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PA Act 129
Energy Efficiency and Conservation Summary
Plan

Prepared for:
PPL Electric Utility Stakeholders

In Response to:
PENNSYLVANIA PUBLIC UTILITY COMMISSION
Docket No. M-2008-2069887

PPL ELECTRIC UTILITIES

May 20, 2009

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Introduction

PPL Electric Utilities (PPL Electric or the Company) is pleased to provide this summary of its Plan for offering a portfolio of Energy Efficiency and Conservation Programs (EE&C Programs or Portfolio), to the key stakeholders in its service territory. Stakeholder input and support will be critical to developing and delivering successful EE&C programs. PPL Electric Utilities welcomes such input and feedback from the many important trade allies, community-based organizations, consumer advocacy groups, environmental groups and others to whom these EE&C programs may impact.

This document contains summaries of the following EE&C Programs:

1. Efficient Equipment Incentive Program
2. Residential Audit and Weatherization Program
3. Compact Fluorescent Lighting Campaign
4. Appliance Recycling Program
5. ENERGY STAR® New Homes Program
6. Direct Load Control
7. Time of Use Rates
8. Low Income WRAP
9. Low Income e-power Wise
10. PHFA Multifamily Housing Efficiency
11. Commercial and Industrial Custom Incentive Program
12. HVAC Tune-Up Program
13. Curtailment
14. Customer Awareness and Education (TBD)
15. Customer sited renewable generation (TBD)

These 15 programs are designed to meet the goals established by Act 129, enacted by the Pennsylvania Public Utility Commission on January 15, 2009.

Objectives

The EE&C Plan includes a range of energy efficiency and demand response programs that are targeted to every customer segment in PPL Electric's electric service territory. These programs are the key components of a comprehensive electric energy efficiency initiative designed to achieve in excess of 1,313,044 MWh of reduced energy consumption and 298 MW of peak demand savings.

PPL Electric Utilities' energy efficiency programs provide a cohesive structure intended to support residential, low-income, commercial and industrial (C&I), and government and nonprofit sector customers through a logical continuum of energy efficiency actions, starting with facility review and analysis and ending with implementation, verification, and evaluation. Marketing and education functions, customer care and quality

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assurance, program tracking, and evaluation, monitoring, and verification will be common features of all programs. The entire continuum is supported by financial incentives and a delivery approach focused on providing customers with the support they need to achieve their efficiency objectives. Implementation activities range from simple, common energy efficiency and demand response measures that can be installed with minimal oversight or administrative burdens to more complex measures that are vetted through a technical analysis and may (but are not required to) be part of a facility-wide energy management strategy. This approach is depicted in Figure 1

Figure 1. PPL Program Continuum



Program Descriptions

The following summary tables provide all of the key features of each program in PPL Electric Utilities' portfolio.

Efficient Equipment Incentive Program

<p>Objectives</p>	<ul style="list-style-type: none"> • Provide customers with opportunities to reduce their energy costs and increase their energy efficiency. • Encourage customers to install high-efficiency HVAC, lighting equipment and electric appliances. • Encourage the use of high-efficiency/ENERGY STAR® rated equipment for commercial and industrial customers. • Promote strategies that encourage and support market transformation of high-efficiency equipment. • Achieve no less than 4,108,691 installed measures through 2013, with a total reduction of 693,505 MWh and 124,785 kW. 	
<p>Target Markets</p>	<p>All PPL electric customers.</p>	
<p>Program Description</p>	<p>The program promotes the purchase and installation of high-efficiency energy equipment and technologies by providing prescriptive rebates.</p>	
<p>Implementation Strategy</p>	<p>PPL Electric Utilities will select a qualified Conservation Service Provider to provide customer intake, eligibility verification, rebate processing, and tracking. The Conservation Service Provider will be encouraged to work with trade allies (such as equipment dealers and installers), help customers understand the features and benefits of high-efficiency equipment, select high-efficiency equipment, and fill out program applications. Customers will be required to submit a program application with documentation of the equipment purchase and installation(s) for verification and rebate processing. PPL Electric Utilities' energy efficiency staff will provide overall strategic direction and program management for the program, and, supported by other Conservation Service Providers, promotional, marketing, trade ally support, evaluation, and other administrative functions.</p>	
<p>Market Risks and Risk Management Strategies</p>	<p><u>Market Risks:</u></p> <ul style="list-style-type: none"> • Cost of energy efficient equipment. • Changing technology impact lifecycle cost. • Current economic environment may limit customer's ability to purchase energy efficient equipment and technology. • Customer needing emergency replacement may not know about the program. • Customer choosing to buy less efficient equipment. 	<p><u>Risk Mitigation Strategies:</u></p> <ul style="list-style-type: none"> • Offer rebates to offset cost. • Robust marketing strategy.
<p>Marketing Strategy</p>	<ul style="list-style-type: none"> • Promote program in PPL Electric Utilities customer bill insert "Connect." • Communicate and provide access to program information on Web page www.pplelectric.com • Advertise using newspaper, radio, and other mass media (i.e., Pennsylvania Restaurant Association publication, other food service publications). 	

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	<ul style="list-style-type: none"> • Brand marketing material with ENERGY STAR®. • Present program information at seminars, conferences, home shows, and community events. • Maximize co-op advertising opportunities with trade allies. • Publish and distribute program brochure. • Cross-promotion from other PPL Electric Utilities programs.
<p>Eligible Measures and Incentive Strategy</p>	<p>The program provides a financial incentive in the form of a prescriptive rebate on a per-unit basis to customers installing qualifying equipment and technologies. See below for specific equipment measures and incentive amounts.</p>
<p>Implementation Milestones</p>	<ul style="list-style-type: none"> • Develop RFP, including scope of work, selection criteria, and quality assurance protocols for program Conservation Service Providers. • Issue RFP for program Conservation Service Providers. • Execute program implementation contract with selected program Conservation Service Providers. <p>In conjunction with Conservation Service Providers:</p> <ul style="list-style-type: none"> • Conduct outreach to equipment dealers, trade allies, and other interested stakeholders; • Develop marketing plan; • Develop tracking and allocation procedures; • Research and coordinate training needs for participating equipment installers and contractors; • Generate training materials and coordinate program training for trade allies and internal staff; • Design customer education materials; and • Launch Program.
<p>EM&V Plan</p>	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Develop program logic model. • Evaluability assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff, implementation contractors, and key market actors. • Survey program participants and nonparticipants. <p>Impact evaluation:</p> <ul style="list-style-type: none"> • Pre-post analysis of consumption histories. • Engineering analysis: <ul style="list-style-type: none"> • Model-based sampling • Simulation modeling • Monitoring high-impact equipment to calibrate simulation model • Statistical analysis of consumption histories
<p>Administrative Requirements and Participant Roles</p>	<ul style="list-style-type: none"> • PPL Electric Utilities program manager will oversee all program operations and program Conservation Service Providers, and will work with trade allies, other Pennsylvania utilities, and stakeholders. • Advertising Conservation Service Provider will provide external advertising, including television and print ads. • Administrative Conservation Service Provider will handle customer calls, review and verify applications, process rebates, and track and report customer and program information to PPL Electric Utilities.

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	<ul style="list-style-type: none"> • Trade allies (primarily equipment installers) will provide technical assessment and installation. • Quality Assurance Conservation Service Provider will oversee quality assurance. • EM&V Conservation Service Provider will conduct evaluation, measurement, and verification activities. 	
Costs and Cost-Effectiveness	Total Program Cost (Utility): <ul style="list-style-type: none"> • Residential: \$9,456,791 • Small C&I: \$66,013,808 • Large C&I: \$15,504,362 • Govt. & Non-profit: \$14,283,950 	Program Cost-Effectiveness: <ul style="list-style-type: none"> • Residential: 1.85 • Small C&I: 4.99 • Large C&I: 5.84 • Govt. & Non-profit: 4.94

Residential Efficient Equipment Incentives

Measure	Eligibility Rating	Incentive
Central Air Conditioner	SEER 14.5	\$150
Central Air Conditioner	SEER 15	\$350
Central Air Conditioner	SEER 16	\$600
Room AC (1st unit)	ENERGY STAR	\$25
Room AC (2nd unit)	ENERGY STAR	\$25
Programmable Thermostat	ENERGY STAR	\$20
Air-Source Heat Pump	SEER 14.5	\$150
Air-Source Heat Pump	SEER 15	\$350
Air-Source Heat Pump	SEER 16	\$600
Heat Pump Hot Water Heater	N/A	\$300
Dishwasher	ENERGY STAR	\$30
Clothes Washer	ENERGY STAR	\$225
Refrigerator	ENERGY STAR	\$30
Light Fixture	ENERGY STAR	\$10

Commercial and Industrial and Institutional Efficient Equipment Incentives

Measure	Eligibility Rating	Incentive
Cooling Tower-Decrease Approach Temperature	Chiller tonnage > 100 tons	\$8/ton
Cooling Tower-Two-Speed Fan Motor	Replace one speed fan motor	\$1/ton
Pipe Insulation	≥ R-4	\$1.60/linear foot
Water-Cooled Chiller, Screw Chiller	High-Efficiency kW/ton = 0.62	\$7/ton
Water-Cooled Chiller, Screw Chiller	Premium Efficiency kW/ton = 0.574	\$10/ton
(DX) Packaged Air Conditioner System	11.0 EER	\$55/ton
(DX) Packaged Air Conditioner System	11.5 EER	\$80/ton
(DX) Packaged Air Conditioner System	12.0 EER	\$105/ton
Thermostat - Programmable	ENERGY STAR	\$55/unit
Heat Pump - Air Source	EER=11.0, COP=3.5	\$75/ton
Heat Pump - Air Source	EER=11.8, COP=3.8	\$160/ton

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Motors	Premium Efficiency	50% of incremental installed cost
HE Fixture/Design	15% LPD Reduction	50% of incremental installed cost up to \$10,000
Improved Exterior Lighting Design	Full Cut Off Fixtures and Photometric Analysis	50% of incremental installed cost up to \$10,000
Anti-Sweat Heater Controls	Variable Temperature Controls (Humidistat)	\$34/case door
Commercial Reach-In Refrigerator	ENERGY STAR	\$70/unit
Compressor VSD Retrofit	VSD Control	\$70/HP
Demand Control Defrost - Hot Gas	Refrigerant Defrost w/ Hot Gas	\$85/case door
Display Cases	High-Efficiency	\$40/case
Floating Head Pressure Control	N/A	\$20/ton
High-Efficiency Case Fans	High-Efficiency Permanent Split Capacitor (PSC) Motor or ECM	\$20/fan
High-Efficiency Compressor	≥ 15% efficient (base = 40% Efficiency)	\$280/ton
High-Efficiency Evaporator Fans - Walk-ins	N/A	\$50/fan motor
Ice Maker	High-Efficiency	\$115/unit
Night Covers for Display Cases	N/A	\$15/linear foot
Strip Curtains for Walk-Ins	N/A	\$16/linear foot
Faucet Aerators	1.5 GPM	\$0.50/unit
Water Heater Thermostat Setback	Set at 120 degrees	\$45/water heater
Steam Cookers	ENERGY STAR	\$40/unit
CFL	≤19 Watt	\$2
CFL	20-40 Watt	\$4
CFL	41-59 Watt	\$6
CFL	≥60 Watt	\$10
CFL Pin-Base Fixtures	≤19 Watt	\$24
CFL Pin-Base Fixtures	20-40 Watt	\$26
CFL Pin-Base Fixtures	41-59 Watt	\$28
CFL Pin-Base Fixtures	≥60 Watt	\$32
Daylighting Controls	Dimming-Continuous, Fluorescent Fixtures	\$35/controlled fixture
LED Exit Lighting	5 Watts	\$15/unit
Occupancy Sensors	Wall or Ceiling-mounted Lighting Sensor	\$45/sensor
Time Clocks and Timers	N/A	\$100/unit
High-Pressure Sodium	70 W (Exterior)	\$40
Pulse Start Metal Halide - Exterior	<320 Watt	\$25
Pulse Start Metal Halide - Exterior	>320 Watt	\$50
Energy Star Office Equipment	ENERGY STAR	30% of incremental measure cost up to \$50
Delamping and Install Reflectors	Remove 1 or more lamps to equal 2-Lamp 4 ft. T8 + New Reflector	\$50/fixture
Fluorescent High Bay Fixtures Lighting Package	High Bay Lighting - T5HO (4 Lamps, 240 W per fixture)	\$18/lamp
Fluorescent High Bay Fixtures Lighting Package	High Bay Lighting - T8HO (6 Lamps, [240 W] estimated per	\$14/lamp

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	fixture)	
T8 Lighting Package	4 ft. T8 2-Lamp Fixture (lamp and ballast)	\$10
T8 Lighting Package	4 ft. T8 3-Lamp Fixture (lamp and ballast)	\$14
T8 Lighting Package	4 ft. T8 4-Lamp Fixture (lamp and ballast)	\$18
T8 Lighting Package	8 ft. T8 2-Lamp Fixture (lamp and ballast)	\$14
Integrated Lighting, Classrooms And other buildings	50% LPD reduction	50% of incremental installed cost up to \$50,000
ASD/VSD	VFDs with motor HP >5 and ≤200	\$30/HP
Ceiling Insulation	Above code requirement	70% of installed cost
Wall Insulation	Above code requirement	70% of installed cost
Residential Size Refrigerator	ENERGY STAR	\$20
LED Traffic Signals 8" Red	N/A	\$20
LED Traffic Signals 12" Red	N/A	\$25
LED Traffic Signals 8" Green	N/A	\$35
LED Traffic Signals 12" Green	N/A	\$40
LED Traffic Signals Pedestrian 8 or 12"	N/A	\$60
LED Traffic Signals Red Arrow	N/A	\$25
LED Traffic Signals Green Arrow	N/A	\$40

Residential Audit and Weatherization Program

<p>Objectives</p>	<ul style="list-style-type: none"> • Provide customers with the opportunity to participate in a walk-through survey or comprehensive energy audit. • Provide customers with opportunities to reduce their energy costs and increase their energy efficiency. • Encourage customers to weatherize their homes by providing rebates. • Provide customers with installation of low-cost energy saving measures as part of both the survey and the audit, which may result in immediate savings. • Promote other PPL Electric Utilities energy efficiency programs. • Obtain participation by no less than 5,940 customers through 2013, with a total reduction of 5,039 MWh and 447 kW.
<p>Target Market</p>	<ul style="list-style-type: none"> • Residential customers in single-family homes (including mobile homes) with electric heat, electric water heating, or central air conditioning. • Owner or tenant (tenant must have owner's approval).
<p>Program Description</p>	<p>The program provides customers with two tracks:</p> <ol style="list-style-type: none"> 1. A \$50 walk-through survey; and 2. A comprehensive energy audit supported by a customer rebate, which includes diagnostic testing. <p>Participating customers in either the walk-through survey or comprehensive audit:</p> <ul style="list-style-type: none"> • Will receive installation of low-cost energy saving measures, information on the benefits and features of energy efficient equipment, an assessment of energy savings opportunities, and recommendations for energy efficient upgrades; and • Will be eligible for incentives for the installation of weatherization measures, including attic, wall, and foundation insulation and duct sealing. <p>To encourage customers to follow-through on recommendations and implement comprehensive efficiency upgrades, participants may receive bonus rebates for the installation of more than one recommended qualifying measures.</p>
<p>Implementation Strategy</p>	<p>PPL Electric Utilities may select Conservation Service Providers to:</p> <ol style="list-style-type: none"> a) Perform \$50 walk through surveys; b) Oversee comprehensive energy audits; or c) Both. <p>The administrative Conservation Service Provider will manage customer intake and routing to the appropriate track, process applications and rebates, track and verify program data, and provide customer and transaction information to PPL Electric Utilities. The administrative Conservation Service Provider will refer customers wanting a comprehensive energy audit to independent trade allies who have participated in PPL Electric Utilities' BPI training program. PPL Electric Utilities' energy efficiency staff will provide overall strategic direction and program management for the program and, supported by other Conservation Service Providers, promotional, marketing, trade ally support, evaluation, and other administrative functions.</p>

<p>Market Risks and Risk Management Strategies</p>	<p><u>Market Risks:</u></p> <ul style="list-style-type: none"> • Cost of comprehensive energy audit. • Current economic environment may limit customers' ability to purchase energy efficient equipment and technology. • Lack of program awareness among customers and trade allies. • Number of qualified contractors to perform work. • Damage done to customer's home. • Health hazards due to over-tightening a home (CO, mold mildew caused by moisture entrapment, radon). 	<p><u>Risk Mitigation Strategies:</u></p> <ul style="list-style-type: none"> • Offer rebate to offset cost. • Provide free walk-through survey with low-cost energy savings measures. • Robust marketing strategy. • Conservation Service Provider to collaborate with trade schools and other resources. • Training and quality assurance with all contractors. • Insurance.
<p>Marketing Strategy</p>	<ul style="list-style-type: none"> • Promote program in PPL Electric Utilities customer bill insert "Connect." • Communicate and provide access to program information on Web page www.pplelectric.com • Advertise using newspaper, radio, and other mass media. • Brand marketing material with ENERGY STAR®. • Present program information at seminars, conferences, and community events. • Maximize co-op advertising opportunities with trade allies. • Publish and distribute program brochure. • Cross-promotion from other PPL Electric Utilities programs. 	
<p>Eligible Measures & Incentive Strategy</p>	<p>The program provides four distinct incentives to program participants: 1) energy efficiency measures that may be installed directly by the energy auditor; 2) \$50 walk-through energy audits; 3) rebates for comprehensive energy audits and weatherization measures; and 4) bonus rebates, which are awarded for customers installing more than one recommended energy efficiency measure following the audit. Incentive levels follow:</p> <ul style="list-style-type: none"> • \$50 walk-through energy survey. • Direct installation measures (CFLs, faucet aerator, smart strip, water heater setback, water heater pipe insulation) with energy survey or energy audit. • \$250 comprehensive audit rebate for all-electric customers (central air conditioning and heat). • \$150 comprehensive audit rebate for central air conditioning customers with heat source other than electric. • Insulation and air sealing rebate 70% of installed cost up to \$500 cap. • \$35 duct sealing rebate. • \$50 per measure bonus rebate when more than one audit-recommended measure is installed. 	
<p>Implementation Milestones</p>	<ul style="list-style-type: none"> • Develop RFP, including scope of work, selection criteria, and quality assurance protocols for program Conservation Service Provider(s). • Issue RFP for program Conservation Service Provider(s). 	

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	<ul style="list-style-type: none"> • Execute program implementation contract(s) with selected program Conservation Service Providers. <p>In conjunction, the Conservation Service Provider(s) will provide outreach to trade allies and other interested stakeholders:</p> <ul style="list-style-type: none"> • Train internal staff and service vendors. • Develop customer and marketing materials. • Develop quality assurance plan approved by PPL Electric Utilities. • Outreach to trade allies, vendors, and other market actors. • Identify audit software for analysis and reporting. • May choose to negotiate bulk purchases for direct install measures. • Determine data requirements for program evaluation. 	
<p>EM&V Plan</p>	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Develop program logic model. • Evaluability assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff, implementation contractors, and key market actors. • Survey program participants and nonparticipants. <p>Impact evaluation:</p> <ul style="list-style-type: none"> • Sample-based verification of installations. • Quantify type, specification, and frequency of measures installed and operating. • Pre-post analysis of consumption histories. 	
<p>Administrative Requirements and Participant Roles</p>	<ul style="list-style-type: none"> • PPL Electric Utilities program manager will oversee all program operations and program Conservation Service Providers, and will work with trade allies, other Pennsylvania utilities, and stakeholders. • Advertising Conservation Service Provider will provide external advertising, including television and print ads. • Administrative Conservation Service Provider will handle customer calls, review and verify applications, process rebates, rout calls to BPI-certified auditors and the walk-through audit Conservation Service Provider, and track and report program results to PPL Electric Utilities. • Walk-through audit Conservation Service Provider delivers walk through audits. • Trade Allies (BPI-certified auditors) will complete comprehensive audits. • Quality Assurance Conservation Service Provider will oversee quality assurance. • EM&V Conservation Service Provider will conduct evaluation, measurement, and verification activities. 	
<p>Costs and Cost-Effectiveness</p>	<p>Total Program Cost (Utility):</p> <ul style="list-style-type: none"> • Residential: \$2,508,193 	<p>Program Cost-Effectiveness</p> <ul style="list-style-type: none"> • Residential: 1.37

Compact Fluorescent Lighting Campaign

<p>Objectives</p>	<ul style="list-style-type: none"> • Encourage customers to replace incandescent light bulbs with ENERGY STAR® CFLs purchased through point-of-sale (POS) discounts or provided free through a giveaway program. • Promote strategies that encourage and support market transformation. • Distribute no less than 7,125,300 CFLs through 2013, with a total reduction of 363,390 MWh and 56,274 kW. 	
<p>Target Market</p>	<ul style="list-style-type: none"> • All PPL Electric Utilities' customers. 	
<p>Program Description</p>	<p>The program has two components:</p> <ol style="list-style-type: none"> 1. An upstream buy-down that will significantly reduce the customer cost of ENERGY STAR® CFL bulbs. 2. CFL giveaway events and activities. 	
<p>Implementation Strategy</p>	<p>A Conservation Service Provider will manage a turnkey buy-down program, including negotiating bulk pricing, recruitment, and coordination with retail stores, marketing and outreach to retailers, and tracking and providing program reports. There may be an additional Conservation Service Provider selected to deliver a CFL giveaway program. PPL Electric Utilities' energy efficiency staff will provide overall strategic direction and program management for the program and, supported by other Conservation Service Providers, promotional, marketing, trade alley support, evaluation, and other administrative functions.</p>	
<p>Market Risks and Risk Management Strategies</p>	<p>Market Risks:</p> <ul style="list-style-type: none"> • Cost for energy-efficient bulbs. • Lack of customer awareness. • Willingness of retailer to stock CFLs. • Other retail bulb promotions may be more attractive. • Negative media attention associated with CFL mercury content and bulb disposal. • CFL performance. 	<p>Risk Mitigation Strategies:</p> <ul style="list-style-type: none"> • Provide buy-down and giveaways. • Robust marketing strategies, including point-of-sale discounts. • Ongoing retailer communications, training, outreach, and education. • Provide customer education and outreach on the proper handling and disposal of CFLs and mercury content.
<p>Marketing Strategy</p>	<ul style="list-style-type: none"> • Promote program in PPL Electric Utilities customer bill insert "Connect." • Communicate and provide access to program information on Web page www.pplelectric.com • Advertise using newspaper, radio, and other mass media. • Brand marketing material with the ENERGY STAR® logo. • Present program information at seminars, conferences, and community events. • Maximize co-op advertising opportunities with trade allies. • Publish and distribute program brochure. • Cross-promotion from other PPL Electric Utilities programs. 	

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<p>Eligible Measures and Incentive Strategy</p>	<p>Conservation Service Provider will negotiate bulk pricing and provide manufacturer buy-downs to participating CFL manufacturers, which are expected to cover approximately 50% of the retail cost of CFLs and 100% of the cost of giveaway bulbs.</p>	
<p>Implementation Milestones</p>	<ul style="list-style-type: none"> • Develop RFP, including scope of work, selection criteria and quality assurance protocols for program Conservation Service Provider(s). • Issue RFP, whereby the Conservation Service Provider bidder will be requested to bid on: <ul style="list-style-type: none"> a) A buy-down component; b) A giveaway component; or c) Both. <p>One or more Lighting Conservation Service Provider(s) will be selected based on the RFP response to:</p> <ul style="list-style-type: none"> • Negotiate manufacture buy-down; • Recruit participating retailer(s); • Select and execute contracts with buy-down Conservation Service Provider and giveaway program Conservation Service Provider; and • Develop and execute marketing and outreach plan and materials. <p>The Lighting Conservation Service Provider in conjunction with PPL Electric Utilities will:</p> <ul style="list-style-type: none"> • Develop tracking and allocation procedures; and • Determine reporting data requirements for program evaluation. 	
<p>EM&V Plan</p>	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Develop program logic model. • Evaluability assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff. • Survey program participants and nonparticipants. <p>Impact evaluation:</p> <ul style="list-style-type: none"> • Pre-post analysis of consumption histories. • Engineering analysis: <ul style="list-style-type: none"> • Verify number of installations • Verify location of installations in the home • Verify full-load hours • Statistical analysis of consumption histories 	
<p>Administrative Requirements and Participant Roles</p>	<ul style="list-style-type: none"> • PPL Electric Utilities program manager will oversee all program operations and program Conservation Service Providers, and will work with trade allies, other Pennsylvania utilities, and stakeholders. • The Lighting Conservation service Provider will track all program activities and report to PPL Electric Utilities. • Quality Assurance Conservation Service Provider will oversee quality assurance. • EM&V Conservation Service Provider will conduct evaluation, measurement, and verification activities. 	
<p>Costs and Cost-Effectiveness</p>	<p>Total Program Cost (Utility)</p> <ul style="list-style-type: none"> • Residential: \$14,487,263 • Low-Income: \$2,904,384 	<p>Program Cost-Effectiveness</p> <ul style="list-style-type: none"> • Residential: 8.55 • Low-Income: 8.5

Appliance Recycling Program

<p>Objectives</p>	<ul style="list-style-type: none"> • Encourage customers to dispose of their existing appliances when they purchase new ones or eliminate a second unit that may not be needed. • Reduce the use of secondary, inefficient appliances. • Ensure appliances are disposed of in an environmentally responsible manner. • On-site decommissioning to ensure appliances are not resold in a secondary market. • Collect and recycle no less than 79,530 appliances through 2013 with a total reduction of 65,293 MWh and 16,752 kW. 	
<p>Target Market</p>	<p>All PPL Electric Utilities customers with working, residential grade appliances.</p>	
<p>Program Description</p>	<p>The Appliance Recycling Program has two components:</p> <ol style="list-style-type: none"> a) Refrigerator and freezer retirement and harvesting; and b) Room air conditioner turn-in events. <p>A customer incentive will be offered for disposal of older, inefficient refrigerators, freezers, and room air conditioners in an environmentally responsible manner. The program provides free pick-up and disposal of old refrigerators and freezers. Units must be plugged in and functioning when picked up.</p> <p>PPL Electric Utilities will also sponsor turn-in events around its territory where customers can bring their old, inefficient air conditioners. Appliances must be in working condition. Customers will be given rebate information on new ENERGY STAR® room air conditioners.</p>	
<p>Implementation Strategy</p>	<p>A Conservation Service Provider will provide turnkey services to manage and administer the program, including:</p> <ul style="list-style-type: none"> • Marketing; • Customer intake and service; • Processing applications and rebates; • Tracking program data; and • Providing customer and transaction information to PPL electric utilities. <p>PPL Electric Utilities' energy efficiency staff will provide overall strategic direction and program management for the program and, supported by other Conservation Service Providers, promotional, marketing, evaluation, and other administrative functions.</p>	
<p>Market Risks and Risk Management Strategies</p>	<p>Market Risks:</p> <ul style="list-style-type: none"> • Time required for customer to be available for pick up. • Need to fill out rebate form(s). • Lack of program awareness among customers. 	<p>Risk Management Strategies:</p> <ul style="list-style-type: none"> • Conservation Service Provider responsible to work with customer to ensure that the pick-up is as convenient as possible. • Provide simple rebate forms. • Robust marketing strategy, leveraging ENERGY STAR® brand.

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	<ul style="list-style-type: none"> • Customers do not see benefit of harvesting qualified appliance(s). 	<ul style="list-style-type: none"> • Conservation Service Provider will work with retailers to display information about the benefits to harvesting. • Customers receive an incentive for purchasing a new air conditioner.
<p>Marketing Strategy</p>	<ul style="list-style-type: none"> • Promote program in PPL Electric Utilities customer bill insert “Connect.” • Communicate and provide access to program information on Web page www.pplelectric.com • Conservation Service Provider to advertise using newspaper, radio, and other mass media. • Use existing materials ENERGY STAR® refrigerator harvesting as a resource for designing marketing materials; include program on ENERGY STAR® “Find a fridge or freezer recycling program” Web page. • Brand program marketing materials with ENERGY STAR® label. • Present program information at seminars, conferences, and community events. • Conservation Service Provider to publish and distribute program brochures to CBO’s, community organizations, such as a Chamber of Commerce. • Bill insert to all customers highlighting the benefits of refrigerator and air conditioning harvesting. • Cross-promotion from other PPL Electric Utilities programs. 	
<p>Eligible Measures and Incentive Strategy</p>	<p>Eligible measures for this program include:</p> <ul style="list-style-type: none"> • Refrigerator (Working unit; > 10 CU FT; meets age requirements); • Freezer (Working unit; meets age requirements); and • Room air conditioner (Working unit). <p>There are three distinct financial incentives associated with the program:</p> <ul style="list-style-type: none"> • Free pick-up and disposal of refrigerator or freezer; • Free drop-off events where customers can drop-off and dispose of inefficient room air conditioners; and • \$35 rebate per appliance. <p>There is a limit of two rebates of each type of appliance per customer address.</p>	
<p>Implementation Milestones</p>	<ul style="list-style-type: none"> • Developed and released RFP in April 2009 that included a scope of work, selection criteria, and quality assurance protocols for program Conservation Service Provider. • Select Conservation Service Provider for this turnkey program. • Execute program implementation contract with selected program Conservation Service Provider. <p>In conjunction with PPL Electric Utilities, Conservation Service Provider will:</p> <ul style="list-style-type: none"> • Develop customer and marketing materials; • Provide outreach to trade allies and other interested stakeholders; • Post customer information Web page; • Implement all aspects of this turnkey program; • Develop quality assurance plan approved by PPL Electric Utilities; • Determine reporting and data requirements for program evaluation; • Coordinate with other utilities and stakeholders; and 	

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	<ul style="list-style-type: none"> • Launch program, approximately 2 months after Commission approval of EE&C Plan. 	
<p>EM&V</p>	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Develop program logic model. • Evaluability assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff. • Survey program participants and nonparticipants. <p>Impact evaluation:</p> <ul style="list-style-type: none"> • Pre-post analysis of consumption histories. • Engineering analysis: <ul style="list-style-type: none"> • Verify number of installations • Verify location of installations in the home • Verify full-load hours • Statistical analysis of consumption histories 	
<p>Administrative Requirements and Participant Roles</p>	<ul style="list-style-type: none"> • PPL Electric Utilities program manager will oversee all program operations and program Conservation Service Providers, and will work with trade allies, other Pennsylvania utilities, and stakeholders. • Appliance recycling Conservation Service Provider will track all program activities and report monthly to PPL Electric Utilities. • Quality Assurance Conservation Service Provider will oversee quality assurance. • EM&V Conservation Service Provider will conduct evaluation, measurement, and verification activities. 	
<p>Costs and Cost-Effectiveness</p>	<p>Total Program Cost (Utility)</p> <ul style="list-style-type: none"> • Residential: \$13,413,893 	<p>Program Cost-Effectiveness</p> <ul style="list-style-type: none"> • Residential: 5.79

ENERGY STAR® New Homes Program

<p>Objectives</p>	<ul style="list-style-type: none"> • Promote construction of energy-efficient new homes. • Educate construction industry professionals and customers about the benefits of ENERGY STAR® new homes. • Obtain participation by no less than 1,930 customers through 2013 with a total reduction of 5,211MWh and 593 kW. 	
<p>Target Market</p>	<p>New single-family construction contractors and buyers.</p>	
<p>Program Description</p>	<p>The program is based on the U.S. Environmental Protection Agency’s ENERGY STAR® New Homes program. Participants will work within the framework of the Residential Energy Services Network (RESNET®) accredited Home Energy Rating System (HERS) to receive a qualifying HERS rating. The program may offer financial incentives for technical assessments (i.e., HERS ratings) and to offset the higher purchase price of new high-efficiency equipment based on achieving ENERGY STAR® certification.</p>	
<p>Implementation Strategy</p>	<p>PPL Electric Utilities will utilize a Conservation Service Provider to provide building contractor training and certification for independent assessment and confirmation of HERS ratings to achieve ENERGY STAR® certification. Trade allies, including builders, developers, and construction professionals will provide project development, implementation, and installation services to comply with program requirements. Participating builders and developers must be HERS-certified and are responsible for meeting the appropriate HERS requirements. PPL Electric Utilities’ energy efficiency staff will provide overall strategic direction and program management for the program, and, supported by other Conservation Service Providers, promotional, marketing, trade ally support, evaluation, and other administrative functions.</p>	
<p>Market Risks and Risk Management Strategies</p>	<p>Market Risks:</p> <ul style="list-style-type: none"> • Cost of HERS rating. • Higher cost for energy-efficient equipment. • Lack of awareness by customer and trade allies of high-efficiency alternatives. • Customers’ value design features and finishes over high-efficiency equipment. • Low trade ally awareness of the program. 	<p>Risk Management Strategies:</p> <ul style="list-style-type: none"> • Offer rebate for HERS rating and overall home performance. • Robust marketing strategy.
<p>Marketing Strategy</p>	<ul style="list-style-type: none"> • Promote ENERGY STAR® new homes program to building contractors. • Promote program in PPL Electric Utilities customer bill insert “Connect.” • Communicate and provide access to program information on Web page www.pplelectric.com • Advertise using newspaper, radio, and other mass media. • Brand marketing material with ENERGY STAR®. • Present program information at seminars, conferences, and community events. • Maximize co-op advertising opportunities with trade allies. 	

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	<ul style="list-style-type: none"> • Publish and distribute program brochure. • Cross-promotion from other PPL Electric Utilities programs. 	
Eligible Measures and Incentive Strategy	<p>Final incentives are to be determined based on discussions and coordination with other stakeholders in the state. Initial incentive estimate, below, is structured to offset higher construction costs, based on compliance with program requirements and post-construction HERS score.</p> <ul style="list-style-type: none"> • Electric heating and cooling customers: \$2,000. • Electric heating only customers: \$1,000. • Cooling only customers: \$750. • Geothermal customers: \$1,500. 	
Implementation Milestones	<ul style="list-style-type: none"> • Develop RFP, including scope of work, selection criteria, and quality assurance protocols for program Conservation Service Provider(s). • Issue RFP for program Conservation Service Provider(s). <p>The Conservation Service Provider(s) will:</p> <ul style="list-style-type: none"> • Develop marketing and outreach plan and materials. • Recruit and train participating trade allies. • Coordinate with other utilities and stakeholders. • Determine data requirements for program evaluation. • Launch program. 	
EM&V	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Develop program logic model. • Evaluability assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff, implementation contractors, and key market actors. • Survey program participants and nonparticipants. <p>Impact evaluation:</p> <ul style="list-style-type: none"> • Sample-based verification of installations. • Quantify type, specification, and frequency of measures installed and operating. 	
Administrative Requirements and Participant Roles	<ul style="list-style-type: none"> • PPL Electric Utilities program manager will oversee all program operations and program Conservation Service Providers, and will work with trade allies, other Pennsylvania utilities, and stakeholders. • Advertising Conservation Service Provider will provide external advertising, including television and print ads. • Administrative Conservation Service Provider will handle customer calls, review and verify applications, process rebates, track customer and project data, and report results to PPL Electric Utilities. • Quality Assurance Conservation Service Provider will oversee quality assurance. • EM&V Conservation Service Provider will conduct evaluation, measurement, and verification activities. 	
Costs and Cost-Effectiveness	<p>Total Program Cost (Utility)</p> <ul style="list-style-type: none"> • Residential: \$3,493,137 	<p>Program Cost-Effectiveness</p> <ul style="list-style-type: none"> • Residential: 1.38

Low-Income WRAP Program

<p>Objectives</p>	<ul style="list-style-type: none"> • Assist low-income customers to reduce their energy use and energy expense. • Maintain partnerships with social service agencies, Community Based Organizations, and local contractors to ensure maximum and timely assistance. • Provide a referral stream to low-income programs, including PPL Electric Utilities OnTrack, Operation HELP, e-Power Wise (Act 129 program), and LIHEAP. • Obtain participation by no less than 15,850 customers through 2013, with a total reduction of 17,168 MWh and 2,423 kW.
<p>Target Market</p>	<ul style="list-style-type: none"> • PPL Electric Utilities' customers at or below 150% of the federal poverty level. • Homeowners or tenants, with landlord approval. • Existing single-family housing. • Existing multifamily housing where 50% or more tenants are low-income qualified. • Customers that received assistance from WRAP six years ago and are in need of further WRAP services. • Low-income customers with a PPL Electric Utilities account for less than nine months.
<p>Program Description</p>	<p>WRAP, the Winter Relief Assistance Program, is an existing PPL Electric Utilities program designed to reduce electric consumption and improve comfort for low-income customers. The program provides free energy audits, energy efficiency measures, and energy education to income-qualified participants.</p> <p>PPL Electric Utilities will increase the funding for this program under its Act 129 program portfolio, which will support project delivery to more customers, will help fill the gaps to address housing that falls outside PPL Electric Utilities' existing WRAP program eligibility and increase the range of efficiency and safety measures that may be installed in each home.</p>
<p>Implementation Strategy</p>	<p>PPL Electric Utilities funds, administers, monitors, and recruits customers to participate in WRAP. The program is delivered by Community-Based Organizations (CBOs) and private contractors who provide income verification and energy audits with direct installation measures. CBOs also coordinate, under the direction of PPL Electric Utilities, the installation of larger equipment, minor repairs, and safety measures. PPL Electric Utilities also uses contractors to conduct third-party inspections. CBOs that currently deliver PPL Electric Utilities' WRAP program will continue to provide these services.</p> <p>Customers in rental housing must have written approval from the property owner prior to installation of any measures.</p>

<p>Market Risks and Risk Management Strategies</p>	<p>Market Risks:</p> <ul style="list-style-type: none"> • Customers reluctant to ask for help. • Lack of program awareness. • Need to verify customer eligibility. Customers reluctant to share income information. • If multi-unit building has a single meter, the landlord, not the customer, will benefit from energy reductions. • Wage requirements for contractors. 	<p>Risk Management Strategies:</p> <ul style="list-style-type: none"> • Provide audits and measures free for income-qualified customers. • Provide marketing materials to distribute through traditional (CBO) and non-traditional (hospital waiting rooms) tactics explaining the benefits of the program. • Work with CBOs to verify customer eligibility. • Deliver program through CBOs to retain customer confidentiality. • Work with landlords to pass on efficiency benefits to customers. • Ensure that the program is in compliance with wage requirements.
<p>Marketing Strategy</p>	<p>PPL Electric Utilities will conduct marketing through its existing WRAP program structure, but plans to ramp-up marketing efforts to increase the program’s reach to new customers.</p> <ul style="list-style-type: none"> • Outreach through existing CBO agencies and e-power team; present program information at seminars, conferences, and community events • Active marketing and outreach through community groups and human services organizations that interact with low-income customers, such as Visiting Nursing Association, social work staff at hospitals, AARP, senior centers and community centers, Head Start, DEPW, county agencies, agricultural extension agencies, churches, housing authority, PHFA, county commissioners, etc. • Grassroots marketing in low-income neighborhoods. • Promote program in PPL Electric Utilities customer bill insert “Connect.” • Publish and distribute program brochure. • Cross-marketing with other PPL Electric Utilities low-income programs. 	

<p>Eligible Measures and Incentive Strategy</p>	<p>All services and measures are provided to income-qualified customers at no cost. Installed measures must save energy provided by PPL Electric. In many cases, CBOs may be able to combine Act 129 funding with federal, state, or other human services funding to provide a whole-house energy efficiency upgrade. Funded measures may include the following.</p> <p>Low-Income Single-Family:</p> <ul style="list-style-type: none"> • Energy Audit. • Energy Education: customer in-home education on ways to save energy. • ENERGY STAR® CFLs and fixtures. • ENERGY STAR® Refrigerator. • Electric heat or central AC: weatherization. • Electric water heat: water heater replacement, faucet aerator, low-flow showerhead, water heater pipe insulation. • Seal drafts and air leaks around windows and doors. • Insulate walls and ceilings. • Install water heater jackets or install an electric heat pump water heater. • Low-flow showerheads. • Faucet aerators. • Safety measures. <p>Low-Income Multifamily:</p> <ul style="list-style-type: none"> • All services/measures listed above for Low-Income Single-Family. • CHP Systems.
<p>Implementation Milestones</p>	<ul style="list-style-type: none"> • Develop participation standards and delivery guidelines for Act 129-funded WRAP program (where they differ from existing program) with state low-income departments and community-based organizations. • Develop marketing plan and materials. • Determine reporting and data requirements for program evaluation. • Develop tracking and allocation procedures. • Coordinate with other utilities and stakeholders. • PPL Electric Utilities will confirm that CBOs have ramped up their capabilities to meet the program requirements.
<p>EM&V</p>	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Develop program logic model. • Evaluability assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff. • Survey program participants and nonparticipants. <p>Impact evaluation:</p> <ul style="list-style-type: none"> • Pre-post analysis of consumption histories. • Engineering analysis: <ul style="list-style-type: none"> • Verify number of installations • Verify location of installations in the home • Verify full-load hours • Statistical analysis of consumption histories

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Administrative Requirements and Participant Roles	<ul style="list-style-type: none">• PPL Electric Utilities staff, responsible for the WRAP program, will continue to manage all aspects of this program, including reporting activities and results directly associated with Act 129 funding. PPL Electric Utilities will provide annual reports to PA PUC.• CBOs will track program activities and report to PPL Electric Utilities.• Quality Assurance Conservation Service Provider will oversee quality assurance.• EM&V Conservation Service Provider will conduct evaluation, measurement, and verification activities.	
Costs and Cost-Effectiveness	Total Program Cost (Utility) <ul style="list-style-type: none">• Low-Income: \$37,113,519	Program Cost-Effectiveness <ul style="list-style-type: none">• Low-Income: 0.77

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E Power Wise Program

<p>Objectives</p>	<ul style="list-style-type: none"> • Provide quality energy conservation and efficiency education to low-income customers, so they can make informed choices about their energy use. • Provide information about low-cost/no-cost energy efficiency strategies low-income customers can use in their homes. • Provide low-income customers with energy efficiency measures in free take-home kits. • Document deemed savings from items in energy efficiency take-home kits. • Obtain participation by no less than 7200 customers through 2013 with a total reduction of 1,786 MWh and 237 kW.
<p>Target Market</p>	<ul style="list-style-type: none"> • PPL Electric Utilities customers at or below 150% of the federal poverty level. • Low-income senior citizens. • Income-qualified customers (owners or tenants) in single-family housing. • Existing multifamily housing where 50% or more tenants are low-income qualified
<p>Program Description</p>	<p>The E Power Wise program, delivered via community-based organizations, will provide low-income customers with energy efficiency educational workshops, so customers will be able to make informed energy-use choices. Customers attending a workshop will receive an energy efficiency take-home kit.</p> <p>The program will use a train-the-trainer model, training staff of CBOs and/or staff identified by the Conservation Service Provider to provide energy workshops at locations convenient to the targeted groups.</p> <p>Workshops will be held during days, evenings, and weekends, making the sessions accessible to as many low-income customers as possible. Program outreach will focus on (but not be limited to) attracting low-income seniors to participate.</p> <p>Customers attending each session will be asked to complete a survey. Survey results will be used to evaluate metrics for this program.</p>
<p>Implementation Strategy</p>	<p>The selected Conservation Service Provider will manage all aspects of the program including:</p> <ul style="list-style-type: none"> • Developing relationships with CBOs; • Identifying qualified trainers; • Designing and implementing the train-the-trainer program; • Designing and implementing the program curriculum; • Verifying customer eligibility; • Managing the delivery and distribution of the energy kits; and • Recording and reporting program metrics. <p>PPL Electric Utilities' energy efficiency staff will provide overall strategic direction and program management for the program and, supported by other Conservation Service Providers, promotional, marketing, evaluation, and other administrative functions.</p>

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<p>Market Risks and Risk Management Strategies</p>	<p>Market Risks:</p> <ul style="list-style-type: none"> • CBOs unaware of program. • Customers reluctant to ask for help. • Need to verify customer eligibility. • Individual customers living in a multi-unit building that is master-metered, with electric included in their rent, will not reap the benefits of the savings from the kits. 	<p>Risk Management Strategies:</p> <ul style="list-style-type: none"> • Robust marketing plan directed at CBOs. • Highlight “free kit” incentive in marketing program. • Use approved list of government funded programs as qualifiers for program (ex. Food Stamps); for those not receiving a government program, provide income application verification process. • Work with landlords to pass on efficiency benefits to customers.
<p>Marketing Strategy</p>	<p>The Conservation Service Provider, with assistance from PPL Electric Utilities, will conduct marketing of this program through its existing WRAP program. In addition, the Conservation Service Provider will direct marketing efforts to increase the program’s reach to low-income customers that are not aware of PPL Electric Utilities low-income initiatives. Marketing will be directed to:</p> <ul style="list-style-type: none"> • CBO agencies. • Community groups and human services organizations that interact with low-income customers, such as: Visiting Nursing Association, social work staff at hospitals, AARP, senior centers and community centers, Head Start, DEPW, County agencies, agricultural extension agencies, churches, housing authority, PHFA, county commissioners, etc. • Grassroots marketing in low-income neighborhoods. • Cross-marketing with other PPL Electric Utilities low-income programs. 	
<p>Eligible Measures and Incentive Strategy</p>	<p>Free services/measures provided through Energy Efficiency Education include:</p> <ul style="list-style-type: none"> • Train-the-trainer opportunity for CBOs. • Energy efficiency educational workshop. • Two CFLs, one 14-watt (equivalent to a 60-watt incandescent), and one 19-watt (equivalent to a 75-watt incandescent). • High-efficiency, low-flow showerhead. • Faucet aerators for the kitchen and bathroom. • Educational materials. <p>Note: Additional measures may be included in energy kits, depending on selected Conservation Service Provider products and other factors.</p>	

<p>Implementation Milestones</p>	<ul style="list-style-type: none"> • Develop RFP, including scope of work, selection criteria, and quality assurance protocols for program Conservation Service Provider. • Issue RFP for program Conservation Service Provider. • Execute program implementation contract with selected program Conservation Service Provider. <p>In conjunction with PPL Electric Utilities, the E Power Wise Conservation Service Provider(s) will:</p> <ul style="list-style-type: none"> • Work with state low-income departments and community-based organizations to develop a delivery process. • Develop marketing materials. • Design customer survey. • Develop program delivery process and protocols. • Provide program delivery training to appropriate participants. • Determine reporting and data requirements for program evaluation. • Develop tracking and allocation procedures. • Develop quality assurance plan. • Identify audit software for analysis and reporting. • Coordinate with other utilities and stakeholders. • Launch and implement all program elements. 	
<p>EM&V Plan</p>	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Develop program logic model. • Evaluability assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff. • Survey program participants and nonparticipants. <p>Impact evaluation:</p> <ul style="list-style-type: none"> • Pre-post analysis of consumption histories. • Deemed savings based on analysis of survey data. 	
<p>Administrative Requirements and Participant Roles</p>	<ul style="list-style-type: none"> • PPL Electric Utilities program manager will oversee all program operations and program Conservation Service Providers, and will work with trade allies, other Pennsylvania utilities, and stakeholders. • Advertising Conservation Service Provider will provide external advertising including television and print ads. • E Power Wise Conservation Service Provider will administer the program, coordinate workshop logistics, deliver training, supply efficiency kits, receive and analyze customer surveys, and report results. • CBOs will handle customer calls direct customers through the program and verify income eligibility. • Quality Assurance Conservation Service Provider will oversee quality assurance. • EM&V Conservation Service Provider will conduct evaluation, measurement, and verification activities. 	
<p>Costs and Cost-Effectiveness</p>	<p>Total Program Cost (Utility)</p> <ul style="list-style-type: none"> • Low-Income: \$454,874 	<p>Program Cost-Effectiveness</p> <ul style="list-style-type: none"> • Low-Income: 3.72

Direct Load Control Program

<p>Objectives</p>	<ul style="list-style-type: none"> • Provide incentive to customers willing to reduce their energy consumption during peak periods. • Educate customers about energy efficiency and peak periods. • Obtain participation by no less than 45,000 customers through 2013, with a total reduction of 29,858 kW. 	
<p>Target Market</p>	<ul style="list-style-type: none"> • Any customer with working central air conditioner or heat pump; water heaters, window air conditioners, and pool pumps are under consideration. • New and existing buildings. • Owner or tenant (with owner’s approval). 	
<p>Program Description</p>	<p>The Direct Load Control program will operate weekdays between 2:00 and 7:00 PM during the peak summer season, from June 1st to September 30th. A control device, installed on a customer’s central air conditioning/heat pump unit allows the unit to be cycled off for 15 minutes of every half hour during peak periods. Cycling events are triggered when PPL Electric Utilities’ service territory electric load is forecasted to reach a given level, or may apply to the entire peak summer season. A control device installed on a customer’s water heaters and/or pool pump will turn that equipment off during those hours. Customer incentives will be provided for participation in the program.</p>	
<p>Implementation Strategy</p>	<ul style="list-style-type: none"> • A Conservation Service Provider will provide turnkey services to manage and administer the program, including: marketing, customer intake and service, installing control devices on eligible customer equipment, processing applications, tracking program data, and providing customer and transaction information to PPL Electric Utilities. • PPL Electric Utilities will provide load forecasting information to the Conservation Service Provider. • PPL Electric Utilities will be responsible for sending the signals that activate the direct load control device. • The Conservation Service Provider will deliver firm load reductions to PPL Electric Utilities. • PPL Electric Utilities’ energy efficiency staff will provide overall strategic direction and program management for the program, and, supported by other Conservation Service Providers, promotional, marketing, evaluation, and other administrative functions. 	
<p>Market Risks and Risk Management Strategies</p>	<p>Market Risks:</p> <ul style="list-style-type: none"> • Customers don’t understand the program. • Ability to maintain comfort levels with air conditioning cycling. • AMI Infrastructure compatibility. • Customers override control device. 	<p>Risk Management Strategies:</p> <ul style="list-style-type: none"> • Robust Marketing Strategy. • Ensure Conservation Service Provider fully understands AMI system. • Limit customer access to controls.

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<p>Marketing Strategy</p>	<ul style="list-style-type: none"> • Demand Response Conservation Service Provider will lead marketing efforts. • Promote program in PPL Electric Utilities customer bill insert “Connect.” • Communicate and provide access to program information on Web page www.pplelectric.com • Advertise using newspaper, radio, and other mass media. • Present program information at seminars, conferences and community events. • Maximize co-op advertising opportunities with trade allies. • Cross-promotion from other PPL Electric Utilities programs.
<p>Eligible Measures and Incentive Strategy</p>	<ul style="list-style-type: none"> • A direct load control receiver (LCR) will be installed on control equipment by CSP at no cost to the customer. • Customers that participate for the entire peak summer period will receive an end-of-summer bill credit of \$32 for first year participation (following years may be lower).
<p>Implementation Milestones</p>	<ul style="list-style-type: none"> • Develop RFP, including scope of work, selection criteria, and quality assurance protocols for program Conservation Service Provider(s). • Issue RFP for program Conservation Service Provider(s). • Determine data requirements for program evaluation. • Launch program.
<p>EM&V Plan</p>	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Develop program logic model. • Evaluate assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff, implementation contractors, and key market actors. • Survey program participants and nonparticipants. <p>Impact evaluation:</p> <ul style="list-style-type: none"> • Pre-post analysis of consumption histories. • Statistical analysis of consumption histories. • DLC Conservation Service Provider input and data on load reduction. • AMI for QA verification of load reduction.
<p>Administrative Requirements and Participant Roles</p>	<ul style="list-style-type: none"> • PPL Electric Utilities program manager will oversee all program operations and program Conservation Service Providers, and will work with trade allies, other Pennsylvania utilities, and stakeholders. • PPL Electric Utilities’ will manage peak events and signaling to load control receivers. • Advertising Conservation Service Provider will provide external advertising, including television and print ads. • Demand Response Conservation Service Provider will handle customer calls, schedule and install Direct Load Control receivers, administer the program, review, verify and process applications, track program data, and report to PPL Electric Utilities. • Quality Assurance Conservation Service Provider will oversee quality assurance. • EM&V Conservation Service Provider will conduct evaluation, measurement and verification activities.

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Cost-Effectiveness	Total Program Cost (Utility) <ul style="list-style-type: none">• Residential: \$8,720,976• Low-Income: \$1,749,024• Small C&I: \$3,969,672• Govt. and Non Profit: \$297,392	Program Cost-Effectiveness <ul style="list-style-type: none">• Residential: 1.01• Low-Income: 1.01• Small C&I: 1.00• Govt. and Non Profit: 1.01
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Time of Use Program

<p>Objectives</p>	<ul style="list-style-type: none"> • Educate customers about energy efficiency and peak periods. • Help customers save money by shifting energy use from peak hours to off-peak hours. • Obtain participation by no less than 84,500 customers through 2013, with a total reduction of 31,954 kW. 	
<p>Target Market</p>	<ul style="list-style-type: none"> • All PPL Electric Utilities’ residential customers. • Commercial Customers with less than 500 kW of monthly demand. 	
<p>Program Description</p>	<p>Participants in the TOU program agree to a rate structure that varies depending on the time of day and season. The peak or highest rates coincide with peak demand during summer afternoons (June–September), and the early evening hours in the winter season (October–May). Customers in the program may save money by shifting their electricity usage away from peak periods to off-peak periods.</p>	
<p>Implementation Strategy</p>	<p>PPL Electric Utilities is currently establishing tariff rules for its TOU program. The Company’s energy efficiency staff will provide overall strategic direction and program management for the program, evaluation, and other administrative functions. PPL Electric Utilities’ advertising Conservation Service Provider will help support program marketing.</p>	
<p>Market Risks and Risk Management Strategies</p>	<p>Market Risks:</p> <ul style="list-style-type: none"> • Lack of awareness by customers. • TOU rate structure too confusing; customers distrust savings claim. 	<p>Risk Management Strategies:</p> <ul style="list-style-type: none"> • Robust marketing strategy. • Customer communications, outreach and education. • Customer education materials, case studies, allow to cancel if savings are not realized. • Rate calculator to verify savings.
<p>Marketing Strategy</p>	<ul style="list-style-type: none"> • Promote program in PPL Electric Utilities customer bill insert “Connect.” • Marketing collateral: bill inserts, brochures, Web page, etc. • Newspaper, radio, and other mass media advertising. • Direct mail targeting customers with high summer usage, new customers. 	
<p>Eligible Measures and Incentive Strategy</p>	<p>There are no specific incentives associated with this program. Customers may realize savings by managing or shifting energy use from peak times when prices are higher to off-peak time when prices are lower.</p>	
<p>Implementation Milestones</p>	<ul style="list-style-type: none"> • Evaluate technology needs. • Develop customer education and marketing materials. • Develop participation forms. • Determine data requirements for program evaluation. • Launch program. 	
<p>EM&V Plan</p>	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Develop program logic model. • Evaluate assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff, implementation contractors, and key market actors. • Survey program participants and nonparticipants. 	

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	<p>Impact evaluation:</p> <ul style="list-style-type: none"> • Pre-post analysis of consumption histories. • Statistical analysis of consumption histories. 	
<p>Administrative Requirements and Participant Roles</p>	<ul style="list-style-type: none"> • PPL Electric Utilities program manager will oversee all program operations, and will work with trade allies, other Pennsylvania utilities, and stakeholders. • PPL Electric Utilities' billing department will manage customer billing according to rate structure. • Advertising Conservation Service Provider will provide external advertising, including television and print ads. • Quality Assurance Conservation Service Provider will oversee quality assurance. • EM&V Conservation Service Provider will conduct evaluation, measurement, and verification activities. 	
<p>Costs and Cost-Effectiveness</p>	<p>Total Program Cost (Utility)</p> <ul style="list-style-type: none"> • Residential: \$2,238,000 • Low Income: \$449,000 • Small C&I: \$811,000 • Govt. and Non Profit: \$63,000 	<p>Program Cost-Effectiveness</p> <ul style="list-style-type: none"> • Residential: 3.20 • Low Income: 3.20 • Small C&I: 2.89 • Govt. and Non Profit: 2.80

Commercial HVAC Tune-up Program

<p>Objectives</p>	<ul style="list-style-type: none"> • Optimize HVAC unit performance. • Assist commercial customer to lower their energy bill and operating cost. • Obtain participation by no less than 3,830 customers through 2013, with a total reduction of 22,174 MWh and 11,499 kW. 	
<p>Target Market</p>	<ul style="list-style-type: none"> • Commercial customers' HVAC systems. • Existing buildings. • Owner or tenant occupied (tenants must have owner's approval). 	
<p>Program Description</p>	<p>The HVAC Tune-Up Program is designed to increase the operating performance of electric HVAC systems in light commercial buildings. The program offers financial incentives to HVAC contractors to diagnose performance inefficiencies and make energy saving retrofits. The efficiency opportunities can be broken into three main areas:</p> <ul style="list-style-type: none"> • Refrigeration components; • Air distribution system; and • Controls. 	
<p>Implementation Strategy</p>	<p>A Conservation Service Provider will manage and administer the program, including contractor recruitment, contractor training, providing continuous contractor field support, marketing, processing applications and rebates, tracking program data, and reporting to PPL Electric Utilities. HVAC Contractors will provide technical assessments and install energy efficiency improvements on end users' HVAC systems. PPL Electric Utilities' energy efficiency staff will provide overall strategic direction and program management for the program, and, supported by other Conservation Service Providers, promotional, marketing, and trade ally support, evaluation, and other administrative functions.</p>	
<p>Market Risks and Risk Management Strategies</p>	<p>Market Risks:</p> <ul style="list-style-type: none"> • HVAC contractors have limited time and/or resources to implement program components. • Limited number of qualified contractors. • Customer/contractor may have uncertainties regarding savings and payback. • Customers think they receive the service as part of an existing maintenance agreement. • Landlord and tenant issues. • Economic environment may limit customers' ability to upgrade equipment and technology. • Customer not aware of incentives to contractors. 	<p>Risk Management Strategies:</p> <ul style="list-style-type: none"> • Contractor marketing and training through Web seminars and outreach. • Robust marketing plan encouraging contractor participation. • Develop case studies that outline customer savings and other benefits. • Specific marketing and information to customers to ensure awareness of PPL Electric Utilities incentives.

<p>Marketing Strategy</p>	<ul style="list-style-type: none"> • Promote program on “ePowerlink,” PPL Electric Utilities commercial and industrial customer Web newsletter. • Communicate and provide access to program information on Web page. www.pplelectric.com • Advertise using newspaper, radio, and other mass media. • Brand marketing materials with ENERGY STAR® as appropriate. • Present program information at seminars, conferences, and community events. • Maximize co-op advertising opportunities with trade allies. • Direct mail and other marketing targeting HVAC contractors. • Cross-promotion from other PPL Electric Utilities programs.
<p>Eligible Measures and Incentive Strategy</p>	<p>Incentives in the form of direct rebates will be paid to participating HVAC contractors:</p> <ul style="list-style-type: none"> • Basic diagnostic testing (no economizer): \$25 • Basic diagnostic testing (economizer is present): \$50 • Refrigerant Charge/Airflow (single compressor): \$125 • Refrigerant Charge/Airflow (multiple compressors): \$175 • Thermostat Modification: \$25 • Thermostat Replacement: \$100 • Economizer Adjustment: \$150 • Economizer Control Package: \$100
<p>Implementation Milestones</p>	<ul style="list-style-type: none"> • Develop RFP, including scope of work, selection criteria, and quality assurance protocols for program Conservation Service Provider(s). • Issue RFP for program Conservation Service Provider. • Execute program implementation contract(s) with selected program Conservation Service Providers. <p>In conjunction with PPL Electric Utilities, the Conservation Service Provider(s) will:</p> <ul style="list-style-type: none"> • Provide outreach to trade allies and other interested stakeholders. • Train internal staff and trade allies. • Develop customer education and marketing materials. • Develop program forms, tracking database, and incentive process. • Develop tracking and allocation procedures. • Develop program delivery approach. • Establish communication and reporting schedule. • Finalize marketing approach details. • Determine data requirements for program evaluation. • Launch program.
<p>MV&E Plan</p>	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Develop program logic model. • Evaluability assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff, implementation contractors, and key market actors. • Survey program participants and nonparticipants.

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	<p>Impact evaluation:</p> <ul style="list-style-type: none"> • Sample-based verification of installations. • Quantify type, specification and frequency of measures installed and operating. • Pre-post analysis of consumption histories. 	
<p>Administrative Requirements and Participant Roles</p>	<ul style="list-style-type: none"> • PPL Electric Utilities program manager will oversee all program operations and program Conservation Service Providers, and will work with trade allies, other Pennsylvania utilities, and stakeholders. • Advertising Conservation Service Provider will provide external advertising, including television and print ads. • Administrative Conservation Service Provider will handle customer calls, review and verify customer applications, and process rebates. • The HVAC tune up Conservation Service Provider will administer the program, recruit, liaison with and train contractors, track project and customer data, and report to PPL Electric Utilities. • Trade Allies (HVAC installers) perform tune-up work. • Quality Assurance Conservation Service Provider will oversee quality assurance. • EM&V Conservation Service Provider will conduct evaluation, measurement, and verification activities. 	
<p>Costs and Cost-Effectiveness</p>	<p>Total Program Cost (Utility)</p> <ul style="list-style-type: none"> • Small C&I: \$1,161,335 • Govt. and Non Profit: \$87,477 	<p>Program Cost-Effectiveness by</p> <ul style="list-style-type: none"> • Small C&I: 10.55 • Govt.I and Non Profit: 10.55

Non-Residential Curtailment Program

<p>Objectives</p>	<ul style="list-style-type: none"> • Reduce peak demand by providing incentive for energy usage reduction during peak hours in summer period. • Provide value to customers with energy management tools and cost savings. • Obtain participation by no less than 150 customers through 2013, with a total reduction of 89,849 kW. 	
<p>Target Market</p>	<p>Commercial and Industrial participants with monthly demand of at least 100 kW who are able to curtail at least 15% or 30 kW (whichever is greater) of average load during peak summer periods.</p>	
<p>Program Description</p>	<p>The Curtailment Program operates during the peak summer season, from June 1 to September 30 during weekdays. Participants commit to curtailing a minimum of 15% or 30kW, whichever is greater. Customers are notified of peak-hour events and are requested to decrease load during that period by shifting or eliminating load or using back-up generation that meets environmental regulations. Customers will receive a utility bill credit for meeting program requirements.</p>	
<p>Implementation Strategy</p>	<p>A Conservation Service Provider specializing in load curtailment will provide turnkey services to manage and administer the program and will deliver firm load reductions to PPL Electric Utilities. Such Conservation Service Providers typically: conduct facility audits and develop customized curtailment plans with participants; prepare and execute customer contracts; install Web-based metering technologies to facilitate information exchange with PPL Electric Utilities and customer sites; and help customers monitor and manage energy usage and control load reduction events. PPL Electric Utilities' energy efficiency staff will provide overall strategic direction and program management for the program, and, supported by other Conservation Service Providers, promotional, marketing, trade ally support, evaluation, and other administrative functions.</p>	
<p>Market Risks and Risk Management Strategies</p>	<p>Market Risks:</p> <ul style="list-style-type: none"> • Lack of program awareness among customers and trade allies. • Confusion or competition with PJM program. • Customer reluctance to change business practices or impact operations. • AMI infrastructure compatibility. 	<p>Risk Management Strategies:</p> <ul style="list-style-type: none"> • Robust marketing strategy. • Ensure Conservation Service Provider provides customized customer service to manage loads. • Provide non-financial benefits for participation (e.g., energy management support). • Ensure Conservation Service provider fully understands AMI system.

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<p>Marketing Strategy</p>	<ul style="list-style-type: none"> • Program Conservation Service Provider will lead marketing efforts. • Marketing collateral: bill inserts, brochures, Web page, etc. • Promotion by PPL Electric Utilities’ Key Account Managers. 	
<p>Eligible Measures and Incentive Strategy</p>	<p>Customers will receive an incentive for participating in the program. The incentive level will be determined by the Conservation Service Provider and could vary by customer, depending on several factors, such as the amount of kWh reductions and the number of interruptible hours.</p>	
<p>Implementation Milestones</p>	<ul style="list-style-type: none"> • Develop RFP, including scope of work, selection criteria, and quality assurance protocols for program Conservation Service Provider(s). • Issue RFP for program Conservation Service Provider(s). • Execute program implementation contract(s) with selected program Conservation Service Providers. • Evaluate technology needs. • Work with Conservation Service Provider to develop customer education and marketing materials. • Develop event management protocols and administrative needs. • Work with Conservation Service Provider, other utilities, and PJM to identify conflicts and areas for collaboration. • Develop participation forms and account management processes. • Determine data requirements for program evaluation. • Launch program, approximately three months after Commission’s approval of EE&C Plan. 	
<p>EM&V Plan</p>	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Develop program logic model. • Evaluability assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff, implementation contractors, and key market actors. • Survey program participants and nonparticipants. <p>Impact evaluation:</p> <ul style="list-style-type: none"> • Pre-post analysis of consumption histories. • Statistical analysis of consumption histories. 	
<p>Administrative Requirements and Participant Roles</p>	<ul style="list-style-type: none"> • PPL Electric Utilities program manager will oversee all program operations and program Conservation Service Providers, work with trade allies, other Pennsylvania utilities and stakeholders, and provide annual reporting to Commission staff and the public. • PPL Electric Utilities’ Key Account Managers will promote curtailment options to commercial and industrial customers. • Demand Response Conservation Service Provider will manage and administer the program, including marketing, customer intake and service, processing applications and rebates, tracking program data, and reporting customer and transaction information to PPL Electric Utilities. • EM&V Conservation Service Provider will conduct evaluation, measurement, and verification activities. 	
<p>Costs and Cost-Effectiveness</p>	<p>Total Program Cost (Utility)</p> <ul style="list-style-type: none"> • Large C&I: \$16,345,000 	<p>Program Cost-Effectiveness</p> <p>Large C&I: 18.45</p>

PHFA Multifamily Housing Program

<p>Objectives</p>	<ul style="list-style-type: none"> • Promote energy efficiency in existing multifamily affordable housing. • Support the existing Pennsylvania Housing Finance Agency (PHFA) multifamily affordable housing efficiency initiatives. • Refer facilities to PPL Electric Utilities’ Act 129 Efficient Equipment Incentive Program and the Custom Commercial and Industrial Incentive Program. • Encourage customer participation by providing a financial incentive to have an energy audit. 	
<p>Target Market</p>	<ul style="list-style-type: none"> • Existing multifamily housing developments owned by non-profit (501(c)3) entities, where 50% or more of tenants’ income is at or below 150% of FPL. • Developments that are non-profit (501(c)3), have received Agency financing, HUD housing, USDA-financed units, tax credit apartments, and units built under other subsidized housing programs. 	
<p>Program Description</p>	<p>The “Preservation Through Smart Rehab Program” and “Energy Conservation Loans for Multifamily” are existing PHFA programs designed to reduce electric consumption in multifamily affordable housing buildings. The program reimburses a portion of the cost of energy audits, provides training for energy auditors, and provides loans to finance the installation of energy efficiency measures.</p> <p>PPL Electric Utilities will provide funding for energy audits delivered to participating non-profits. Energy efficiency measures recommended as a result of these energy audits may be eligible for incentives through PPL Electric Utilities’ Efficient Equipment Incentive Program, Commercial and Industrial Custom Incentive Program, and PHFA’s loan program.</p>	
<p>Implementation Strategy</p>	<p>PHFA administers, provides outreach, and monitors the program. PHFA will maintain a list of BPI multifamily-certified energy auditors willing and available to perform audits that meet the requirements of the program. PHFA will also coordinate and administer energy auditor training.</p> <p>Details of the delivery structure for this program are to be determined. Customers will be required to submit a program application to the Administrative Conservation Service Provider for review and approval.</p>	
<p>Market Risks and Risk Management Strategies</p>	<p>Market Risks:</p> <ul style="list-style-type: none"> • Current economic environment may limit customers’ ability to purchase energy efficient equipment and technology. • Customer uncertain of payback time for each measure. • Lack of program awareness among customers and trade allies. 	<p>Risk Management Strategies:</p> <ul style="list-style-type: none"> • Provide incentives to reduce the cost of work to be performed. • Robust marketing strategy.

<p>Marketing Strategy</p>	<p>PHFA will lead marketing through its existing structure, but plans to ramp up marketing efforts to increase the program’s reach to new customers. Additional outreach activities may include the following:</p> <ul style="list-style-type: none"> • Trade allies outreach. • Direct, targeted marketing to multifamily housing owners and property managers focused on new energy auditing services and available capital resources. • Presence and presentations at conferences, trade fairs, and community events. • Targeted marketing using PHFA’s affordable housing database that tracks subsidized housing energy consumption and utility information.
<p>Eligible Measures and Incentive Strategy</p>	<p>The program provides reimbursement for 50% of the cost of an energy audit. Based on the results of the audit, customers will be encouraged to participate in PPL Electric Utilities Efficient Equipment Incentive Program and the Custom Incentives Program. Customers may also be eligible to receive a loan of up to \$500,000 through PHFA to finance efficiency measures:</p> <ul style="list-style-type: none"> • The audit must comply with published PHFA audit guidelines. • Improvements that promise a payback in less than 10 years get priority. • The loan interest rate will be fixed and determined on a case-by-case basis.
<p>Implementation Milestones</p>	<p>With support from Conservation Service Provider(s) and PHFA, PPL Electric Utilities will:</p> <ul style="list-style-type: none"> • Provide outreach to trade allies and other interested stakeholders. • Train internal staff and service vendors. • Design customer and marketing materials. • Develop quality assurance plan approved by PPL Electric Utilities. • Develop participation standards and delivery guidelines for Act 129-funded PHFA Program (should they differ from existing program). • Provide outreach to trade allies, vendors, and other marketing actors. • Identify audit software for analysis and reporting. • Determine data requirements for program evaluation.
<p>EM&V</p>	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Develop program logic model. • Evaluability assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff, implementation contractors, and key market actors. • Survey program participants and nonparticipants. <p>Impact evaluation:</p> <ul style="list-style-type: none"> • Sample-based verification of installations. • Quantify type, specification, and frequency of measures installed and operating. • Pre-post analysis of consumption histories. <p>The EM&V strategy will account for cases in which participants also receive incentives under the Efficient Equipment Incentive Program or the Custom Incentives Programs.</p>

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<p>Administrative Requirements and Participant Roles</p>	<ul style="list-style-type: none"> • PPL Electric Utilities program manager will oversee all program operations and program Conservation Service Providers, and will work with trade allies, other Pennsylvania utilities, and stakeholders. • PHFA will continue to administer the program and will report activities and results directly associated with Act 129 funding to PPL Electric Utilities. PPL Electric Utilities will provide annual reports to the Commission. • PHFA reviews energy audit results, provides project oversight during construction, and monitors post-installation energy use for participating facilities. PHFA also coordinates and administers training for energy auditors. • Trade Allies (BPI certified auditors) will complete comprehensive audits. • Quality Assurance Conservation Service Provider will oversee quality assurance. • EM&V Conservation Service Provider will conduct evaluation, measurement and verification activities. 	
<p>Costs and Cost-Effectiveness</p>	<p>Total Program Cost (Utility)</p> <ul style="list-style-type: none"> • Govt. and Non Profit: TBD 	<p>Program Cost-Effectiveness</p> <ul style="list-style-type: none"> • Govt. and Non Profit: TBD

Commercial and Industrial Custom Incentive Program

<p>Objectives</p>	<ul style="list-style-type: none"> • Encourage the installation of high-efficiency equipment not included in PPL Electric Utilities' Efficient Equipment Incentive program by Commercial and Industrial customers (C&I) in new and existing facilities. • Increase customer awareness of the features and benefits of electric energy efficient equipment. • Increase the market penetration of high-efficiency equipment. • Support emerging technologies and non-typical efficiency solutions in cost-effective applications. • Obtain participation by no less than 263 customers through 2013 with a total reduction of 140,461 MWh and 24,746 kW.
<p>Target Market</p>	<ul style="list-style-type: none"> • All new and existing C&I facilities. • Owner or tenant occupied (tenants must have owner's approval). • Cost effective new or replacement equipment not included in PPL Electric Utilities Efficient Equipment Incentive Program, comprehensive efficiency upgrades, or process improvements.
<p>Program Description</p>	<p>The Commercial and Industrial Custom Incentive program provides a delivery channel for measures that do not fit into PPL Electric Utilities' other programs. It offers financial incentives to customers installing equipment or systems not covered by the Efficient Equipment Incentive program that result in cost-effective energy efficiency savings. To qualify for financial incentives, eligible customers will be required to provide documentation that their proposed efficiency upgrades pass PPL Electric Utilities' cost-effectiveness threshold and technical criteria. PPL Electric Utilities will provide 50% of the cost of a technical study and may provide additional reimbursement following successful implementation of a cost-effective project. Additionally, PPL Electric Utilities will offer customers a tiered incentive based on avoided or reduced kilowatt hours (kWh) resulting from the project. Incentives will be subject to an annual cap for each project and for each participating customer.</p>
<p>Implementation Strategy</p>	<p>This program relies on both Conservation Service Providers and trade allies for implementation. PPL Electric Utilities will select a qualified Conservation Service Provider to process program applications, perform technical analyses of applications, and confirm scope, cost, and potential energy savings of proposed projects as well as conducting field verification of completed projects and adjust energy savings from installed projects, if appropriate. This Conservation Service Provider may also work directly with customers to help identify and flesh out project ideas. Trade allies, such as energy engineering and energy service firms, will perform technical analyses, project development, and project implantation on behalf of clients and may also bring projects to PPL Electric. PPL Electric Utilities' energy efficiency staff will provide overall strategic direction and program management for the program, and, supported by other Conservation Service Providers, promotional, marketing, trade ally support, evaluation, and other administrative functions.</p>

<p>Market Risks and Risk Management Strategies</p>	<p>Market Risks:</p> <ul style="list-style-type: none"> • Higher first cost of energy efficient equipment. • Not a high priority; limited access to discretionary cash/credit. • Lack of program awareness and “emergency replacement” scenario among target customers. • Low dealer, customer, and trade ally awareness. • Procurement policies that specify low first-cost instead of life-cycle cost. • Tenant/landlord issues. 	<p>Risk Management Strategies:</p> <ul style="list-style-type: none"> • Offer customized incentives on equipment and technical study to offset higher cost. • Robust marketing strategy, which markets to decision makers and facility operators to facilitate understanding of capital budget and operating concerns.
<p>Marketing Strategy</p>	<ul style="list-style-type: none"> • Promote program on “ePowerlink,” PPL Electric Utilities’ C&I customer Web newsletter. • Communicate and provide access to program information on Web page www.pplelectric.com • Advertise using newspaper, radio, and other mass media. • Present program information at seminars, conferences, and industry events. • Maximize co-op advertising opportunities with trade allies. • Publish and distribute program brochure. • Targeted marketing to high-potential market sectors. • One-on-one marketing to C&I customers through PPL Electric Utilities’ Key Account Managers and the technical program Conservation Service Provider. • Outreach to facility managers and building engineers, building owners and managers associations, and other trade allies 	
<p>Eligible Measures and Incentive Strategy</p>	<p>This program will provide two distinct financial incentives:</p> <p>a) Whole building, equipment, or process improvement technical study: 50% of study cost with 100% rebated, if customer proceeds with project, capped at \$100,000 total incentive.</p> <p>b) Performance-based custom incentive: \$/kWh (and possibly \$/kW) based on technical study results.</p>	
<p>Implementation Milestones</p>	<ul style="list-style-type: none"> • Develop work scope, evaluation criteria, and performance protocols. • Issue RFP for Conservation Service Provider. • Develop RFP- including scope of work, selection criteria and quality assurance protocols for program Conservation Service Provider(s). • Issue RFP for program Conservation Service Provider(s). • Train internal staff and trade allies. • Develop customer education and marketing materials. • Outreach to professional engineering firms, equipment dealers, trade allies, and other local market actors. • Develop tracking and allocation procedures. 	

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	<ul style="list-style-type: none"> • Determine customer contractor qualification requirements. • Finalize marketing approach details. • Determine data requirements for program evaluation. 	
<p align="center">EM&V Plan</p>	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Develop program logic model. • Evaluability assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff, implementation contractors, and key market actors. • Survey program participants and nonparticipants. <p>Impact evaluation:</p> <ul style="list-style-type: none"> • Measure or process specific evaluation. • Pre- and post-installation inspections. • Specific protocols for each individual measure. 	
<p align="center">Administrative Requirements and Participant Roles</p>	<ul style="list-style-type: none"> • PPL Electric Utilities program manager will oversee all program operations and program Conservation Service Providers, and will work with trade allies, other Pennsylvania utilities, and stakeholders. • Administrative Conservation Service Provider will handle customer calls, direct customers to participants in the program, and process rebates. • Trade Allies will engage manufacturers and engineers. • Quality Assurance Conservation Service Provider will oversee quality assurance. • EM&V Conservation Service Provider will conduct evaluation, measurement, and verification activities. 	
<p align="center">Costs and Cost-Effectiveness</p>	<p>Total Program Cost (Utility)</p> <ul style="list-style-type: none"> • Small C&I: \$21,455,128 • Large C&I: \$4,187,170 • Govt. and Non Profit: \$4,992,174 	<p>Program Cost-Effectiveness</p> <ul style="list-style-type: none"> • Small C&I: 4.40 • Large C&I: 4.12 • Govt. and Non Profit: 4.57

Customer Awareness and Education Program

<p>Objectives</p>	<ul style="list-style-type: none"> • Educate customers about free (no cost) or very low-cost measures and behaviors that can significantly reduce energy consumption or demand. • Educate customers about PPL Electric Utilities online resources and energy efficiency and conservation programs. • Encourage customers to adopt more energy efficient behaviors and to install energy efficiency measures in their homes and businesses by comparing their electric usage with a controlled group of customers who have a similar usage pattern in the same geographical area. 	
<p>Target Market</p>	<p>All PPL Electric Utilities' customers.</p>	
<p>Program Description</p>	<p>The Customer Awareness and Education program is focused on ways customers can implement free or very low-cost measures and behaviors that can significantly reduce energy consumption or demand. This education and awareness is separate from the advertising and promotion of PPL Electric's specific energy efficiency and demand reduction programs. Awareness and educational messages may include:</p> <ul style="list-style-type: none"> • Periodic reports to customers that compare their usage with other customers in the same geographical area. • The importance of peak load reduction during the peak load season and ways to shift energy use to off-peak periods. • General conservation behaviors such as turning down the thermostat, turning off lights, shortening showers, etc. • Low-cost energy efficiency tips, such as replacing incandescent lights with CFLs, installing weather stripping, and using power strips. • Information on tools and resources available through PPL Electric Utilities' Web site, such as how customers can access their energy use information through the smart meter system. <p>In addition, PPL Electric Utilities may sponsor presentations and demonstrations, increase direct outreach to customers, participate in local energy education events, and provide energy educational materials to local schools, among other activities.</p>	
<p>Implementation Strategy</p>	<p>PPL Electric Utilities will work with its Advertising Conservation Service Provider, its own Marketing Department, and may select additional Conservation Service Providers to develop messaging, mass-media advertising campaigns, grassroots and public awareness activities, school curriculum, Web site content, or other components that promote energy efficiency and peak load reduction. Awareness and education can include a broad range of activities that may be undertaken without a great deal of lead time or may be led by activity-specific Conservation Service Providers, and program operations needs may vary by activity.</p>	
<p>Market Risks and Risk Management Strategies</p>	<p>Market Risks:</p> <ul style="list-style-type: none"> • Lack of customer awareness of educational opportunities. • Lack of time and resources to participate. 	<p>Risk Management Strategies:</p> <ul style="list-style-type: none"> • Outreach through traditional and nontraditional mechanisms. • Create a comprehensive marketing strategy. • Flexible event scheduling. • Streamline programs to ensure efficient use of participant's time.

<p>Marketing Strategy</p>	<p>The Customer Awareness and Education Program will be dependent upon and coordinate closely with PPL Electric Utilities existing and new marketing activities. The program itself will not require specific marketing; however, promotion of specific awareness and educational events and activities and general education information may be provided as follows:</p> <ul style="list-style-type: none"> • Promote events in PPL Electric Utilities customer bill insert “Connect.” • Communicate and provide access to information on Web page www.pplelectric.com • Advertise using newspaper, radio, and other mass media. • Present awareness information at seminars, conferences, and community events. • Maximize co-op advertising opportunities with trade allies. • Publish and distribute informational brochures. • Provide general awareness information to customers via PPL Electric Utilities’ programs.
<p>Eligible Measures and Incentive Strategy</p>	<p>Specific awareness activities and measures will be determined based on strategic planning activities and solicitation responses from Conservation Service Providers. In general terms, PPL Electric envisions that measures will fall into two categories:</p> <ul style="list-style-type: none"> • Peak Load Reduction: PPL Electric Utilities will promote peak load reduction during the peak load season, by asking customers to reduce or shift energy usage during approximately 10 to 25 of the highest peak load hours of the summer. • Energy Conservation: PPL Electric Utilities will conduct an awareness campaign and activities focused on low cost/no-cost ways to reduce energy consumption, such as turning down thermostats, turning off lights, and installing CFLs. Customers will also be encouraged to use PPL Electric Utilities’ smart meter system to monitor energy use.
<p>Implementation Milestones</p>	<ul style="list-style-type: none"> • Develop RFP- including scope of work, selection criteria and quality assurance protocols for program Conservation Service Provider(s); • Issue RFP for program Conservation Service Provider(s); • Execute program implementation contract(s) with selected program Conservation Service Providers. • Conduct research on most viable education and outreach approaches, costs, expected savings, measure life, etc. • Develop general awareness messaging and materials. • Provide outreach to interested stakeholders. • Post customer information Web page. • Develop quality assurance plan approved by PPL Electric Utilities. • Determine reporting and data requirements for program evaluation. • Coordinate with other utilities and stakeholders. • Program launch.

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<p>EM&V Plan</p>	<p>Process evaluation:</p> <ul style="list-style-type: none"> • Evaluability assessment of data collection and tracking procedures. • Review program documentation. • Interview program staff. • Survey program participants and nonparticipants. <p>Impact evaluation:</p> <ul style="list-style-type: none"> • Pre-post analysis of consumption histories. 	
<p>Administrative Responsibilities and Participants Roles</p>	<ul style="list-style-type: none"> • PPL Electric Utilities program manager will oversee all program operations and program Conservation Service Providers, and will work with trade allies, other Pennsylvania utilities, and stakeholders. • Quality Assurance Conservation Service Provider will oversee quality assurance. • EM&V Conservation Service Provider will conduct evaluation, measurement, and verification activities. 	
<p>Costs and Cost-Effectiveness</p>	<p>Total Program Cost (Utility)</p> <ul style="list-style-type: none"> • Residential: TBD 	<p>Program Cost-Effectiveness</p> <ul style="list-style-type: none"> • Residential: TBD

Implementation Strategy

PPL Electric Utilities' implementation strategy is based on its assessment of features needed to help support customer energy efficiency and demand response actions and generate a high level of energy and peak demand savings. The approach includes:

- Continuous customer support through the program process;
- Flexibility to allow customers to use their own resources and combine incentives from multiple programs or from other sources to form the best solution for any facility or system.
- Precision marketing that utilizes PPL Electric's in-house resources and external expertise from program CSP and trade allies to match specific program outreach to those customers most likely to participate.

PPL Electric's implementation strategy will rely on a broad range of contractors, partners, trade allies, community agencies, and other entities engaged in energy efficiency to promote, deliver, and support the effective deployment of programs. PPL Electric expects to utilize Conservation Service Providers (CSPs) to deliver services in support of its EE&C programs, with some CSPs operating as turnkey program delivery contractors, and others providing specific program functions across multiple programs.

In addition, many of PPL Electric's programs will depend on trade allies and other market partners to engage customers, promote programs, evaluate projects, and install energy efficient equipment. The Company's objective is to find the optimal balance of costs, ratepayer value, customer choice, quality of service, and energy and capacity savings while leveraging contact with customers through the Company's own staff.

The Company will develop (or procure) and implement an electronic program management, tracking, reporting, and analysis system, which will allow program activities to be tracked in near real-time. This system will also generate reports and queries to allow ongoing monitoring, management, analysis, and reporting of activities.

Quality assurance will be integral to implementation plans for each program. QA/QC procedures will be deployed at various levels of program development and implementation, including CSP recruitment, CSP training, program operations, and implementation. The QA/QC procedure will include on-site inspection or other methods of verification of a statistically representative sample (at least 10%) of all installations.

For each program in the plan, there will be an impact assessment and a process analysis. The impact assessment will focus on developing accurate estimates of the program's actual savings, based on the protocols developed by the Statewide EM&V contractor. The process analysis will focus on qualitative assessments of the program's design, operation, and implementation. The results of the process analysis will be used to identify aspects of the program that work well and those that do not, and to adjust program features as warranted. The process evaluation will also include an "evaluability" assessment to ensure all data required for the impact assessment are collected.

Figure 4 provides a graphic representation of CSP functions and roles related to each of PPL Electric's proposed programs.

Figure 2. Program Implementation Strategy and Delivery Roles

PPL PROGRAMS													
Program Function	Efficient Equipment Incentive	Audit & Weatherization	New Construction	Custom Incentives	HVAC Tune-Up	Time of Use Rates	CFL Lighting Campaign	Appliance Recycling	Direct Load Control	Curtailment	Low Income WRAP	E Power Wise	PHFA MF
Portfolio Planning/Program Design	PPL/Consultant												
Research & Development	PPL/Consultant												
Manufacturer management	NA	NA					CSP-7	NA					
Retailer management	CSP-7	NA					CSP-7	NA					
Marketing & advertising	PPL/CSP-2												
Customer Intake and Routing	CSP - 1			PPL/CSP-1	CSP-6	PPL	NA	CSP - 8	CSP-9	CSP-9	CAA	CSP-10/ CAA	PHFA
Technical Assessment	TA-1	CSP-3/ TA-2	CSP-4	TA-4	TA-1								
Project Development			TA-3										
Implementation/Installation	CSP-1	CSP-4	CSP-5	CSP-6									
Application Review and Approval			CSP-1		CSP-1								
Payment Processing	PPL/CSP-1												
Participant Relations Management	PPL/CSP-1												
QA	PPL/CSP-5												
Measurement & Verification	PPL/CSP-11												
Program Tracking	CSP-12												
CSP Management and Coordination	PPL												
Internal PPL Coordination	PPL												
Legal and Regulatory Affairs	PPL												
Customer Service	PPL												
Corporate Communications	PPL												
Rates	PPL												
Finance	PPL												
Purchasing	PPL												
Meter Operations	PPL												
IT	PPL												
Reporting and analysis	PPL												
Internal	PPL												
External	PPL/CSPs (all)												

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The CSPs, trade allies, and market partners in the figure above are defined below.

Conservation Service Providers

CSPs are defined as individuals or firms under contract to PPL Electric Utilities to provide services related to the delivery of its EE&C programs.

Conservation Service Provider Program Delivery Roles

CSP # CSP Role

- 1 **Administrative CSP:** will provide a call center with staff knowledgeable about PPL Electric Utilities' programs, customer enrollment, and routing to appropriate program contacts or actions, eligibility verification, application and rebate processing, and customer care.
- 2 **Advertising CSP (may not be classified as a CSP):** is a third-party advertising and public relations firm, working in collaboration with PPL Electric Utilities' internal marketing and corporate communications departments. The advertising firm will handle advertising for both rate base funded programs and Act 129 programs. This would include the creative function, production, and media buys for television, radio, print, outdoor, and Internet. They would also consult with CSPs that are not self-contained and provide support via brochures, bill inserts, and other promotional materials.
- 3 **Walk-through audit CSP:** will provide walk-through energy audits for customers participating in the walk-through audit component of PPL Electric Utilities' Residential Audit and Weatherization Program.
- 4 **New Construction CSP:** will provide builder contractor training and certification, and independent assessment and confirmation of HERS ratings to achieve ENERGY STAR® certification.
- 5 **Quality Assurance CSP:** is a technical services and quality assurance contractor that will review technical customer applications, conduct engineering and economic analysis for the Custom Incentives program, and will oversee quality assurance.
- 6 **HVAC Tune-Up CSP:** is a dedicated HVAC tune-up program contractor that will administer and implement the HVAC Tune-Up Program on a turnkey basis.
- 7 **Lighting CSP:** will work with manufacturers and retailers to develop and implement PPL Electric Utilities' CFL buy-down program and will be responsible for working with retailers to promote appliance rebates.
- 8 **Refrigerator Recycling CSP:** is a dedicated refrigerator recycling contractor that will administer and implement the program on a turnkey basis.
- 9 **Demand Response CSP:** may be one or two dedicated demand response contractor(s) that may administer and implement one or both of PPL Electric Utilities' Demand Response Programs: Direct Load Control and Curtailment on a turnkey basis.

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- 10 **Power Wise CSP:** will be responsible for providing energy efficiency kits to Community Action Agencies (CAAs), training CAA personnel to deliver workshops, distributing and analyzing feedback forms, and reporting on results.
- 11 **EM&V CSP:** is a third-party evaluation, monitoring, and verification contractor.
- 12 **Tracking CSP:** will develop, provide, or host a customized program tracking database system (program tracking, management, analysis, and reporting).

Market Partners

Market Partners are independent market actors that provide conservation services to PPL Electric Utilities' customers supported by funding from PPL, but are not under contract to PPL:

- CAAs are existing Community Action Agencies, which provide energy efficiency services directly to income-qualified customers. PPL will leverage this existing infrastructure to expand and enhance its low-income programs.
- PHFA, the Pennsylvania Housing Financing Authority, operates a multifamily low-income energy efficiency program. PPL will provide funding to PHFA to expand these activities in PPL Electric Utilities' service territory.

Trade Allies (TA)

Trade allies provide customer services in support of PPL programs, but operate independent of PPL contractual requirements. Trade allies typically perform services under contract to and directly for customers.

Trade Ally Program Delivery Roles

TA # TA Role

- 1 **HVAC and Appliance Dealers and Contractors:** provide sales, equipment diagnostics, maintenance, and installation services for energy efficient equipment, such as HVAC and appliances. These trade allies will inform customers about PPL's Programs, provide essential information for customers to understand costs and benefits of equipment or services, and encourage customers to take advantage of PPL Electric's programs.
- 2 **Comprehensive Audit Contractors:** a network of BPI-trained contractors in PPL Electric's service territory will support delivery of the comprehensive audit component of the Residential Audit and Weatherization Program.
- 3 **Residential Builders:** are residential builders, developers, remodelers, contractors, architects, or other market actors that provide residential building services.
- 4 **Technical engineering and energy services firms:** provide technical studies and/or installation of energy efficiency projects for commercial and industrial sector customers.

An estimated implementation schedule is provided on the following page.

Portfolio Summary Tables and Charts

Table 1 summarizes the PPL Electric Utilities' portfolio level costs, benefits, and anticipated energy and demand savings through plan year 2013.

Table 1. Portfolio Summary of Costs, Benefits, and Impacts

<i>Benefit/Cost Component</i>	Plan Year				Total
	2010	2011	2012	2013	
Savings (MWh)	65,679	334,625	411,713	502,009	1,314,026
Capacity Savings (MW)	51	133	114	91	389
Total Societal Cost	\$36,511,285	\$95,921,395	\$123,072,183	\$151,014,236	\$406,519,098
Direct Participant Costs	\$6,672,050	\$35,728,648	\$50,609,704	\$67,348,177	\$160,358,579
Direct Utility Costs	\$29,839,235	\$60,192,747	\$72,462,479	\$83,666,059	\$246,160,519
Incentives	\$15,348,985	\$45,851,747	\$60,591,479	\$74,429,059	\$196,221,269
Evaluation	\$3,025,250	\$3,086,000	\$3,152,000	\$3,219,000	\$12,482,250
Program Implementation	\$4,643,000	\$6,502,000	\$4,851,000	\$3,108,000	\$19,104,000
Program Marketing & Trade Ally	\$4,166,000	\$3,716,000	\$2,815,000	\$1,836,000	\$12,533,000
Program Planning & Administration	\$2,656,000	\$1,037,000	\$1,053,000	\$1,074,000	\$5,820,000

	TRC Test
NPV Benefits	\$1,624,885,601
NPV Costs	\$350,721,920
Benefit-Cost Ratio	4.63

Table 2 shows the projected results of PPL Electric Utilities' portfolio of programs as compared to its Act 129 goals.

Table 2. PPL Electric Utilities Plan vs. Goals

Portfolio Results	Targets			Cap
	2011 MWh	2013 MWh	2012 MW	Total Costs
Plan	400,304	1,313,044	298	\$246,161
Goal	382,144	1,146,431	297	\$246,006
% of Goal	105%	115%	101%	100%

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The following graphs describe PPL Electric Utilities' Portfolio in terms of total 2010 to 2013 benefits and costs by sector.

Figure 4. Distribution of Cumulative 2013 Energy Savings by Sector

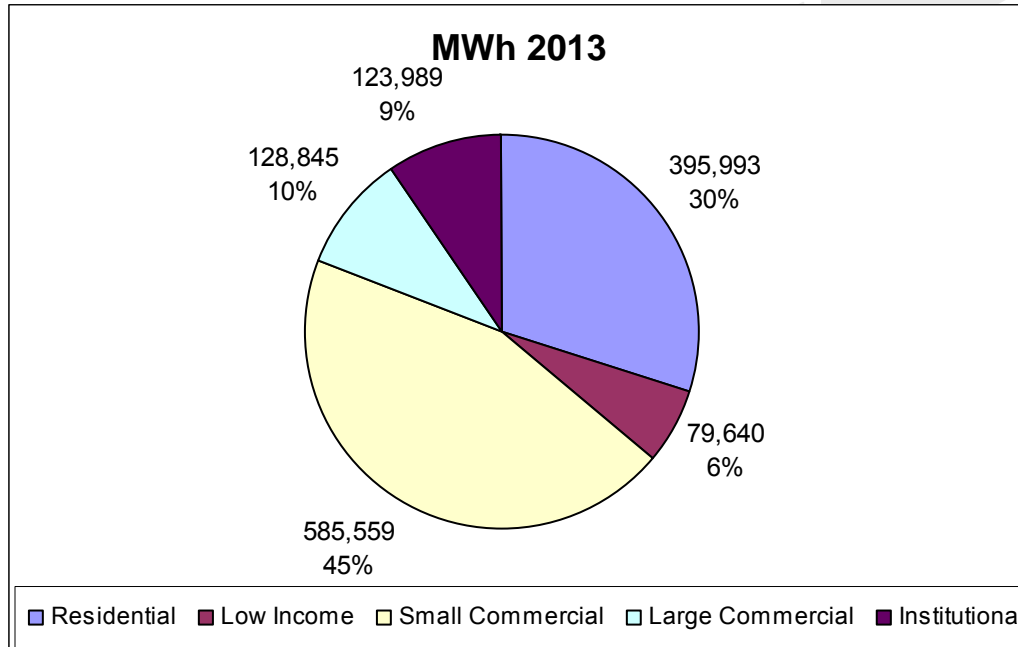


Figure 5. Distribution of Cumulative 2012 Peak Demand Impacts by Sector

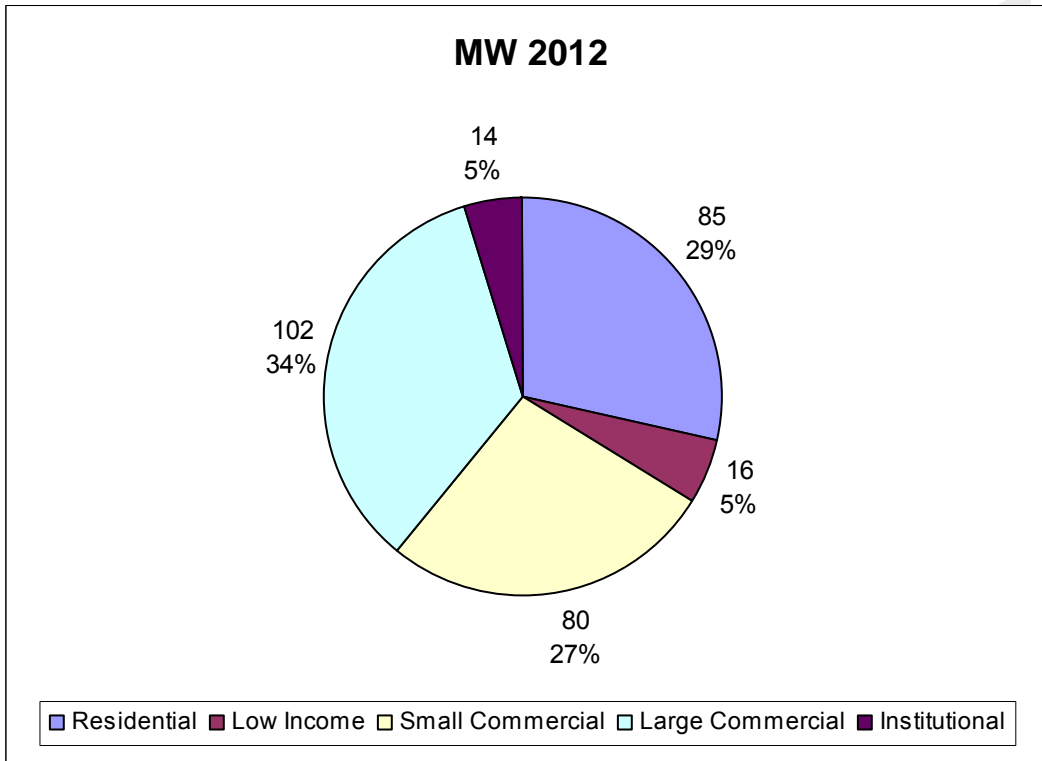


Figure 6. Distribution of Cumulative 2013 Budget Allocation by Sector (1,000s)

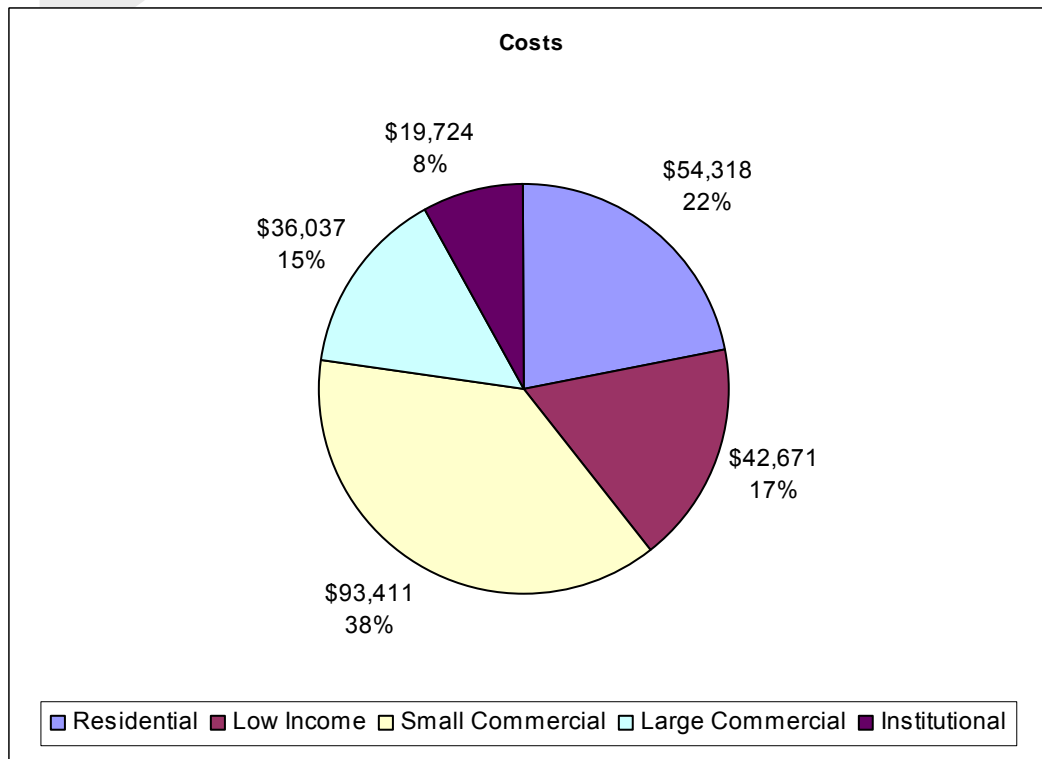


Table 3. Summary of Portfolio Results by Customer Sector

Data date: 5/10/2009

Sector	% of Total Annual PPL Load	% of Total PPL Annual Revenue	2013 MWh Reduction	% of 2013 Total MWh Reduction	2012 MW Reduction (total)	% of 2012 Total MW Reduction	Act 129 Program Cost \$MM	% of Total Act 129 Portfolio Cost	# of Customers	Annual Usage of Sector (MWh)	Act 129 Program Cost Per Customer ¢/kwh ⁽⁵⁾
Residential	32.0%	36.0%	395,993	30.1%	85	28.6%	\$54.3	22.1% ⁽³⁾	1,216,628	14,560,303	0.195
Low-Income	6.0%	7.0%	79,640	6.1%	16	5.34% ⁽⁴⁾	\$42.7	17.3% ⁽³⁾	incl in resid	incl in resid	0.195
Small C&I	26.0%	24.0%	585,559	44.6% ⁽²⁾	80	27.0%	\$93.4	38.0%	174,572	14,093,904	0.235
Large C&I	30.0%	27.0%	128,845	9.8% ⁽²⁾	102	34.3%	\$36.0	14.6% ⁽³⁾	1,254	9,275,530	0.114
Institutional	6.0%	5.0%	123,989	9.4% ⁽¹⁾	14	4.84% ⁽¹⁾	\$19.7	8.0%	sm C&I	sm C&I	sm C&I
Total			1,314,026		297		\$246		1,392,454	37,929,737	0.190

Notes:

1. Institutional reductions must be at least 10% of the total reductions.

2. The % of MWh reductions is high compared to the % of load/revenue for Small C&I segment. However, shifting more MWh reductions to the residential sector will cause cap challenges since small C&I programs have the highest benefit-cost ratio.

For the Large C&I sector, the % of MWh reductions is low and the % of MW reductions is slightly high compared to that sector's share of total load. However, increasing Large C&I MWh reductions would significantly increase that sector's share of total portfolio cost (see note 3).

3. The % of portfolio cost for the Large C&I sector is high compared to that sector's share of MWh reductions and low compared to that sector's share of MW reductions. This is caused by the high cost to obtain curtailable load.

The sum of residential and low-income is more appropriate to assess than the individual sectors since both are in the "residential" rate class. The sum of residential and low-income is proportional to the % reductions.

4. Low-income must be at least 6%.

5. Program cost per customer per year is based on a 41-month collection period (12/2009–5/2113) and total cost of programs for that sector.

Table 4. Summary of Energy Savings by Program

Program	MWh (incremental)					% of MWh Savings
	Plan Year					
	2010	2011	2012	2013	Total	
Appliance Recycling	5,024	20,090	20,090	20,090	65,293	5.0%
Residential Audit	282	1,421	1,421	1,915	5,039	0.4%
Residential Equipment	2,084	4,603	5,530	5,530	17,746	1.4%
Residential Upstream Lighting	17,304	115,362	115,362	115,362	363,390	27.7%
Residential New Construction	486	945	1,890	1,890	5,211	0.4%
WRAP	3,571	4,043	4,442	5,112	17,168	1.3%
Energy Kit	186	583	558	459	1,786	0.1%
Total Residential (including Low Income)	28,936	147,046	149,292	150,358	475,633	36.2%
Small Rooftop HVAC Tune-Up	982	5,042	7,053	9,097	22,174	1.7%
Custom C&I	5,001	31,657	39,332	64,471	140,461	10.7%
Prescriptive C&I	30,759	150,880	216,035	278,084	675,758	51.4%
Total Commercial (including Institutional)	36,743	187,579	262,421	351,651	838,393	63.80%
Portfolio Total	65,679	334,625	411,713	502,009	1,314,026	
Portfolio Total (cumulative)	65,679	400,304	812,017	1,314,026		

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Table 5. Summary of Demand Impacts by Program

Program	MW (incremental)					% of MW Savings
	Plan Year					
	2010	2011	2012	2013	Total	
Appliance Recycling	1	5.2	5.2	5	17	4.3%
Residential Audit	0.02	0.1	0.1	0	0	0.1%
Residential Equipment	0.5	1.0	1.2	1	4	1.0%
Residential Upstream Lighting	3	17.9	17.9	18	56	14.5%
Residential New Construction	0.1	0.1	0.2	0	1	0.2%
WRAP	0.5	0.6	0.6	1	2	0.6%
Energy Kit	0.02	0.1	0.1	0	0	0.1%
Residential DLC	5	10.6	5.3	-	21	5.5%
Residential TOU	6	12.3	6.2	-	25	6.3%
Total Residential (including Low Income)	16	48	37	25	127	32.5%
Small Rooftop HVAC Tune-Up	1	3	4	5	11	3.0%
Custom C&I	1	6	7	11	25	6.4%
Prescriptive C&I	5	27	39	50	121	31.1%
Small C&I DLC	2	4	2	-	9	2.2%
Small C&I TOU	2	3	2	-	7	1.9%
Curtailable	24	42	24	-	90	23.1%
Total Commercial (including Institutional)	35	85	78	66	263	67.51%
Grand Total	51	133	114	91	389	
Grand Total (cumulative)	51	184	298	389		

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Table 6. Summary of Total Costs (Utility) by Program

Program	Costs (1000s) (incremental)					% of Costs	\$/kWh	TRC
	Plan Year							
	2010	2011	2012	2013	Total			
Appliance Recycling	\$1,543	\$3,876	\$3,956	\$4,039	\$13,414	5.4%	\$0.21	5.79
Residential Audit	\$291	\$664	\$676	\$877	\$2,508	1.0%	\$0.50	1.37
Residential Equipment	\$1,477	\$2,299	\$2,811	\$2,869	\$9,457	3.8%	\$0.53	1.85
Residential Upstream Lighting	\$1,452	\$5,204	\$5,312	\$5,424	\$17,392	7.1%	\$0.05	8.55
Residential New Construction	\$419	\$642	\$1,204	\$1,229	\$3,493	1.4%	\$0.67	1.38
WRAP	\$7,420	\$8,513	\$9,651	\$11,529	\$37,114	15.1%	\$2.16	0.77
Energy Kit	\$67	\$136	\$135	\$118	\$455	0.2%	\$0.25	3.72
Residential DLC	\$2,189.00	\$3,989.00	\$2,865.00	\$1,427.00	\$10,470.00	4.3%		1.01
Residential TOU	\$746.00	\$1,233.00	\$647.00	\$61.00	\$2,687.00	1.1%		3.20
Total Residential (including Low Income)	\$15,605	\$26,556	\$27,256	\$27,572	\$96,989	39.4%	\$0.20	3.62
Small Rooftop HVAC Tune-Up	\$123	\$278	\$373	\$475	\$1,249	0.5%	\$0.06	10.55
Custom C&I	\$2,568	\$6,486	\$9,049	\$12,531	\$30,634	12.4%	\$0.22	4.39
Prescriptive C&I	\$8,360	\$21,005	\$29,177	\$37,260	\$95,802	38.9%	\$0.14	5.10
Small C&I DLC	\$911.03	\$1,617.03	\$1,161.00	\$578.00	\$4,267.06	1.7%		1.00
Small C&I TOU	\$293.00	\$317.00	\$223.00	\$41.00	\$874.00	0.4%		2.89
Curtable	\$1,980.00	\$3,934.00	\$5,223.00	\$5,208.00	\$16,345.00	6.6%		18.45
Total Commercial (including Institutional)	\$14,234	\$33,637	\$45,206	\$56,094	\$149,171	60.60%	\$0.11	5.05
Grand Total	\$29,839	\$60,193	\$72,462	\$83,666	\$246,161		\$0.19	4.63
Grand Total (cumulative)	\$29,839	\$90,032	\$162,494	\$246,161				