



PPL Electric Utilities

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Stakeholder Meeting
Act 129 EE&C Phase 3
September 28, 2015

Agenda

- **Welcome/Housekeeping/Agenda** – 5 min
- Recap of Previous Meeting – 10 min
- Update Phase 3 Programs
 - Residential – 30 min
 - Low Income – 20 min
 - Non-Residential – 20 min
 - **Break** – 10 minutes
 - Demand Response – 10 min
 - Tracking System and Evaluation Update – 10 min
- Structure, format, and schedule for EE&C Plan – 5 min
- **Q&A and Next Steps** – 30 min

Previous Meeting - Recap

- Estimated savings and costs for each customer sector
- Common costs
- Program acquisition costs

Phase 3 Estimated EE Costs

	Estimated Ph 3 Costs (\$1000)	% of Ph 3 Cost	% of Ph 2 Cost	% of 2008 Revenue
Residential Direct EE	\$99,000	39%	36%	
Low-income Direct EE	\$47,000	19%	14%	
Total Resid & LI Direct EE	\$146,000	58%	50%	45%
Sm C&I Direct EE	\$63,000	25%	24%	
Lg C&I Direct EE	\$34,000	13%	10%	
GNI Direct EE	\$10,000	4%	16%	
Total Non-Resid Direct EE	\$107,000	42%	50%	55%
Total Portfolio Direct EE	\$253,000			

The higher Ph 3 low-income compliance target, the requirement for all LI savings to come from income-qualified programs, and the lower GNI target contribute to the higher % of costs for LI (and residential as a whole) vs. Ph 2 and vs. 2008 revenue.

Phase 3 Estimated Common & DR Costs

	Estimated Ph 3 Costs (\$1000)	% of Ph 3 Budget	% of Ph 2 Budget
EE Direct Costs	\$253,000	81.1%	80%
Common EE Costs **	\$42,000	13.5%	20%
Total EE Costs	\$295,000	94.6%	100%
DR Direct Costs*	\$15,000	4.8%	N/A
DR Common Costs**	\$2,000	0.6%	N/A
Total DR Costs	\$17,000	5.4%	N/A
Total Portfolio Costs	\$312,000		

We are driving common costs down in Phase 3, from ~20% to 14% of portfolio costs.

* Allocation to customer sectors not available at this time

** Includes SWE costs (\$5,000 total EE + DR)

Phase 3 Estimated Savings by Customer Sector

	Estimated Ph 3 Savings (MWh/yr)	% of Ph 3 Portfolio Savings	% of Ph 2 Portfolio Savings	% of Market Potential Savings**
Residential	678,000	42.7%	36.5%	
Low-income	88,000 (79,367 target)	5.5% (6.1%)*	4.1%	
Total Residential & LI	766,000	48.3%	40.6%	55.1%
Sm C&I	475,000	30%	30.3%	27.5%
Lg C&I	270,000	17%	16.2%	17.4%
GNI	75,000 (50,507 target)	4.7% (5.2%)*	12.9%	incl
Total Non-Residential	820,000	51.7%	59.4%	44.9%
Total Portfolio	1,586,000 (1,443,035 target)			

* % of portfolio compliance target. Basis of compliance.

** Statewide, not PPL EU specific

Phase 3 EE Summary by Customer Sector



	Est. Savings (MWh/yr)	% of Portfolio Savings	Est. Cost (\$1000)	% of Portfolio Cost	Est. Ph 3 EE PAC (\$/annual kWh)	Est. Ph 2 EE PAC (\$/annual kWh)
Residential	678,000	42.7%	\$115,400	39%	\$0.17	\$0.28
Low-income	88,000	5.5%	\$55,000	19%	\$0.62	\$1.01
Total Resid & LI	766,000	48.3%	\$170,400	58%	\$0.22	\$0.36
Sm C&I	475,000	30%	\$73,500	25%	\$0.15	\$0.23
Large C&I	270,000	17%	\$39,500	13%	\$0.15	\$0.18
GNI	75,000	4.7%	\$11,700	4%	\$0.16	\$0.37
Total Non-Resid	820,000	51.7%	\$124,700	42%	\$0.15	\$0.25
Total Portfolio	1,586,000*		\$295,000		\$0.19	\$0.29
Common Costs (included in sectors above)			\$42,000		\$0.03	\$0.06

* 1,443,035 target

Significant reduction in program acquisition cost compared to Ph 2.

Customer Sector Savings & Cost



- Any questions or comments on the estimated Phase 3 savings and costs for each customer sector?

Residential Program Status

- CSP selected in late August
- Expect to send the contract to the PaPUC for approval in October
- Savings and costs within budget
- Currently developing the detailed residential portfolio estimates including programs, measures, savings, and costs
- Will include individually metered multi-family buildings (non low-income)

Proposed Residential Programs

- **Appliance Recycling**

- Refrigerators, freezers, and window air conditioners like Phases 1 and 2
- Considering tiered incentives based on the age of the old appliance
- Considering free pick-up of consumer electronics and CFLs as a service to customers to encourage proper, environmentally responsible disposal (no electricity savings)
- Considering dehumidifiers (subject to inclusion in the TRM)
- Considering different forms of incentives such as a check, pre-paid card at the time of pick-up, and free LEDs at the time of pick-up
- Available to Low-Income CSP and Non-Residential CSP

Proposed Residential Programs

(cont'd)



- **Student and Parent Energy Efficiency Education**
 - Very similar to successful program in Phase 2
 - In-class presentations to increase awareness and engagement of energy efficiency, along with take-home energy efficiency kits
 - Will encourage students and parents to take the next step after the presentation, and drive them to the Customer Engagement Hub for follow-up activities, competitions between classrooms and other schools

Proposed Residential Programs

(cont'd)



- **Upstream Lighting**

- LEDs discounted at the point of sale
- No CFLs
- Big box, independently owned, and discount stores throughout the service territory
- Variety of A-line, reflectors, and specialty bulbs (shapes, base sizes, etc.) in various lumens, wattages, colors, and manufacturers.
- May include other distribution methods such as free LEDs as part of a promotion, free LEDs in a new customer welcome kit, etc.

Proposed Residential Programs

(cont'd)

- **Energy Efficiency Behavior and Education**
 - More accurate, informative, personalized, actionable, and engaging home energy reports that will include personalized energy efficiency tips (down to the customer level)
 - Home energy reports to approximately 120,000 customers
 - Encourage customers to engage the energy efficiency hub
 - The hub is the gateway for all residential programs
 - Encourages the customer to complete an online energy survey (home construction, occupants, EE practices, appliances, HVAC, water heaters, etc.)
 - Energy analyzer
 - Energy efficiency education and tips
 - Retail locator, rebate portal, real-time input to home energy reports, and contractor search features
 - HERs and hub will engage customers, heavily promote all programs, and encourage customers to take a more-comprehensive approach to energy efficiency

Proposed Residential Programs

(cont'd)

- **Efficient Equipment/Home Comfort - Existing Homes**
 - Broad mix of measures such as heating, air conditioning, water heating, appliances, weatherization
 - Considering tiered incentive structure to encourage the most efficient measures and installation of multiple measures
 - Strong trade ally network to promote, stock, and install more-efficient measures
 - Evaluating mid-stream incentives at point of sale for some measures like smart thermostats
 - Offer in-home energy audits (like Phase 2) for the first 6 months. Transition to online audits or audits performed by trade allies as part of their sales model (no incentives from PPL)

Proposed Residential Programs

(cont'd)



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- **Efficient Equipment/Home Comfort - New Construction**
 - **HERS ratings**
 - 30% more efficient
 - Performance based incentives for appliances, heating, hot water, insulation
 - **Energy Star rated homes**
 - 15% more efficient than standard homes (current building code)
 - Prescriptive based incentive package for appliances, heating, hot water, insulation
 - **Strong trade ally network, including builders and real estate agents**

Additional Residential Highlights



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- **Rebate application process will be significantly improved and offer more options**
 - Online (web and mobile) or paper
 - Trade allies encouraged to process applications for some measures
 - Shorter rebate processing times, especially with online application
 - Nearly real-time feedback and status available to customer
- **Seamless experience for customers across all programs**
 - Online (web and mobile) or paper
 - Looks like one program to the customer and CSP has one view of the customer across all programs/measures
 - Consolidated phone number / E-mail / web for all programs
- **Pilots for new technology**
- **Seamless transition from Phase 2 to Phase 3**

Residential Program Summary



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PROGRAMS	ESTIMATED SAVINGS (MWh/yr)
Appliance Recycling	68,000
Upstream Lighting	284,000
Efficient Equipment/Home Comfort	79,000
Student and Parent EE Education	28,000
Energy Efficiency Behavior & Education	225,000*
TOTAL	684,000**

*Approx. 45,000 MWh per program year, repeated for five years.

** Slightly higher than PPL projected.

Low-Income Program Status



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- CSP selected in late August
- Expect to send the CSP contract to the PaPUC for approval in early October
- Savings and costs within budget
- CSP will initiate an RFP process to all existing CBOs and other partners to continue delivering low-income program services within the PPL service territory.
- Currently developing the detailed low-income portfolio estimates including: programs, measures, savings, and costs
- Includes individually metered multi-family buildings with low-income tenants (residential rate class)
- Includes master-metered multifamily buildings with mostly low-income tenants (non-residential rate class)
 - Savings & costs will be assigned to low-income, consistent with the PaPUC's decision

Proposed Low-Income Programs



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- **Direct-install (“WRAP”)**
 - Single family, multifamily and manufactured homes
 - Expect fairly comprehensive measures, comparable to Phase 2
 - Much lower program acquisition cost than Phase 2
- **Energy Efficiency Kits & Education**
 - Distribution through CBO’s and direct mail
- **Behavior program not expected**
- **Close coordination with:**
 - LIURP WRAP to ensure programs do not “compete” with each other
 - Residential – Appliance Recycling

Multifamily Programs

Property Type	CSP Responsibility		
	<u>Low Income</u>	<u>Residential</u>	<u>Non Residential</u>
Master-Metered w/Low-Income Residents	X		
Individually-Metered w/Low-Income Residents	X		
Master-Metered w/Non-Low-Income Residents			X
Individually-Metered w/Non-Low-Income Residents		X	

Non-Residential Program Status



PPL Electric Utilities

- CSP selected in early September
- Expect to send the CSP contract to the PaPUC for approval in early October
- Savings and costs within budget
- Currently developing the detailed portfolio estimates including: programs, measures, savings, and costs
- Includes master-metered multifamily buildings with non-low-income tenants

- **Prescriptive Equipment Program**
 - Lighting, including a new mid-stream delivery model
 - Refrigeration
 - HVAC
- **Custom Program**
 - Efficient projects that pass TRC
 - Compressed air
 - Industrial process improvements
 - CHP
 - Other technologies

Additional Non-Residential Highlights



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- Enhanced website and customer experience
- Seamless experience for customers across all programs (looks like one program to the customer)
- All programs serve each sector customer class (Small C&I, Large C&I, GNI)
- Online rebate application in addition to paper option
 - Reduced administration costs
 - Quicker processing
 - Minimizes errors and missing information that could delay rebates
 - Faster feedback and status to customer
- Seamless transition from Phase 2 to Phase 3, including waitlist and approved projects that slip from Phase 2

Additional Non-Residential Highlights

(cont'd)



- **Evolve to mid-stream incentives for some measures**
 - Lower administrative costs
 - Encourages trade allies to stock more-efficient products
 - Simpler for customers (trade ally submits all documentation)
 - Transforms markets quicker
- **Pilots for new technology**
- **Coordinating multi-family with low-income and residential CSPs, especially inbound inquiries**

Comprehensive Programs

- The PaPUC Implementation Order requires at least one comprehensive program for Residential and Non-Residential customers
- **Residential**
 - Low-income WRAP Direct Install
 - Holistic, comprehensive approach to encourage participation across all non-low-income residential programs: Home Survey + HVAC + Lighting + Water Heating Measures + Weatherization
- **Non-Residential**
 - Custom
 - CHP

Demand Response

- CSP selected in early September
- CSP contract will be sent to the PaPUC for approval
- Savings and costs within budget
- Load curtailment for non-residential customers
- Additional details will be available after the PaPUC approves the CSP contract

Other Contracts

- **Energy Efficiency Tracking System**
 - Vendor selected in August
 - Replacing existing system
 - Lower cost than Phase 2
 - Enhanced reporting, analytics, and functionality
 - Implement changes real-time
- **Independent Evaluator**
 - Vendor selected in September
 - Lower cost per year than Phase 2
 - Will send contract to PaPUC in October for approval
- **Helps to reduce common costs**

Structure & Format of EE&C Plan



- Use the PaPUC's template
- Essentially the same level of detail & format as Phase 2
- To provide reasonable flexibility to control the pace of programs (savings and cost budgets)
 - Incentive ranges will be provided for each measure/program
 - All likely measures expected during the five-year phase will be listed but every measure may not be offered at the all times
- To provide flexibility, PPL will give *at least 30 days* notice of changes to rebate amounts and measures offered

Schedule for the EE&C Plan

- **Detailed program design**
 - Late September to mid October
- **Review detailed program design with stakeholders**
 - Late October
- **Freeze program design and EE&C Plan**
 - October 31
- **File EE&C Plan with PaPUC**
 - November 30

Questions or Comments



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