



The Power to Make a Difference

PPL Electric Utilities
Act 129 Energy Efficiency & Conservation Plan
Stakeholder Meeting
April 19, 2011



Agenda

- Housekeeping Items
- Portfolio Results
- Status of Programs
- Short Break
- Process for Orderly Closing of Programs
- What's New- Proposed Changes to Programs
- What Happens After May 2013?
- Q&A and Open Discussion
- Stakeholder Survey



Portfolio Results (Pete Cleff)



Results as of 3/31/11

- Results are for installations recorded through 3/31/11
- Savings are recorded when the rebate application is processed, the rebate is paid, and the program CSP completes their batch download process into PPL EU's tracking system
- There could be approximately an 8 week lag between the rebate application receipt date and when savings are reported in PPL EU's tracking system



Results as of 3/31/11

- Portfolio energy savings are on target for compliance.
- Some programs are ahead and some are behind
- Some customer sectors are ahead and some are behind.
- Some programs or sectors are far enough ahead that their participation may close much earlier than 5/31/13. More about that later.
- We are behind the institutional target for 5/31/11.



Results as of 3/31/11

- Portfolio peak load reductions are behind target and we will be 37 MW short of the compliance target (297 MW) if no action is taken. More about this later.
- Portfolio costs at completion are projected to be within budget.



Portfolio Results as of 3/31/11

- Approximately 124,000 participants (rebate applications) excluding CFLs.
- Over 95,000 unique customer accounts have participated (excluding CFLs).
- Approximately 600,000 participants including CFLs. Based on 8 CFLs per participant as estimated by PPL Electric's independent evaluator through surveys.
- \$35 million incentives paid (as of 2/28/11)
- \$64 million total expenditures (as of 2/28/11)
- \$70 million budgeted (as of 2/28/11)



Portfolio Energy Savings as of 3/31/11

- Reported energy savings to date for the portfolio are ~426,000 MWh/yr.
- Slightly ahead of target
- Reported energy savings to date for the portfolio are greater than the yearly energy usage of all residential households in Allentown.



Reported Vs. Verified Savings

- Compliance targets are based on verified savings.
- 426,000 MWh/yr of reported energy savings to date are ~90% of the 5/31/11 compliance target.
 - Approx. 477,000 MWh/yr of reported savings are required to achieve 382,000 MWh/yr of verified savings at an estimated realization rate of 80%.
- Reported energy savings to date are ~30% of the 5/31/13 compliance target.
 - Approx. 1,432,000 MWh/yr of reported savings are required to achieve 1,146,000 MWh/yr of verified savings at an estimated realization rate of 80%.



Reported Vs. Verified Savings

- Verified savings for Program Year 2 (ends 5/31/11) will not be known until sometime between August and November 2011, after the independent evaluation is complete.
- Therefore, we are using an estimated realization rate of 80% to project verified savings, for the sole purpose of internal management of program progress, until the annual evaluation determines actual verified savings.



Portfolio Peak Load Reductions as of 3/31/11

- Peak load reductions from energy efficiency measures are trending lower than expected and the gap is expected to widen.
- Reported peak load reductions from energy efficiency measures (lighting, HVAC, appliances, etc.) to date are 48 MW
 - Equivalent to ~ 38 MW of verified savings
 - ~13% of the 297 MW compliance target



Portfolio Peak Load Reductions as of 3/31/11

- There will be no demand response (direct load control, load curtailment, TOU, etc.) reductions until the summer of 2012
- Only the peak load reductions June – September 2012 count toward compliance
- We will not know the amount of the reductions or the applicable 100 peak hours until that summer is over



Portfolio Peak Load Reductions as of 3/31/11

- The forecast peak load reductions at completion (summer 2012) is 260 MW
 - 297 MW is the compliance target
 - 334 MW in approved EE&C Plan
 - Minus 53 MW for Time-of-Use (more on this later)
 - Minus 21 MW for peak load reductions from energy efficiency measures
- The forecast at completion will be 37 MW short of the compliance target (297 MW) if no action is taken.

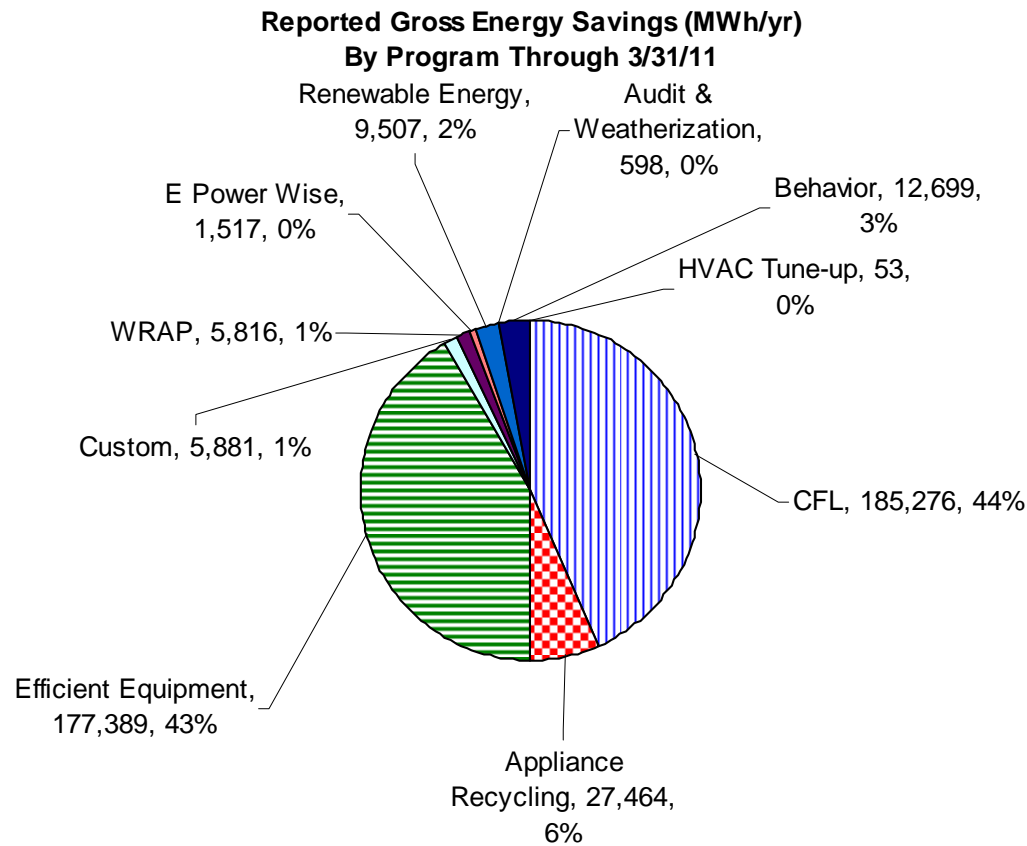


Proposed Plan to Increase Peak Load Reductions

- Proposed to increase the load curtailment program from 100 MW to 150 within the originally approved program budget
- Pending PUC approval



Energy Savings by Program as of 3/31/11

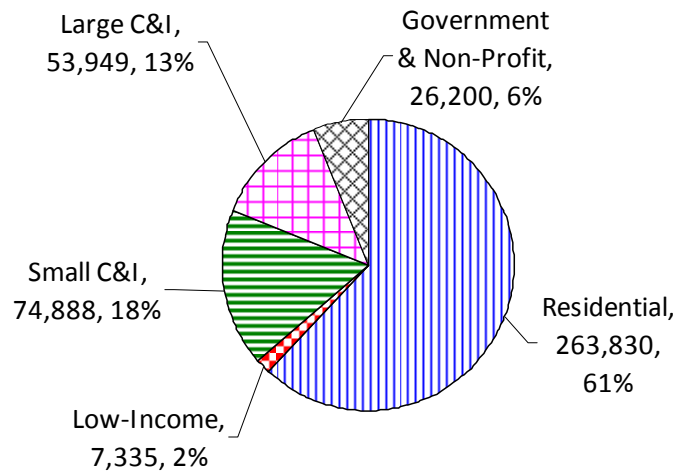


Legend: Program name, reported savings MWh/yr, % of total savings by program

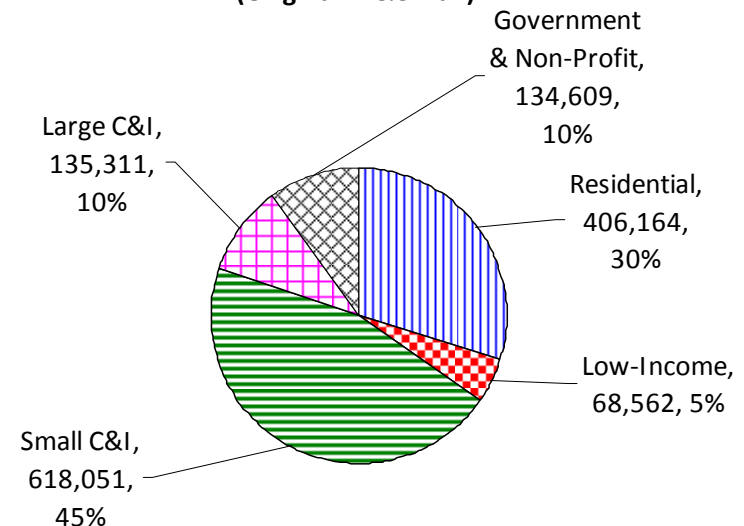


Energy Savings by Customer Sector as of 3/31/11

**Reported Gross Energy Savings by Sector
Through 3/31/11**



**Energy Savings by Sector
(Original EE&C Plan)**



- To better align actuals with the proportions assumed in the EE&C Plan, we need to accelerate Small C&I, accelerate GNI, and slow down Residential.
- The proportion for Large C&I is on track.
- Low-income will be a smaller proportion than in the original EE&C Plan because of the reclassification of CFL Program savings (Plan included ~50,000 MWh/yr for Low-Income that will now be accounted for as Residential).



Energy Savings by Customer Sector as of 3/31/11

Customer Sector	Reported Savings as of 3/31/11 (MWh/yr)	Verified Savings (assumed at 80% realiz. rate) MWh/yr	Orig. EE&C Plan at Completion (MWh/yr)	% of Plan Achieved
Residential & Low-Income	271,165	217,000	474,726	45% ON TARGET
Small C&I	74,887	60,000	618,051	10% BEHIND
Large C&I	55,889; ~122,000 w/ projects in pipeline	45,000; 98,000 (w/ pipeline)	135,311	33%; 72% w/ pipeline AHEAD*
Gov't, Non-Profit, & Schools	26,200	21,000	134,609	16% BEHIND

* So far ahead that Large C&I portion of Efficient Equipment & Custom Programs will likely close shortly (wait list). More about that later.



Questions about Portfolio Results?



Status of Programs (Joe Mezlo)



The Programs

Program Name	Residential	Low Income	Small C&I	Large C&I	Institutional	Estimated Benefit-Cost Ratio (Plan)	Launch Date
1 Efficient Equipment Incentive	■	■	■	■	■	2.6 - 3.3	1/2/10 - 4/15/10
2 Residential Audit and Weatherization	■					1.2	5/1/10
3 Compact Fluorescent Lighting	■	■	■	■	■	4.8	1/2/10
4 Appliance Recycling	■	■	■	■	■	9.8	11/9/09
5 ENERGY STAR New Homes	■					1.4	tbd
6 Direct Load Control	■	■	■		■	0.2	1/1/11
7 Time of Use Rates	■	■	■	■	■	3.2 - 3.6	6/1/10
8 Low-Income WRAP		■				0.8	11/1/09
9 E Power Wise		■				1.4	3/1/10
10 C&I Custom Incentive	■		■	■	■	2.3 - 3.0	3/1/10
11 HVAC Tune-Up			■	■	■	5.8	4/1/10
12 Load Curtailment			■	■	■	0.7	1/1/11
13 Renewable Energy	■				■	1.0 - 1.5	3/1/10
14 Energy Efficiency Behavior & Education	■	■	■	■	■	3.7	3/1/10

Portfolio benefit-cost ratio = 2.8

■ Primary customer target
 ■ Eligible customers



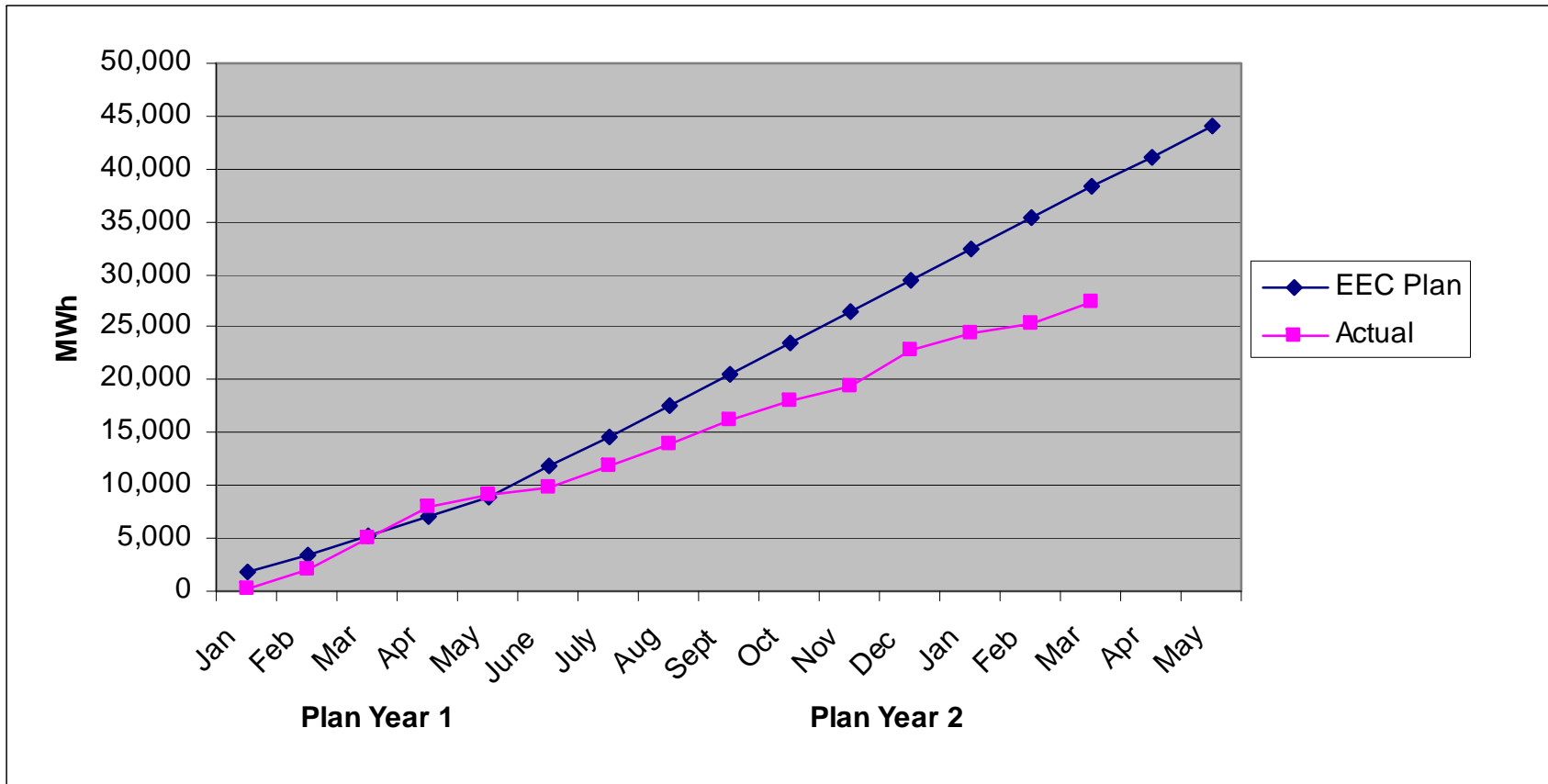
Program Status- Appliance Recycling

- Launched November 2009
- Recycling facility opened in Hatfield, PA, March 2010
- Behind target, under budget
- Extensive marketing since September 2010
- Enhanced to allow customers to arrange recycling when buying a new refrigerator (Sears, Best Buy, 'Quick link' for independent retailers)

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
Appliances Recycled	19,434	26,775	69,615
Reported Gross Savings (MWh/yr)	27,464	44,139	114,761
Program Cost (\$1000)	\$2,292	\$3,859	\$10,036



Program Status- Appliance Recycling





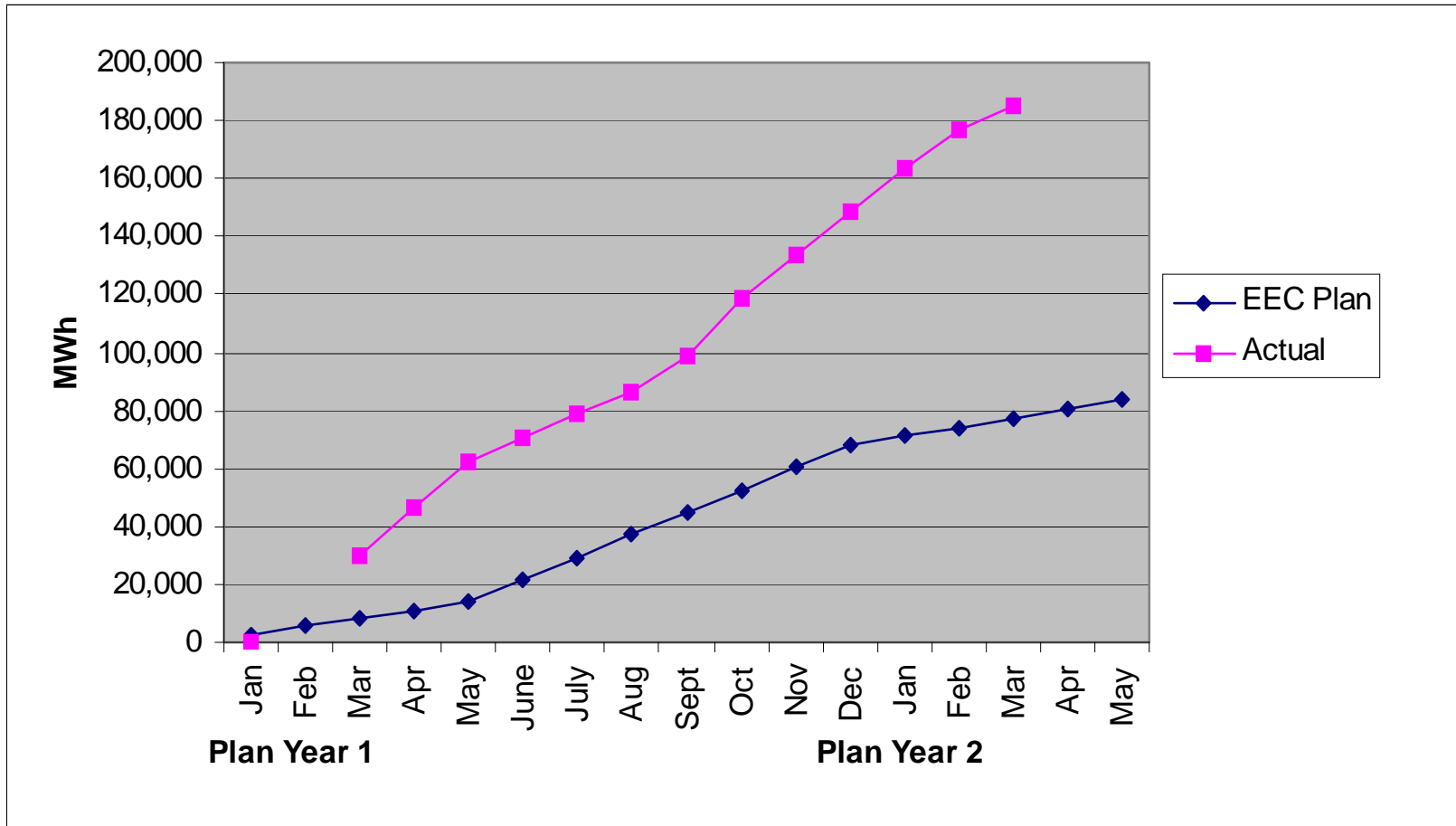
Program Status- CFL

- Launched January 2010
- 411 participating retail stores
- Ahead of target, under budget

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
CFLs	4,029,900	2,558,000	7,125,000
Reported Gross Savings (MWh/yr)	185,276	106,654	292,137
Program Cost (\$1000)	\$5,927	\$6,769	\$17,733



Program Status- CFL





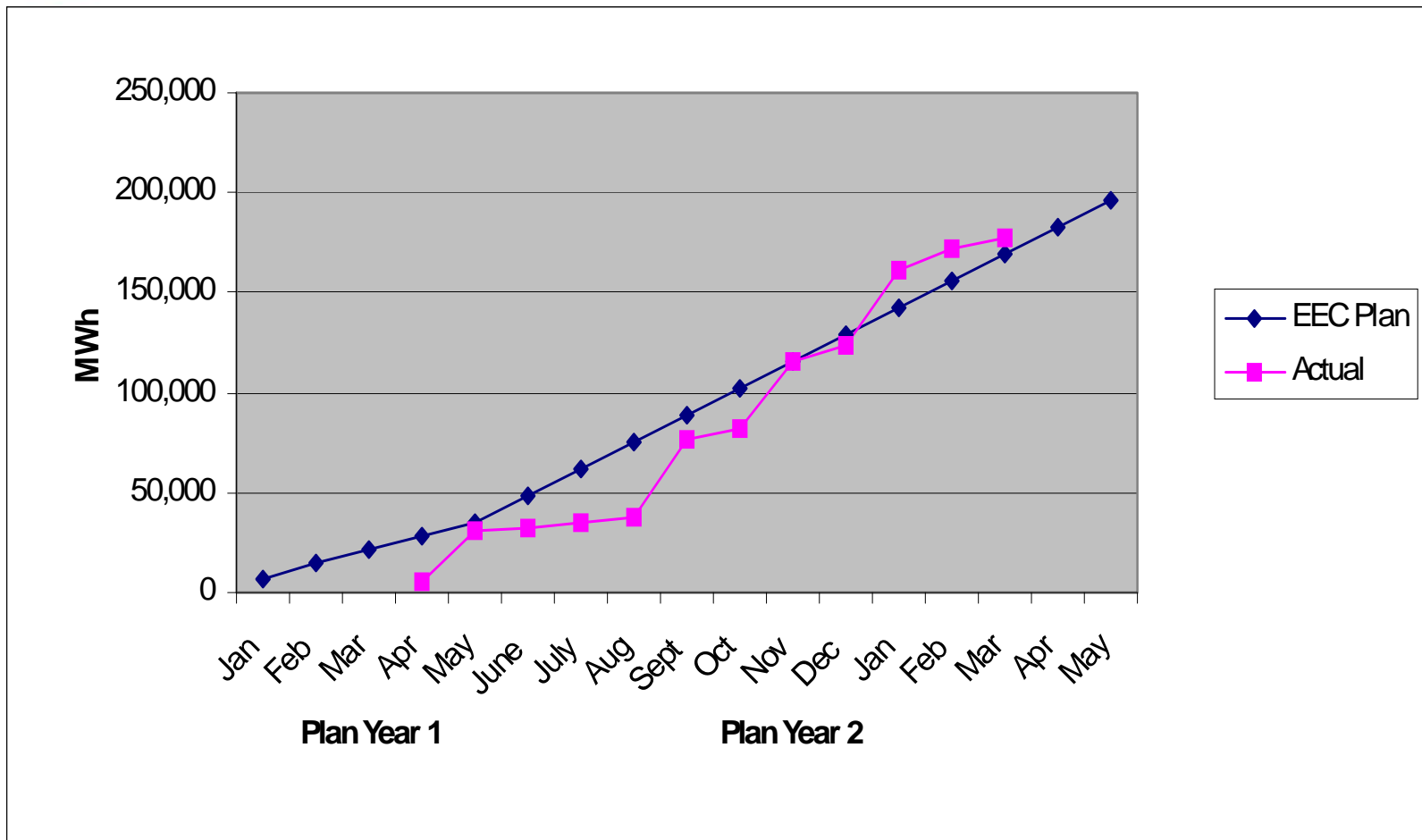
Program Status- Energy Efficiency Rebates

- Launched December 2009 for residential; March 2010 - April 2010 for C&I
- Ahead of target for residential but will be throttled to control pace
- Ahead of target for large C&I (including projects in the pipeline) and nearing the 2013 target for MWh/yr and \$ budget. Likely to close to Large C&I summer/early fall 2011
- Behind target for small C&I
- Extensive marketing since September 2010 focused on small C&I and GNI

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
Number of rebates paid	130,178	NA	NA, but about 3.8 million measures
Reported Gross Savings (MWh/yr)	177,389	196,293	715,875
Program Cost (\$1000)	\$20,136	\$26,940	\$92,857



Program Status- Energy Efficiency Rebates





Program Status- Energy Assessment & Weatherization

- Launched May 2010
- Behind target
- Extensive marketing since September 2010

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
Number of participants	724 surveys 206 audits	1,616 surveys 404 audits	5,940 4,752 surveys 1,188 audits
Reported Gross Savings (MWh/yr)	599	2,063	5,961
Program Cost (\$1000)	\$513	\$1,007	\$2,756



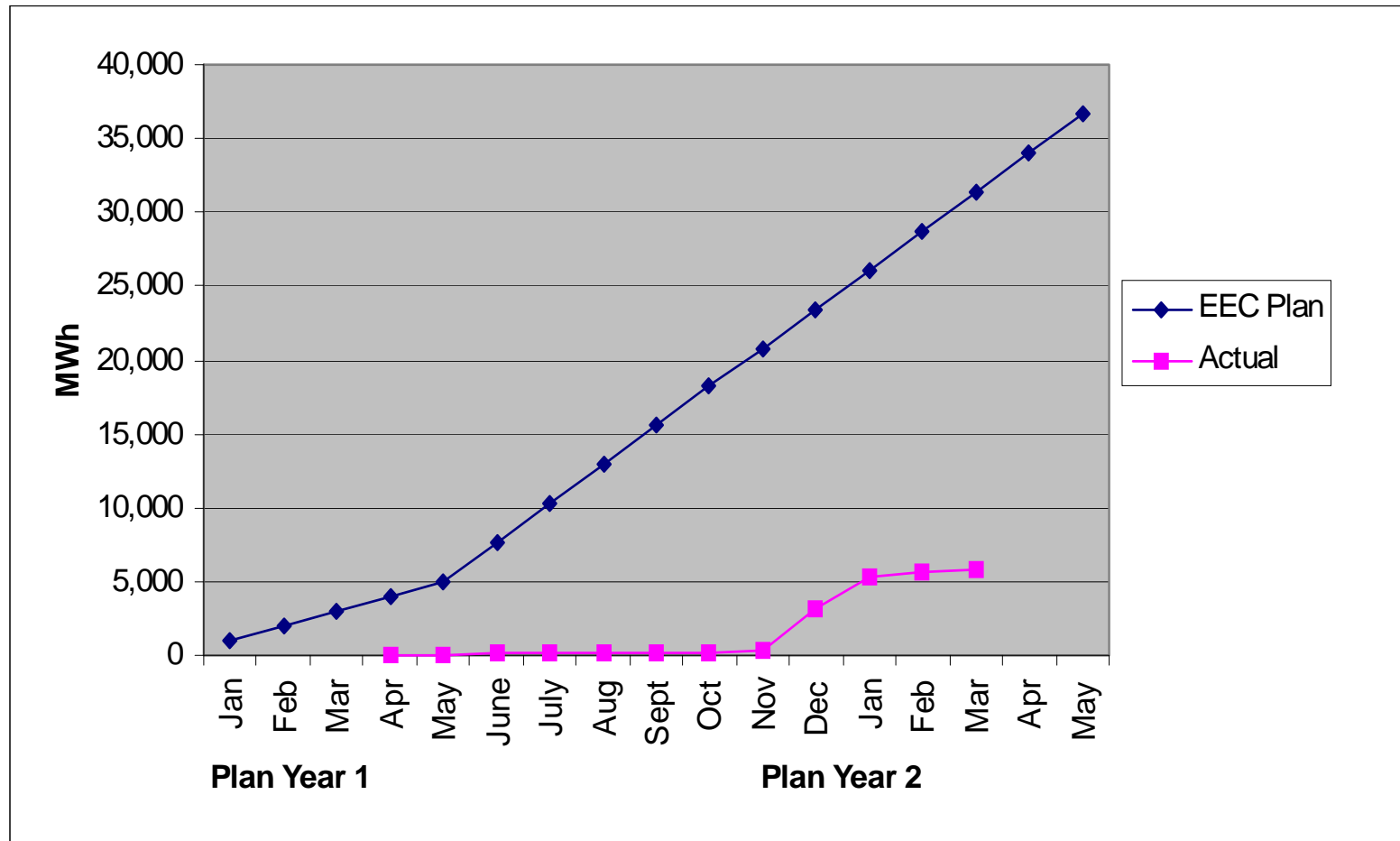
Program Status- Custom Incentives

- Launched March 2010
- Behind target
- Approximately 73 projects and 62,394 MWh/yr in the pipeline (“projects in progress”)
- Including projects in the pipeline, nearing the 2013 target for MWh/yr and \$ budget for the large C&I sector. Likely to close to Large C&I summer/early fall 2011.

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
Number of projects	Tech studies 55 Projects 127	52	187
Reported Gross Savings (MWh/yr)	5,881	36,657	140,522
Program Cost (\$1000)	\$620	\$5,889	\$21,252



Program Status- Custom Incentive





Program Status- Low Income WRAP

- Launched November 2009
- Behind target for energy savings but on target for # of jobs completed

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
Number of participants	5,013	Single Family = 5,940 Multi Family = 4,230 Total = 10,170	23,590
Reported Gross Savings (MWh/yr)	5,816	8,366	18,695
Program Cost (\$1000)	\$9,723	\$12,935	\$29,038

- Estimated number of multi-family customers who received Act 129 WRAP services = 778
- Estimated number of multi-family jobs assigned to WRAP contractors = 60
- Estimated number of multi-family jobs completed and assigned for inspection = 391
- Estimated number of CFLs distributed to WRAP customers = 46,458; estimated savings = 2,008 MWh/yr
- Estimated rate class breakdown of multi-family participants = 100% residential



Program Status- E Power Wise Low-Income

- Launched March 2010
- Ahead of target
- 23 Community Based Organizations participating
- Estimated number of CFLs distributed to E Power Wise customers = 7,482
- Estimated savings of CFLs distributed to E Power Wise customers = 323 MWh/yr
- Program expected to exhaust budget in first half of 2012

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
Number of kits	3,253	3,100	7,200
Reported Gross Savings (MWh/yr)	1,517	466	1,080
Program Cost (\$1000)	\$331	\$250	\$542



Program Status- HVAC Tune-up

- Launched April 2010
- Behind target
- Over budget (front-loaded costs for contractor recruiting and training)
- CSP is focused on the April/May maintenance season (approximately 2,400 units scheduled for testing with a total of 5,100 MWh/yr estimated savings)

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
Number of units serviced	144	1,830	5,770
Reported Gross Savings (MWh/yr)	53	6,026	22,176
Program Cost (\$1000)	\$521	\$389	\$1,238



Program Status- Renewable Energy

- Launched March 2010
- Closed 5/10 for residential PV and 8/10 for government, non-profit and institutional (GNI) PV
- GSHP for residential closed 1/31/11
- Reservation process for GNI GSHP is in place for remaining funds

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
Number of participants	1,643 (135 PV, 1,508 GSHP)	420 (20 PV, 400 GSHP)	1,260 (60 PV, 1,200 GSHP)
Reported Gross Savings (MWh/yr)	9,507	6,164	18,490
Program Cost (\$1000)	\$3,143	\$1,967	\$5,649



Program Status- Load Curtailment

- Negotiating with bidders
- Launch delayed from June 2010 to Spring 2011 because of the late development of statewide protocols for determining the savings
- No curtailments until summer 2012 (except for testing)

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
Number of MWs enrolled	0	0	98 (increased to 150 within cost budget)*
Reported Gross Peak Reduction (MW)	0	0	98 (increased to 150 within cost budget)*
Program Cost (\$1000)	\$100	\$2,332	\$14,486

* Pending PUC approval



Program Status- Direct Load Control

- Awarded January 2011.
- Customer enrollment started 4/1/11. Launch delayed from June 2010 because of the late development of statewide protocols for determining the savings.
- Some DLC in Summer 2011 for testing and measurement & verification. Only the DLC in Summer 2012 counts toward compliance.

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
Number of participants enrolled	0 (>2,000 as of 4/8, 1 week after launch)	11,190	44,940
Reported Gross Peak Reduction (MW)	0	0	32
Program Cost (\$1000)	\$312	\$3,452	\$11,722



Program Status- Education & Behavior

- Launched March 2010
- On schedule for ~8,000 MWh/yr at the end of Program Year 2*

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
Number of Participants	50,000	25,000	100,000
Reported Gross Savings (MWh/yr)	12,698	9,000	18,100
Program Cost (\$1000)	\$325	\$1,263	\$2,577

* Need 1 year to conduct post-participation billing analysis to verify savings. Measure life is ~ 1 year so program needs to be repeated each year.



Program Status- New Home Construction

- Likely to recommend dropping the program. More on that later.
- Will focus on communicating existing rebates available through the energy efficient equipment program for new construction

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
Number of Participants	0	530	1,930
Reported Gross Savings (MWh/yr)	0	1,431	5,211
Program Cost (\$1000)	\$23	\$830	\$2,819



Time of Use Program Status (Pete Cleff)



Program Status- Time of Use Rates

- Rates offered beginning in May 2010
- Participation is behind target
- Will likely get very little of the planned peak load reductions (61 MW; 150,000 participants) projected in the Plan.

	Actual as of 3/31/11	Plan Year 2 Target	Total Plan Target
Number of participants enrolled	~19,000*	~40,000*	150,510
Reported Gross Peak Load Reduction (MW)	0**	0**	61

* TOU rates change in June 2011 then quarterly thereafter. Participants can enter/leave TOU at will. Only the participants active for the summer of 2012 will count toward the reduction goal.

** Need to conduct post-participation billing analysis to determine peak load reductions. Reductions only count in the summer of 2012.



TOU Participation Will Likely be Very Low

- TOU rates change in June 2011 then quarterly thereafter. Participants can enter/leave TOU at will. Only the participants active for the summer of 2012 will count toward the reduction goal.
- Continued decline in the difference between on-peak and off-peak energy prices in PJM suggests there will be less economic incentive to participate in TOU and the actual reductions per participant will be less (i.e. many customers will not shift usage and the after-the-fact billing analysis will show little-to-no savings).
- TOU participation in summer 2012 (the compliance period) is difficult to predict, especially given the attractiveness of shopping as an alternative and the opportunity for participants to exit the program to avoid summers' higher prices. These are factors not recognized in the previous projection of 150,000 participants and are likely to result in far less participation.



Questions About Program Status?

Short Break



Process for the Orderly Closing of Programs or Customer Sector Participation in a Program (Joe Mezlo)



Closed Programs/Measures

- Residential photovoltaic
- GNI photovoltaic
- Residential ground source heat pump



Programs/Measures Performing Above Expectations

- CFLs
 - Throttle the program to slow the pace over the next 2 years without changing the total at completion (May 2013)
 - Increase emphasis on specialty bulbs like LEDs
- Residential measures in Efficient Equipment Program
 - Throttle the program to slow the pace
 - Propose to reduce or eliminate rebates for measures that have met or exceeded the number of units planned
 - Eliminate rebates for measures that are no longer necessary
 - More on this later when we discuss proposed changes
- E-Power Wise
 - Will likely expend the full budget in the first half of 2012



Programs/Measures Performing Above Expectations

- We are close to the total (May 2013) planned savings for Large C&I
- We are close to the total (May 2013) funding budget for Large
- Combined total for Efficient Equipment Program and Custom Incentive Program
- Those two programs are the primary energy efficiency programs for Large C&I
- More on this shortly



Considerations for Closing Programs/Sectors

- First priority is to meet portfolio compliance targets within total portfolio budget
- Next priority is to meet savings and budget targets for customer sectors, as estimated in the EE&C Plan
- PPL Electric believes it can achieve both priorities but success hinges on improving Small C&I results quickly.
- It is unclear which closing strategy best balances Stakeholders' and PPL Electric's interests:
 - Close programs/sectors when we reach the savings target. Costs could be under the Plan's budget (i.e. do not pursue additional savings until the budget is expended).
 - Close programs/sectors when we hit the budget target. Savings could be over or under the Plan.



Large C&I to Date

- Large C&I savings target is 135,311 MWh/yr (verified savings) per the EE&C Plan
- We need to get approximately 169,000 MWh/yr of reported savings to achieve 135,311 verified savings, assuming a realization rate of 80%.
- Reported savings as of March 31, 2011 are ~122,000 MWh/yr, which is ~72% of Plan at May 2013 completion
 - 55,900 actual reported
 - 66,000 in the pipeline



Proposed Closing Process for Large C&I

- Based on the current Plan and status, we expect Large C&I programs (Efficient Equipment & Custom programs) to close this summer/early fall
- Happened much sooner than scheduled, especially with projects in the pipeline
- Implement a two-step rebate application process (reservation and rebate request)
- Implement a wait list when we reach 100% of target (savings or budget, whichever is the basis)
- Stop funding new technical studies for custom projects



Questions about the orderly closing of programs or customer sector participation in a program?



Changes to the EE&C Plan Under Consideration (Pete Cleff)



Changes Under Consideration as of 3/31/11

- Most of the changes are minor and will not be discussed in detail today. If stakeholders have any questions or concerns about the minor changes, please contact us via e-mail (pdcleff@pplweb.com) or phone (610-774-4530) no later than May 5, 2011.
- The more-significant changes under consideration are:
 - Significantly reduce participation and savings estimates for TOU (discussed earlier today)
 - Eliminate New Homes Program
 - True-up cost projections for programs and common costs. This is separate from the specific changes to measures and programs described below.
 - Reduce projected peak load reductions from energy efficiency measures



Changes Under Consideration as of 3/31/11

- PPL Electric will request PUC approval to modify its EE&C Plan consistent with the PUC's Orders.
- Please note the PUC issued a tentative order on 4/1/11 recommending a revised process to request approval of minor changes. The content and timing of the final order is not known at this time.



Changes Under Consideration

- 1. TOU.** Reduce the projected participation and savings in Time-of-Use as described earlier. All years are 0 except for PY 4. Need to determine if/how to reallocate TOU costs.
- 2. Eliminate the New Homes Program.** New home market is not likely to rebound quickly enough to achieve material savings. Also, savings are very low because of new building codes (IECC 2009 that became effective in 2010) and likely changes to TRM would reduce new home savings (the baseline increases). We will market measures to builders and homeowners through the efficient equipment program instead and reallocate budget to the residential measures in the efficient equipment program.



Changes Under Consideration

- 3. True-up Cost Projections.** Adjust projected costs for programs and common costs (tracking system, EM&V, marketing, etc.) to reflect current projections, including “cash flow” between years and a true-up to PY 1 and PY 2 actuals. This is separate from the specific changes to measures and programs described below. Impact on program cost forecasts and allocation to customer sectors is not yet known.
- 4. Peak Load Reduction for EE Measures.** Adjust the projected peak load reduction from energy efficiency measures/programs to reflect current results. CFL program decreases (MW per CFL are lower than assumed), Eff. Equip Program decreases (MW per measure are lower than assumed), Appliance Recycling may increase slightly at the program level because the mix of appliances is more heavily weighted toward measures with a higher peak load contribution (window A/C) than assumed in original Plan even though the MW per measure are lower.



Minor Changes Under Consideration

5. **Ductless Heat Pumps.** Add residential ductless heat pumps as an eligible measure now that they are approved by the PUC in the 2011 TRM. Add ductless heat pumps for commercial applications as an eligible measure if an interim TRM is approved. This provides more options for customers. No additional cost.
6. **Add a C&I CSP.** Instead of self-managing C&I Efficient Equipment and Custom Programs, PPL will hire a CSP. The existing implementation method is not getting enough participation from small C&I and institutional customers. The CSP will have more “feet on the ground”, better technical expertise to help customers ID projects, can complete lighting spreadsheets for the customer, can complete the rebate application and associated documentation, can better verify baseline conditions (especially for lighting retrofits), and can recruit trade allies faster than PPL EU. No cost or savings impact on programs or the Plan. Cost to be absorbed within the budget for that program.
7. **HVAC Tune-up.** Adjust savings and cost assumptions for HVAC Tune-up to reflect actual experience. Projected benefit-cost ratio of HVAC Tune-up decreased from 5.8 to 3.2. The price of the contract is greater than estimated and the weighted average measure life decreased from 15 years to 5 (or 3?).
8. **Dehumidifiers.** Eliminate the rebate for dehumidifiers. The actual number of measures exceed the estimate in the EE&C Plan. There is no reason to continue this measure because savings are relatively low and it costs \$8 to process a \$10 rebate.
9. **Programmable Thermostat Eligibility.** Change technical eligibility requirements for residential programmable thermostats to conform to the recently issued interim 2011 TRM. The customer must have electric heat (air source heat pump, baseboard electric, ground source heat pump). Otherwise, savings is negligible. Change the rebate from up to \$50 to up to \$25. The market price is generally less than \$50 and the basic objective of the rebate is to reimburse customers for approximately 50% of the incremental cost of the measure.



Minor Changes Under Consideration

10. **Energy Star Light Fixtures.** Discontinue the rebate. Participation has been very low. The EE&C Plan assumed 42,000 units but there has been only 348 rebates as of 1/31/11. The per-unit savings is very low (44 kWh, the equivalent of 1 CFL) and it costs \$8 to process a \$10 rebate.
11. **Heat Pumps & A/C.** Eliminate the rebate for SEER 14.5 heat pumps and SEER 14 and 15 central A/C. Very few SEER 14 heat pumps suggests the market prefers higher SEERs. Central A/C has limited savings so PPL wants to encourage customers to strive for higher SEERs than 14 and 15.
12. **Refrigerators.** Reduce the rebate from \$50 to \$25 and double the expected number of units. This change also helps to slow participation by the residential sector as it approaches its projected total savings. Need to keep some type of rebate because it helps to identify refrigerators for recycling (keeps those from becoming secondary units or from being disposed of improperly).
13. **LED Traffic Lights.** Streamlined rebates and changed eligibility requirements for LED traffic lights in the Efficient Equipment Program. Red & Green now have the same rebate for the same size light. Eliminated rebates for yellow LED traffic lights because they have no savings. Restrict eligibility to replacements of incandescent traffic lights; no rebate if LED traffic light/bulb replaces another LED traffic light/bulb.
14. **Behavior Program Measure Life.** Repeat the behavior program each year because the measure life is only 1 year (we did not know that when we filed the EE&C Plan).
15. **Scanners.** Delete scanners from Efficient Equipment Program because they have no savings according to ENERGY STAR.
16. **Water Coolers.** Delete water coolers because they have negligible savings.



Minor Changes Under Consideration

17. **LPD.** Change the minimum required lighting power density (LPD) reduction vs. code from 15% to 5%. That threshold is more consistent with practices in other PA EDCs and states. The 5% threshold is sufficient to ensure the customer takes action to intentionally exceed code LPD requirements, not accidentally exceeds them (i.e by 0.1%).
18. **Close Date for Residential Renewables.** Close the residential PV and residential GSHP portions of the Renewable Energy Program earlier than expected because they were fully subscribed. The number of units and total costs exceeds the EE&C Plan for residential PV and GSHP because so many applications were received at the same time when the program opened. There was no way to fairly prioritize those applications so all were accepted until PPL Electric could notify the public that the program closed.
19. **Close Date for GNI Renewables.** Close the GNI portion of the Renewable Energy Program earlier than expected because it is fully subscribed. Stopped accepting applications for GNI PV August 2010. The program continues to accept applications for GNI GSHP as of 4/1/11.
20. **Eliminate the Rebate for Dishwashers and Clothes Washers.** The actual number of measures exceeds the estimates in the EE&C Plan. Savings from these measures are not significant (105 kWh/hr and 258 kWh/yr respectively if the customer has electric hot water; zero if they have gas/oil/propane hot water) and the market for these Energy Star appliances is fairly well transformed. Therefore, there is no reason to continue to offer rebates for these measures.
21. **Room A/C.** Reduce the expected number of rebates for room air conditioners from approximately 38,000 to approximately 9,000 to reflect current performance. There is no reason to increase incentives or promote this measure more aggressively to increase participation. PPL EU considered discontinuing the rebate because per unit savings is very low (59 kWh/yr per A/C, which is slightly more than 1 CFL). However, PPL EU will continue this rebate because it benefits low-income customers who are likely to continue to buy room A/C and PPL EU wants to encourage them to buy Energy Star rated units. It also helps small, independent appliance dealers.



Minor Changes Under Consideration

22. **C&I Thermostats.** Add programmable thermostats for commercial applications if an interim TRM is approved.
23. **Rename and Adjust CFL Program.** Reduce the incentives for standard CFLs in the CFL program to slow that program's progress (so it does not close too early). Increase incentives for specialty CFLs. Expand eligible products in the CFL program to include residential LEDs (pending approval of a TRM protocol) and other efficient lighting technologies to stimulate their use and to expose customers to those technologies. Change the yearly projections of CFL savings to more closely align with actual performance. Change name of program to "Residential Lighting".
24. **Motors.** Change (increase) minimum motor efficiencies to align to revised industry standards that became effective December 2010.
25. **LEDs for Residential.** Clarify that the prescriptive rebate for LED fixtures or retrofit kits in the Efficient Equipment Program applies to residential use only. C&I LED lighting will be covered in the Custom Program. Savings for residential and C&I lighting are determined differently per the TRM. A specific TRM protocol will be developed for the residential fixture so a residential customer does not have to complete the complex PA Lighting Spreadsheet for a LED fixture.
26. **C&I Direct Install.** Add a direct install delivery mechanism for C&I participants in the Efficient Equipment Program. Customers hire an approved contractor to install the efficient measures. Incentives are paid from PPL EU to the approved contractor who passes the savings along to the customers. This delivery mechanism will accelerate participation by small C&I customers who are having a difficult time identifying efficiency improvements, finding contractors, and filling-out rebate forms. The measures are the same as those included in this program for self-installation by the customer.



Minor Changes Under Consideration

27. **Rebate Cap.** General clarification for all programs and measures: rebates paid cannot exceed the cost of the measure. That limitation was implied but not specifically mentioned in the EE&C Plan.
28. **LEDs for C&I.** Add LED lighting for C&I customers after it was added to the 2011 TRM. Savings will be determined in accordance with the TRM (retrofit or new construction lighting) and rebates will be in accordance with PPL EU's Custom Incentive Program.
29. **Appliance Recycling Projections.** Revise projected number of recycled refrigerators, freezers, and window air conditioners to reflect more-realistic targets. The estimated quantities in the approved EE&C Plan were too high (the saturation level was unrealistic compared to other EDCs and other states). Reduce savings of each recycled refrigerator from 1728 kWh/yr to 1695. If required, reduce savings of refrigerators from 1695 to 1205 to account for replacements of a recycled refrigerator.
30. **Reallocate from Efficient Equipment Program to Custom Program.** Reallocate approximately 30,000 MWh/yr Large C&I savings and approximately \$3 million Large C&I program costs from the Efficient Equipment Program to the Custom Incentive Program. There is no net impact on Large C&I sector costs or savings. Large C&I seems to have a stronger interest for custom projects.
31. **Heat Pump Water Heaters.** Increase the projected number of rebates for heat pump water heaters from 230 to 2,400. Actual participation has exceeded expectations (975 actual rebates through 1/31/11 vs. 230 assumed in the EE&C Plan). This measure contributes significant per unit savings (1,884 kWh/yr) and the market is not close to transformation. Therefore, it makes sense to expand this measure. Restrict heat pump water heaters to residential use and certain types of commercial use. We are developing a TRM protocol that defines the applicable commercial uses and energy and demand savings (if they differ from residential).



Minor Changes Under Consideration

- 32. Custom Program Eligibility Requirements.** Change the rebate and eligibility requirements for Custom Incentive Technical Studies. PPL EU will no longer accept retroactive Technical Study Applications unless the customer is also submitting an eligible Custom Incentive Application. Technical Study Applications that are submitted without a Technical Scope Application are also ineligible for payment. Any Reimbursement Application submitted without a Scope Application will be rejected. Technical Studies will be calculated as the lesser of the following values: If the study is a comprehensive audit of an entire facility, the reimbursement will be calculated as 10 cents per square foot. For a feasibility study that addresses specific equipment or system, the reimbursement will be calculated as 2 cents per kWh addressed. Studies will be capped at 25% of the potential Custom Incentive, 100% of the study cost, or \$50,000, whichever is least. These changes will ensure that the reimbursements are within the limitations set by the EE&C plan but still encourage customers to evaluate their facilities in a manner that leads to viable, eligible Custom Incentive Projects.

Clarify that, for purposes of determining the rebate cap for custom projects, the incremental cost of custom projects will include only the customer's external costs. Internal costs, such as the customer's staff, are excluded.

- 33. De-Lamping Rebates.** Change rebate structure for lighting retrofits that include de-lamping. Instead of 1 de-lamping measure, there will be five. This will better align rebates with the savings (specific number of lamps removed).
- 34. Time Clocks.** Delete time clock prescriptive rebate and move to custom program. Or, create a TRM protocol that is limited to exterior lights that would normally be controlled by a photocell (time clocks must result in at least a 25% reduction in EFLH compared to dusk-to-dawn photocell). In other applications, the baseline is unclear and it is also unclear if the time clocks reduce EFLH below the default value for the building/space type in the TRM.



Minor Changes Under Consideration

35. **Demand Control Defrost.** Discontinue the rebate for demand control defrost (commercial refrigeration). The measure is not common and it is not worth preparing a TRM protocol or handling this as a custom measure. No impact on cost or savings.
36. **PTAC and PTHP.** Add packaged terminal air conditioners and packaged terminal heat pumps as eligible measures in the Efficient Equipment Program.
37. **TOU Costs.** Delete TOU costs from EE&C Plan because they will be recovered through Default Supply. Impact on EE&C Plan TBD.



What Happens After May 31, 2013? (Tom Stathos)



What Happens After 5/31/13?

- If there is a “next version” of Act 129 Energy Efficiency & Conservation, it is critical to know the targets and rules by May 2012.
- The process must start soon to determine if there will be EE&C programs after 6/1/13 and, if so, to establish the targets and rules by May 2012.



Why Start Now?

- Need at least 1 year to conduct market analysis/market potential studies; prepare and approve EE&C Plans; bid & award CSP contracts; and implement (or change) systems, processes, and programs so everything is ready to go on 6/1/13, the day after the current EE&C Plan ends.
- Legislative changes (if required) and PUC regulatory decisions need sufficient lead time.



Why Start Now?

- Prevents programs from “going dark” (between 5/31/13 and the start of new EE&C programs)
 - loss of momentum and interest by customers and trade allies
 - inefficient & costly to stop/restart
- Provides certainty to the market (CSP, trade allies & customers) for green job retention/expansion and availability of future funding
- Determine the relationship between current targets and new targets
 - If EDCs exceed current targets (within cost budget), will that make future compliance more difficult?
 - Should EDCs halt existing programs as soon as they hit current savings targets, even if more funding is available in current EE&C Plan?
 - Can EDCs “bank” over-compliance in current EE&C Plan and apply it to the next EE&C planning cycle?



Why Start Now?

- If EE&C programs will not continue after 6/1/13, there is no need for EDCs/SWE/PUC to conduct studies now to provide input for future planning cycles, technical reference manual updates, etc.
- EE&C assumptions impact EDC operational planning, load forecasting, and revenue forecasting for periods after 6/1/13.
- EDCs cannot bid energy efficiency measures into PJM RPM auctions as required 3 years in advance without certainty that there will be energy efficiency.
 - Lost opportunity to pass savings on to customers (offset Act 129 costs).



Open Discussion and Q&A (Tom Stathos)



Stakeholder Survey

- You will receive a short survey via e-mail
- Please promptly complete and return it
- We value your input and incorporate it into future stakeholder meetings



Additional Information

- www.pplelectric.com/e-power
 - Program descriptions, details, rebate amounts, qualifications, and enrollment forms
 - Stakeholder Information
 - Click on E-power links, then Act 129 EE&C Stakeholder Info.
- Stakeholder coordination and feedback:
Peter Cleff- pdcleff@pplweb.com ; 610-774-4530