



**PPL Electric Utilities**

# Stakeholder Meeting Act 129 Phase Two

PPL Electric Utilities

May 1, 2013

Harrisburg, PA

# PPL Electric Utilities Act 129 Phase II



- Welcome
- Safety First
- Meeting overview
  - Outcome, comments and follow up from March 14<sup>th</sup> Opinion and Order
  - Overview of Phase II programs being offered
  - Review of Low-income Energy-efficiency Behavior and Education Program
  - Presentation of the energy education for residents of Multifamily Master Metered Low-Income Housing CSP contract status updates
  - Questions

## **Outcome, comments and follow up:**

- PPL Electric Utilities Plan was approved with minor changes in large part thanks to stakeholder input
- Specific requests from PUC are as follows:
  - Continue the practice of referring all customers who self-verify as low- income to all of PPL EU's low income programs
  - Coordinate Act 129 WRAP with Low-Income Usage Reduction Program (LIURP) WRAP to ensure that all eligible customers receive all available and appropriate services

## Outcome, comments and follow up:

- Share the education plan for the Master Metered Low-Income Multifamily Program with stakeholders
- Include LEDs in the Master Metered Low-Income Multifamily Program
- Track and report fuel switching from electric to gas and gas to electric
- Either reallocate funds from the Low-Income Behavior and Education program (approximately \$1.18 million) to Act 129 WRAP or provide additional details about this program

## **Outcome, comments and follow up:**

- Revise tariff to comply with PUC's directive of Phase I and Phase II cost recovery requirements
- Set deadlines for the submission of all incentive applications following the in-service date of a measure during Phase II

## Appliance Recycling Program

- Up to two refrigerators or freezers or one refrigerator and one freezer during each calendar year per customer
  - \$35 rebate per unit
- Up to four air conditioners per calendar year. Must be recycled in conjunction with a refrigerator or freezer per customer
  - \$25 per unit

Target	Residential
Savings	30,551 (MWh/yr)
Direct Utility Cost	\$5,763,210
TRC	3.20

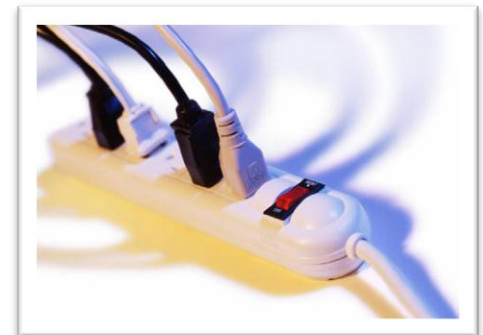
# Phase I programs continued to Phase II



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## Residential Retail Program

- Combines Phase I Lighting Program with Residential Efficient Equipment Program
- Includes a mid-stream discount on consumer electronics
- Smart Strip program



Target	Residential
Savings	284,811 MWh/yr
Direct Utility Cost	\$25,754,515
TRC	4.57

## Residential Energy-Efficiency Behavior & Education Program

- Starting PY6, approximately 110,000 customers will receive energy report cards
- Include energy saving tips and behavior changes that help customers reduce energy usage

Target	Residential
MWH/yr	32,193
Direct Utility Cost	\$2,438,500
TRC	1.69



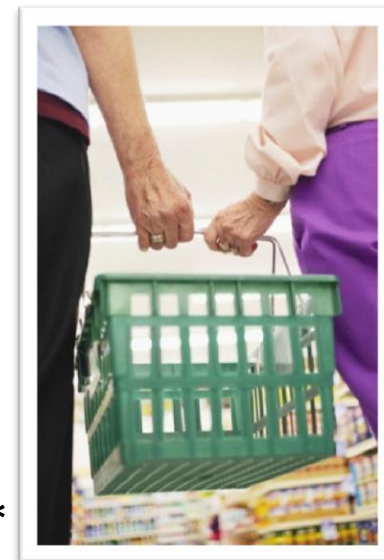
# Phase I programs continued to Phase II



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## Low-Income WRAP (with changes)

- Baseload WRAP
- Heat Pump Water Heater
- Target: Residential customers at or below 150% of FPIG \*



Target	Low-Income residential customers
MWH/yr	9,544
Direct Utility Cost	\$13,227,000
TRC	0.74

\* Federal Poverty Income Guideline

# Phase I programs continued to Phase II



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## E-Power Wise Program



- Energy-efficiency kits for customers at or below 150% of FPIG \*
- Distribute kits through Community Based Organizations (CBOs)
- Direct mail component



Target	Low-Income Residential customers
MWH/yr	4,212
Direct Utility Cost	\$735,250
TRC	3.09

\* Federal Poverty Income Guideline

## Prescriptive Equipment Program

- Rebates and incentives from a list of specific energy-efficient measures and services
- Direct Discount for energy-efficient lighting and commercial refrigeration
- Farm component 
- Pilot program for conversion from electric heat to ENERGY STAR<sup>®</sup> rated fossil fuel space heating or water heating 



# Phase I programs continued to Phase II



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## Prescriptive Efficient Equipment

Target	Residential (Farm)
MWH/yr	1,304
Direct Utility Cost	\$207,823
TRC	1.99

Target	GNI
MWH/yr	73,653
Direct Utility Cost	\$18,804,799
TRC	1.54

Target	Small C&I
MWH/yr	153,024
Direct Utility Cost	\$34,418,483
TRC	2.18

Target	Large C&I
MWH/yr	129,092
Direct Utility Cost	\$40,101,011
TRC	1.27

## Custom Incentive Programs

- Encourage customers to install high-efficiency equipment
  - Must have a TRC of 1 or greater
  - \$0.08/kWh saved based on verified savings
- Encourages “whole facility” approach
- CHP projects
  - Must have a TRC of 1.25 or greater
  - \$0.05/kWh saved based on verified savings
- Up to \$250,000 per customer site per year or \$1 million per parent company per year for customers with multiple sites
- Incentives may not exceed 50% of incremental cost

# Phase I programs continued to Phase II



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## Custom Incentive Program

Target	Small C&I
MWH/yr	4,750
Direct Utility Cost	\$1,010,000
TRC	1.50

Target	Large C&I
MWH/yr	62,491
Direct Utility Cost	\$8,544,011
TRC	1.54

Target	GNI
MWH/yr	9,120
Direct Utility Cost	\$1,540,500
TRC	1.39



## Residential Home Comfort

- New homes component
  - Focus on new home builders
  - Rebate for installing required program measures
- Audit and weatherization component
  - Walk through audit and comprehensive audits with rebates
- Energy-efficient equipment component
  - Rebates for HVAC and pool pumps
- Pilot program for conversion from electric heat to ENERGY STAR<sup>®</sup> rated fossil fuel space heating or water heating

Target	Residential
Savings	15,359 MWh/yr
Budget	\$8,051,600
TRC	0.57

## Student and Parent Energy-Efficiency Education Program

- Five components
  - Bright Kids (grades 2-3)
  - Take Action! (grades 5-7)
  - Innovations (grades 9-12)
  - Workshops for parents targeted at low-income communities
  - Teacher workshops

Target	Residential
MWH/yr	13,453
Budget	\$5,743,491
TRC	1.49



## Low-Income Energy-Efficiency Behavior & Education Program

- Starting PY6, up to 50,000 low income customers at or below 150% of FPIG\* customers will receive energy report cards
- Includes no cost or low cost tips that may help low-income customers reduce energy usage, promotes safety, informs customers about other assistance programs for which they may qualify
- Reaches underserved segment of customers

Target	Low-Income residential customers
MWH/yr	8,333
Budget	\$1,183,600
TRC	0.92

\* Federal Poverty Income Guideline

## School Benchmarking Program

- Benchmarking up to 25 schools per plan year
- Train and provide support schools on the use EPA Portfolio Manager and how to update their data
- Provide schools with recommendations on ways to use energy wisely

Target	GNI - Schools
MWH/yr	0 *
Direct Utility Cost	\$300,000
TRC	0.0

\* savings for measures implements are captured in other programs.

## Continuous Energy Improvement Program

- In PY6, 10 school districts will be identified to participate
- Energy savings goal set for each participating school district
- Instills an energy efficiency ethic in operation and maintenance of schools and engages administrators, teachers and students in more energy efficiency behavior

Target	GNI - schools
MWH/yr	3,500
Budget	\$585,000
TRC	1.24

## Master Metered Low-Income Multifamily Housing Program

- Walk through audits
- Direct install measures in apartments
- Prescriptive measures in common areas
- Tenant and building manager education
- Zero percent financing

Target	GNI – low income
MWH/yr	6,562
Budget	\$2,265,187
TRC	1.12

# Break



# Energy Efficiency Sessions

Name of Building

Date and Time of Session

# Welcome

- Thank you for attending this energy efficiency session!
- Safety first-emergency evacuation route

# Pennsylvania's Act 129



- Act 129 requires electricity companies to help customers reduce energy use and reduce costs
- This building is participating in PPL Electric Utilities E-Power program for multifamily buildings that are master metered
  - This building has one electric meter
  - Cost for the electricity you use is part of the rent for your unit
  - Using electricity more efficiently may help to keep rents more stable, longer
- Since the rent you pay includes the cost of electricity, you are in part funding this program



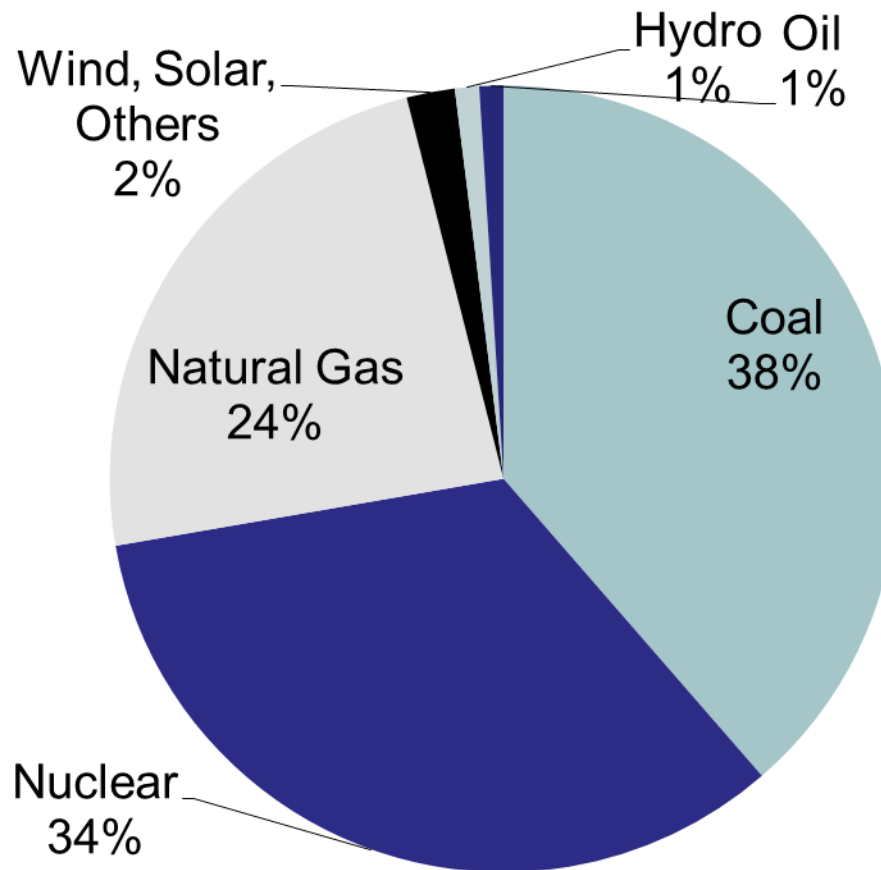
# Session Objectives

- Discuss why energy efficiency makes sense
- Review the energy efficiency measures that will be installed in
  - Individual units
  - Common areas
- Identify the behaviors that can reduce energy consumption
- Review the process for installing energy efficiency measures in your apartment

# Fuels Used to Generate Electricity in Pennsylvania



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# Benefits of Energy Efficiency

- Reduces customer costs
- Makes better use of non-renewable fuels
- Helps keep the cost of electricity lower over time
- Reduces greenhouse gases
- Helps with energy independence

# Unit of Electricity is Kilowatt Hours

- One kilowatt used for one hour
- One kilowatt hour is equal to ten 100 watt light bulbs turned on for one hour
- Charges for electricity is based on the number of kilowatt hours used
- Energy efficiency is gaining more work or use from a light or appliance while using less electricity to power it

# Measures Installed In Apartments



- Compact Fluorescent Lights (CFL)
- Low-flow shower head
- Low-flow sink aerator
- Smart strips
- ENERGY STAR Refrigerators

- Incandescent bulbs will be required to meet new Federal efficiency requirements
- CFL uses 75% less energy and lasts 10 times longer than incandescent bulbs
- Various color renditions (soft, bright, day light)
- Almost 8 million CFL's provided by E Power Programs to date
- Proven way to reduce electricity consumption through more efficient lighting in homes

- Most electronics use energy even when they are turned off (Phantom Load or Vampire Load)
- Flat screen TVs are an example of a large energy user even when they are turned off
- Smart strips automatically shut off selected equipment that is in idle mode (turned off, but still using energy)
- Smart strips can reduce the electricity used by electronics or appliances by 5% to 10% per year
- More convenient than always unplugging individual devices
- Separate plug allow cable boxes to remain active

# Low Flow Showerhead

- Showers are 30% of the water used in a home
  - Costly to heat water
  - Costly to pump water and process waste water
- Old showerheads can have flow rates of 5.5 gallons per minute
- Today's regulations require showerheads to be less than 2.5 gallons per minute
- Low flow shower heads achieve water savings of 25% to 60%
  - Need to heat less water



# Low Flow Faucet Aerators

- As with shower heads, low flow kitchen and bathroom sink aerators save water and energy
- Typical aerators allow the flow of about 2 gallons per minute
- Low flow aerators reduce the flow to about 1 gallon per minute

# Refrigerator Replacement



- New refrigerators are much more energy efficient
  - Better insulation
  - Improved refrigerants
  - More efficient motors
  - Better door seals
- ENERGY STAR labeled refrigerators use 15% less electricity than required by the Federal Government
  - Difference in electricity consumption could be more than 1,000 kilowatt hours in a year
- Old refrigerators will be completely recycled

# Easy Behaviors That Help Make the Best use of Electricity

- Turn off lights when not needed
- Adjust thermostats, particularly if no one is home
  - Higher in the summer
  - Lower in the winter
- Close curtains or blinds to keep sunlight out in the summer
- Use a microwave or toaster oven rather than heating the entire oven, when possible
- Make decisions in favor of energy efficiency

# Installation in your Apartment

- Our installers will be on site the week of September X
  - All installers will have identification and name badges
- On average, it takes about 30 minutes to install measures in your apartment
- We will leave a door hanger on your door knob 48 hours before we plan to be at your apartment
  - It will identify a two hour window of time during which we will arrive
  - If the time on the card is inconvenient, please contact the building managers to arrange a better time

# Common Area Improvements

- Hall lighting
  - More efficient fluorescent tubes-these lights are on all the time so using more efficient tubes will save a lot of electricity
  - Occupancy sensors-Improves efficiency by only turning on lights when needed
- LED Exit signs
- Efficient exterior lighting

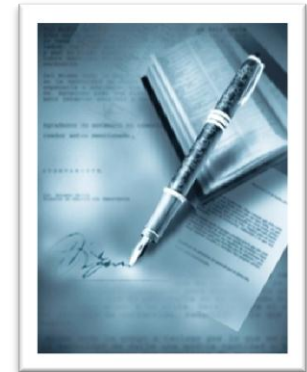
# Other Programs Available to Improve Energy Efficiency and Control Costs



- The following programs available for income qualified customers in single family homes or apartments with individual electric meters
  - Winter Relief Assistance Program: Provides energy efficiency measures and weatherization at no cost
  - E-Power Wise: Offered through community based organizations and provides energy efficiency education and kits that include many of the measure your will be receiving
  - Brochures describing both programs are being distributed

# Conservation Service Providers

- Contracts completed and filed with the Pa PUC.
  - ✓ Prescriptive Equipment and Custom Incentive Programs (Small C&I, Large C&I and GNI)
    - KEMA Services, Inc.
  - ✓ Energy-Efficiency Behavior & Education Programs
    - Opower, Inc.
  - ✓ E-Power Wise Program
    - Resource Action Program, Inc.
  - ✓ Residential Retail Program
    - ECOVA, Inc.



# Conservation Service Providers

- Contracts completed and filed with the Pa PUC.
  - ✓ Student and Parent Energy-Efficiency Education Program
    - National Energy Foundation
  
  - ✓ EM&V
    - Cadmus
  
  - ✓ Advertising, Marketing and PR
    - UMarketing
  
  - ✓ Master Metered Low-Income Multifamily Housing Program
    - SmartWatt





# Conservation Service Providers

- Contract negotiations underway:
  - ✓ Home Comfort Program
  - ✓ School Benchmarking Program
  - ✓ Continuous Energy Improvement Program



# Discussion and Questions



# PPL Electric Utilities Contact Information



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