Year Ending May 31



### Energy Efficiency and Conservation Plans Gantt Chart of Program Schedule Summary Small Commercial and Industrial Portfolio Programs

Chart 2



Reports will be filed with the Commission Secretary, SWE and posted to Duquesne Light's Watt Choices Website.

**Key**

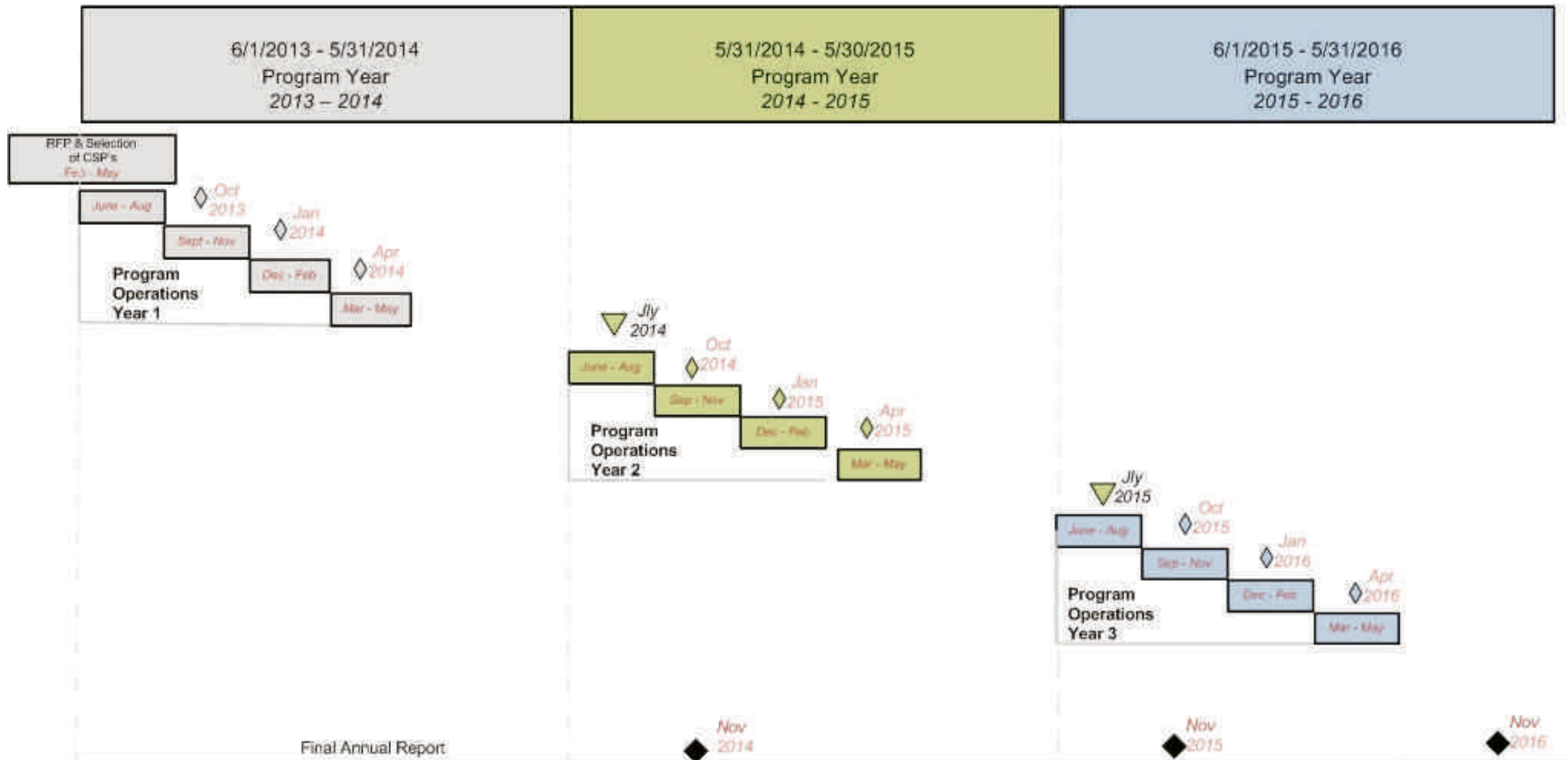
- ◇ Quarterly Report
- ▽ Preliminary Annual Report
- ◆ Final Annual Report

Note: Program Year Ending May 31



### Energy Efficiency and Conservation Plans Gantt Chart of Program Schedule Summary Large Commercial and Industrial Portfolio Programs

Chart 3



Reports will be filed with the Commission Secretary, SWE and posted to Duquesne Light's Watt Choices Website.

**Key**

- ◇ Quarterly Report
- ▽ Preliminary Annual Report
- ◆ Final Annual Report

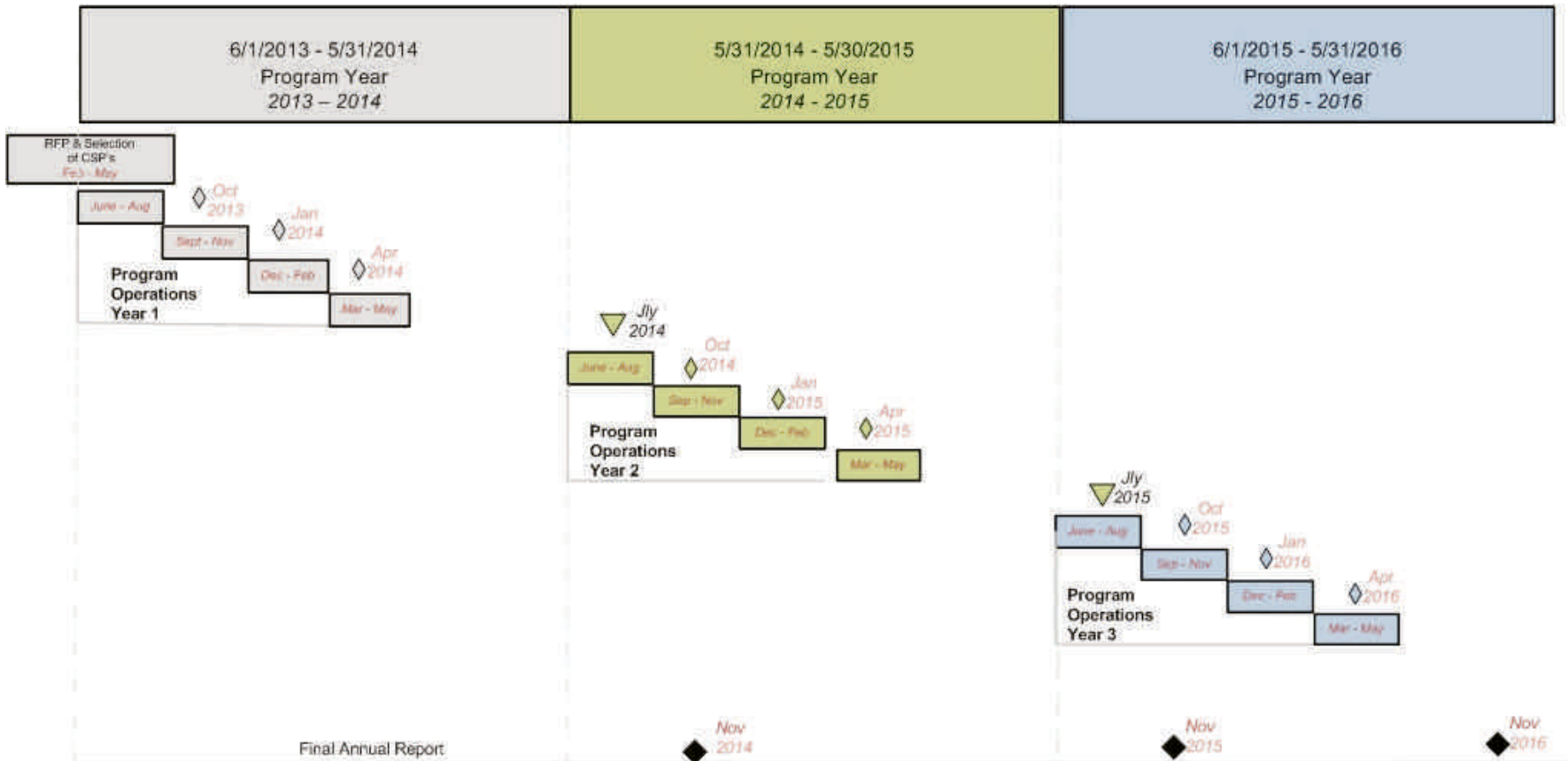
Note: Program Year Ending May 31





### Energy Efficiency and Conservation Plans Gantt Chart of Program Schedule Summary Governmental/Non-Profit Portfolio Programs

Chart 4



Reports will be filed with the Commission Secretary, SWE and posted to Duquesne Light's Watt Choices Website.

**Key**

- ◇ Quarterly Report
- ▽ Preliminary Annual Report
- ◆ Final Annual Report

Note: Program Year Ending May 31