

Before the  
**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

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**PPL Electric Utilities Corporation**  
**Energy Efficiency and Conservation Plan**

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Docket No. M-2009-2093216

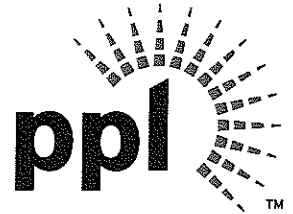
July 1, 2009

Amended July 31, 2009

To reflect the final Total Resource Cost test (TRC) issued by the Pa  
Public Utility Commission

**HAND DELIVERED**

July 31, 2009



James J. McNulty, Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street  
Harrisburg, Pennsylvania 17120

**Re: PPL Electric Utilities Corporation  
Energy-Efficiency and Conservation Plan  
Docket No. M-2009-2093216**

Dear Mr. McNulty:

Enclosed for filing on behalf of PPL Electric Utilities Corporation ("PPL Electric") are an original and three (3) copies of PPL Electric's Amended Energy-Efficiency and Conservation Plan ("EE&C Plan"). PPL Electric is making this filing pursuant to the Pennsylvania Public Utility Commission's ("Commission") June 23, 2009 order, *Implementation of Act 129 of 2008 – Total Resource Cost (TRC) Test*, Docket No. M-2009-2108601 ("TRC Order").

Consistent with the Commission's *TRC Order*, PPL Electric has amended its EE&C Plan to reflect differences between the final TRC test approved by the Commission and the preliminary TRC test that served as the basis for PPL Electric's EE&C Plan filed on July 1, 2009. The revisions to the EE&C Plan based upon the final TRC test are minor and impact only the TRC test benefits, costs, and benefit-to-cost ratios of the programs. There are no changes to recoverable EE&C Plan costs, the allocation of costs, projected mW and kWh reductions, or to the design or implementation of programs.

To assist the Commission and the parties to the PPL Electric Act 129 proceeding in reviewing the resulting changes from the final TRC test, the Company is submitting the following documents:

- PPL Electric's Amended EE&C Plan (Identified as PPL Exhibit No. 1 – Amended);
- Redline of PPL Electric's July 1, 2009 EE&C Plan;
- Supplemental Direct Testimony of M. Hossein Haeri detailing the revisions to the EE&C Plan (Identified as PPL Statement No. 2-S);

As shown on the attached Certificate of Service, copies have been provided to the parties in the manner indicated. The Company also posted this filing on its Act 129 website. The URL address for that website, which is available to all interested parties and to the public, is [www.pplact129.com](http://www.pplact129.com).

If you have any questions regarding the enclosed filing, please call me at (610) 774- 4254 or Peter Cleff PPL Electric's Manager- Energy-efficiency Program at (610) 774-4530.

Very truly yours,

A handwritten signature in cursive script that reads "Paul E. Russell". The signature is written in black ink and is positioned above the printed name.

Paul E. Russell

Enclosures

cc: The Honorable Susan D. Colwell  
The Honorable James H. Cawley, Chairman  
The Honorable Tyrone J. Christy, Vice Chairman  
The Honorable Kim Pizzingrilli, Commissioner  
The Honorable Wayne E. Gardner, Commissioner  
The Honorable Robert J. Powelson, Commissioner

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# Glossary of Terms and Abbreviations

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ACEEE	American Council for an Energy Efficient Economy
The Act	Act 129 (Act of October 15, 2008, P.L. 1592, No. 129)
AMI	Advanced Metering Infrastructure
ARRA	American Reinvestment and Recovery Act
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
BPI	Building Performance Institute
CBO	Community-based Organization
CDD	Cooling Degree Days
CEE	Consortium for Energy-efficiency
CFL	Compact Fluorescent Lamp
CIP	Continuous Improvement Process
C&I	Commercial and Industrial
CSP	Conservation Service Provider
COP	Coefficient of Performance
DCED	Department of Community and Economic Development
DEER	Database for Energy-efficiency Resources
DEP	Department of Environmental Protection
DLC	Direct Load Control
ECM	Electrically Commutated Motor
EDC	Electric Distribution Company
EE&C	Energy-efficiency and Conservation
EER	Energy-efficiency Ratio
EEMIS	Energy-efficiency Management Information System
EERS	Energy-efficiency Resource Standards
EFMR	EFMR Monitoring Group, a PA non-profit agency
EIA	Energy Information Agency
EGS	Electric Generation Supplier
EM&V	Evaluation, Measurement and Verification
EPAct	Energy Policy Act of 2005
FTE	Full-time employee
GAMA	Gas Appliance Manufacturers Association
GPM	Gallons per minute
HDD	Heating Degree Days
HERS	Home Energy Rating System
HP	Horse Power
HVAC	Heating, ventilation, and air conditioning

IPMVP	International Performance Measurement and Verification Protocols
kWh	Kilowatt hour
kW	Kilowatt
LCR	Load Control Receiver
LEED	Leadership in Energy and Environmental Design – a national building certification program
LPD	Lighting Power Density
M&V	Measurement and Verification
MWh	Megawatt hour
MW	Megawatt
NPV	Net present value
NYMEX	New York Mercantile Exchange
PCF	Peak Coincidence Factor
PHFA	Pennsylvania Housing Finance Agency
PJM	A regional transmission organization that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia
PPLICA	A coalition of large C&I customers served by PPL Electric
PV	Photovoltaic
QA/QC	Quality Assurance and Quality Control
RESNET®	Residential Energy Services Network
RFP	Request for Proposal
SAE	Statistically Adjusted Engineering
SEDA-COG	SEDA council of Governments, a regional, multi-county development agency
SEER	Seasonal Energy-efficiency Rating
SOX	Sarbanes Oxley Act (Pub.L. 107-204, 116 Stat. 745, enacted July 30, 2002)
SQL	A database computer language
TA	Trade Ally
TOU	Time of Use
TRC	Total Resource Cost
TRM	Technical Reference Manual
VFD	Variable Frequency Drive
WRAP	PPL Electric's LIURP program that will be expanded for Act 129

## **1. Overview of Plan**

### **1.1. Summary Description of Plan, Plan Objectives, and Overall Strategy to Achieve Energy-efficiency and Conservation Goals.**

#### **1.1.1. Summary Description of Plan**

PPL Electric Utilities Corporation (PPL Electric or the Company) hereby submits its Energy-efficiency and Conservation Plan (EE&C Plan or the Plan) in compliance with Section 2806.1 (b)(1)(i) of Act 129 (The Act). This filing is being made pursuant to the January 16, 2009 Implementation Order (Implementation Order) of the Pennsylvania Public Utility Commission (the Commission) at Docket M-2008-2069887. The proposed Plan describes an extensive portfolio of energy-efficiency, conservation, and peak load reduction measures, programs, and education. The proposed Portfolio consists of the following programs, all of which are voluntary for customers:

1. Efficient Equipment Incentive Program
2. Residential Energy Assessment & Weatherization
3. Compact Fluorescent Lighting Campaign
4. Appliance Recycling Program
5. ENERGY STAR® New Homes Program
6. Renewable Energy Program
7. Direct Load Control Program
8. Time of Use Rates
9. Energy-efficiency Behavior & Education
10. Low-income WRAP
11. Low-income E-Power Wise
12. Commercial and Industrial Custom Incentive Program
13. HVAC Tune-Up Program
14. Load Curtailment Program

These 14 programs are designed to meet the goals established by Sections 2806.1 and 2806.2 of Act 129, as outlined in the January Order:

"This program requires an EDC with at least 100,000 customers to adopt a plan, approved by the Commission, to reduce electric consumption by at least one percent (1%) of its expected consumption for June 1, 2009 through May 31, 2010, adjusted for weather and extraordinary loads. This one percent (1%) reduction is to be accomplished by May 31, 2011. By May 13, 2013, the total annual weather-normalized consumption is to be reduced by a minimum of three percent (3%). Also, by May 31, 2013, peak demand is to be reduced by a minimum of four-and-a-half percent (4.5%) of the EDC's annual system peak

## Section 1: Overview of Plan

demand in the 100 hours of highest demand, measured against the EDC's peak demand during the period of June 1, 2007 through May 31, 2008."<sup>1</sup>

These programs are designed as a portfolio of options which, once implemented, will offer PPL Electric's customers a cost-effective, equitable, flexible, and wide-ranging set of programmatic choices, incentive options, information, and educational opportunities. PPL Electric respectfully requests that the Commission approve all of these programs together as an integrated portfolio designed to meet Act 129 energy-efficiency and conservation goals in PPL Electric's service territory.

### 1.1.2 Plan Objectives

The requirements of Act 129 are wholly consistent with PPL Electric's business philosophy. PPL Electric has a history of striving for excellence in customer service. To build on that, over the past several years PPL Electric has developed and implemented programs that support more efficient use of electricity. Act 129 creates a platform for expanding these activities with programs that offer more customer choices for the wise use of electricity; help customers reduce their electricity consumption and save money without diminishing the quality of their electric services; reduce the need for new, more costly and resource-intensive electricity supplies; and support local economic development.

PPL Electric's portfolio of programs is designed to provide these customer benefits and to meet the energy reduction, peak load reduction, and other requirements set forth in Act 129. Specifically, PPL Electric's Plan:

- Includes measures and programs to achieve PPL Electric's approved electricity consumption and peak load reduction targets of:
  - 1% energy savings by 2011 = 382,000 MWh
  - 3% energy savings by 2013 = 1,146,000 MWh
  - 4.5% peak load reduction by 2013 = 297 MW
- Is designed to comply with the designated expenditure cap of 2% of 2006 Annual Revenues for each year of the four-year plan, which equates to an average of approximately \$61.5 million per year for four program years and approximately \$246 million for the entire Plan period. The first program year is 6/1/2009 – 5/31/2010 and subsequent program years continue on that cycle until 5/31/2013.
- Designates activities to achieve 10% of total Plan reductions from institutional facilities—local governments, school districts, colleges, and nonprofit organizations. Institutional customers are eligible for the same programs as their underlying rate class (typically small or large commercial and industrial) but marketing and other delivery details will be designed to address the specific needs of institutional customers.
- Designates activities to achieve the required proportion of reductions from low-income customers. Recognizing that approximately 6% of PPL Electric's total

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<sup>1</sup> Implementation Order at page 2.

## Section 1: Overview of Plan

load is consumed by low-income customers, PPL Electric's Act 129 programs are designed to achieve approximately 6% of the energy consumption and peak load reductions from the low-income customer sector.

- Offers at least one energy-efficiency and one demand response program to every customer class.
- Provides a reasonable mix of energy-efficiency and demand response programs for all customers.
- Is cost-effective, based on a Total Resource Cost Test (TRC) criterion, for the entire portfolio.
- Allocates the cost of measures to the customer class(es) that receive(s) the benefit of those measures.
- Defines the roles and responsibilities of Conservation Service Providers.
- Leverages economies of scale and other efficiencies by offering programs across multiple customer sectors, as appropriate.
- Includes procedures to measure, evaluate, and verify performance of the programs and the Plan as a whole.
- Outlines a process for annual, independent evaluation of the results and the cost-effectiveness of the Plan using the Standards for the Participation of Demand Side Management Resources—Technical Reference Manual at Docket No. M-00051865 (TRM), wherever applicable.
- Proposes a mechanism for recovery of all applicable costs.

The Plan described herein includes a range of energy-efficiency and demand response programs targeted to every customer segment in PPL Electric's service territory. These programs are the key components of an extensive electric energy-efficiency initiative designed to achieve in excess of 1,361,979 MWh of reduced energy consumption and 334 MW of peak demand savings. In developing the proposed program approach, PPL Electric considered successful energy-efficiency program models around the country and its own strategic objectives to position the Company as a leading provider of energy-efficiency services to its customers.

The Plan also reflects significant input from a large group of external stakeholders. Input was gathered from three large group meetings, which included break-out sessions and many meetings with individual stakeholders. Furthermore, the Plan incorporates elements of PPL Electric's coordination activities with Pennsylvania's other EDCs, including ideas, insights, and, where appropriate, consistent program features, design elements, and implementation details.

### 1.1.3 Overall Strategy to Achieve Energy-efficiency and Conservation Goals

PPL Electric's program design and implementation strategy includes several key features the Company has identified as critical to achieving the proposed Plan's objectives, including:

## Section 1: Overview of Plan

- Ongoing customer support, education, guidance and follow up to encourage customers to choose energy-efficiency and conservation options and adopt sustainable energy-efficient practices.
- Flexibility to allow customers to use their own resources and trade allies and to combine incentives from multiple programs or from other sources to create the best solution for any facility or system.
- Precision marketing that blends PPL Electric's in-house resources with the external expertise of program Conservation Service Providers (CSPs) and trade allies to match program outreach strategies to the unique needs of various customer classes and market segments.
- Engaging trade allies, community-based organizations, and other local market participants through outreach, coordination, training, and potential co-marketing to ensure they are aware of PPL Electric's programs, are able to articulate program features and benefits to customers, and support customers' decisions to take energy-efficiency and demand reduction actions.
- Where appropriate, using existing market delivery channels to provide efficient, simple participation processes from the customer's perspective. Where possible, PPL Electric does not dictate where the customer must obtain energy-efficiency products and services. Those decisions are the customer's.
- Reliance on CSPs, trade allies (TAs), and market partners to effectively promote and deploy programs. PPL Electric expects to utilize approximately 10 CSPs to deliver services in support of its EE&C programs, with some CSPs operating as turnkey program delivery contractors, and others providing specialized functions across multiple programs.
- Programs that are easy for the customers to understand, accept, enroll, and participate.
- Strategic delivery of programs across multiple customer classes where the program offering and delivery process is compatible with multiple customer and building types. For example, PPL Electric's Efficient Equipment Incentive Program is available to all customer classes. The program offers different equipment measures appropriate to each customer class and building type, but utilizes identical administrative and delivery mechanisms as well as similar marketing and quality assurance approaches to reduce customer confusion and leverage efficiencies associated with delivery of discreet program functions.
- Immediate development of the infrastructure (staff, systems, processes, CSPs, trade allies, market partners, etc.) necessary to launch programs upon Commission approval and to ramp up quickly. PPL Electric expects most of this infrastructure to be in place by November 2009.
- For many programs, retroactive customer eligibility for customers who install or commit to install qualifying equipment and services between July 1, 2009 and Commission approval of the Plan. In addition to increasing PPL Electric's likelihood of meeting its targets, especially the 2011 energy reduction target and the peak load reduction target, this approach will allow some customers to take advantage of Federal stimulus funding through the American Recovery and Reinvestment act (ARRA), along with Act 129 funding, to install energy-efficiency projects.

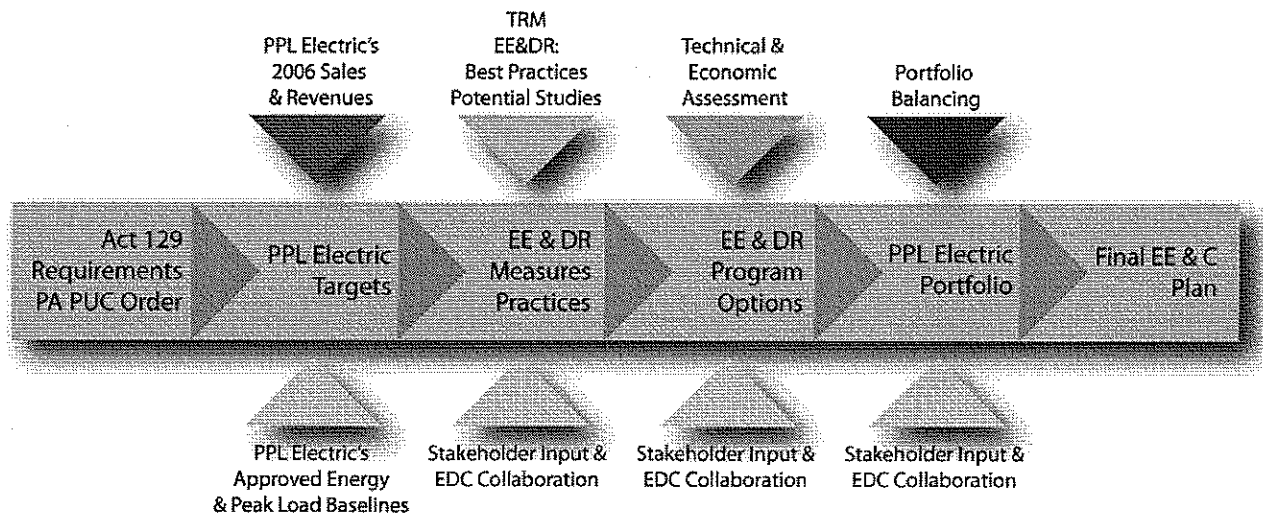
## 1.2. Summary description of process used to develop the EE&C Plan and key assumptions used in preparing the Plan.

### 1.1.2 Plan Development Process

At the outset, PPL Electric realized that developing an EE&C Plan to comply with all of the requirements of Act 129 would require significant expertise in this area and a significant commitment of resources. Consequently, the Company assigned a full-time Project Manager to the task and created an in-house team that includes representatives from all affected areas of the Company. In addition, PPL Electric hired the Cadmus Group, a nationally-renowned environmental and energy consulting firm, to assist in the preparation of the Plan.

The requirements of Act 129 formed the basis for developing the Plan. As illustrated in Figure 1, the first step in the process was to carefully review Act 129 to determine: the broad objectives, energy and peak load reduction targets, allowable annual expenditures for PPL Electric, and all other requirements. The Company used energy consumption forecasts (and associated reduction targets) and average historical peak loads (and associated reduction targets) approved by the Commission in an Order entered on March 30, 2009, at Docket No.M-2008-2069887. Actual total annual revenue as of December 31, 2006, was used to determine the 2% expenditure cap established by Act 129.

**Figure 1. Process for Developing the Plan**



These targets established parameters for constructing a portfolio of measures and programs targeting different customer classes. For each sector, a set of program concepts was developed based on best program practices and lessons learned in utility-sponsored or publically funded energy-efficiency programs. The programs were formulated to satisfy the equity requirements of Act 129 by ensuring a range of program options would be available to all customer classes and market segments, and to meet the reduction targets for governmental/non-profit and low-income sectors. The process for development of the Plan consisted of four basic elements: 1) establishing a set of guiding principles; 2) assessing energy-efficiency and conservation resource potentials; 3) developing and balancing the portfolio to meet all of the requirements of the Act; and