

PPL Electric Utilities Corp.

Act 129 Energy Efficiency & Conservation Plan
Stakeholder Meeting
April 1, 2009



Today's Objectives

- Understand the purpose of Act 129.
- Understand why Act 129 is important to you.
- Provide input for PPL Electric's Act 129 Energy Efficiency & Conservation Plan.
- Develop consensus on important open issues.
- Establish an on-going, collaborative environment for successful development and implementation of the Plan.
- Please ask questions and provide comments as we go.

Act 129 is Important

- The purpose of this portion of Act 129 is to reduce the cost of electricity by reducing consumption & peak demand.
- Consumers (includes residential, businesses and organizations) will save money.
- Consumers will be more informed and will have more choices for the wise use of electricity.
- Reducing energy consumption is environmentally wiser, less costly, and faster than adding renewable or conventional generation.
- Improves economic development & the local economy.
- Act 129 is consistent with PPL Electric's Business Philosophy.

Stakeholder Input is Important

- We need your input to develop and implement energy efficiency programs.
- Valuable input increases the likelihood of successful, cost-effective energy efficiency programs for consumers.
- Consensus helps to expedite approval of the EE&C Plan, maximizing the implementation time and consumer savings.

Who Are the Stakeholders?

- Consumers and their advocacy groups- residential customers, commercial customers, industrial customers, institutional, low-income.
- Environmental groups.
- Chambers of Commerce.
- State, local, and private economic development organizations
- Community-Based Organizations.
- Providers and administrators of existing energy efficiency programs or funding.
- State and local government.
- Electric Distribution Companies.
- Gas utilities.
- Trade associations.
- Conservation Service Providers.
- Program delivery allies, trade allies, marketing allies, contractors/suppliers for energy efficiency products & services, etc.
- Others.

Process for Stakeholder Input

- Smaller meeting on 3/10/09 to review the stakeholder process.
- Today's first "Big Group" meeting.
- Another "Big Group" meeting to review draft EE&C Plan in mid/late May.
- Another "Big Group" meeting to review nearly final EE&C Plan in mid-June, if there are significant changes since May.
- Do we need other "Big Group" meetings?
- Do we need on-going focus groups to resolve specific open issues?
- Ongoing EDC collaboration to identify opportunities for consistency.
- See PPL's Act 129 website: www.pplact129.com
- We encourage on-going stakeholder input. Contact me:

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Summary of Act 129

- The law became effective 11/14/08
- PA Electric Distribution Companies must:
 - Develop and file an Energy Efficiency & Conservation Plan (EE&C Plan) by 7/1/09.
 - The EE&C Plan must be implemented upon approval (approximately 11/09).
 - Cost-effectively reduce total electricity consumption (kwh):
 - 1% by 5/31/11
 - 3% by 5/31/13
 - Cost-effectively reduce peak load 4.5% by 5/31/13
 - Average of the 100 summer hours (June – Sept.) of highest demand
 - Likely must achieve these reductions by 9/30/12 since there are no summer months between 10/1/12 and 5/31/13

The EE&C Plan

- Includes specific measures and programs to achieve electricity consumption and peak load reduction targets.
- 10% of the reductions must be from institutions-- government, municipalities, school districts, colleges, and nonprofits.
- Every customer class must be offered at least one energy efficiency and one demand response program.
- Must demonstrate that each program is cost-effective (i.e. the benefits > the cost).
- Includes a cost recovery mechanism.
- Cost of measures are financed by the same customer class that receives the benefit of those measures. Common costs are allocated using generally accepted cost of service principles.
- Defines role & scope of Conservation Service Providers.
- Includes procedures to measure, evaluate, & verify performance of the Plan.
- Annual, independent evaluation of the results and the cost-effectiveness of the Plan.
- New Plan required every 5 years.

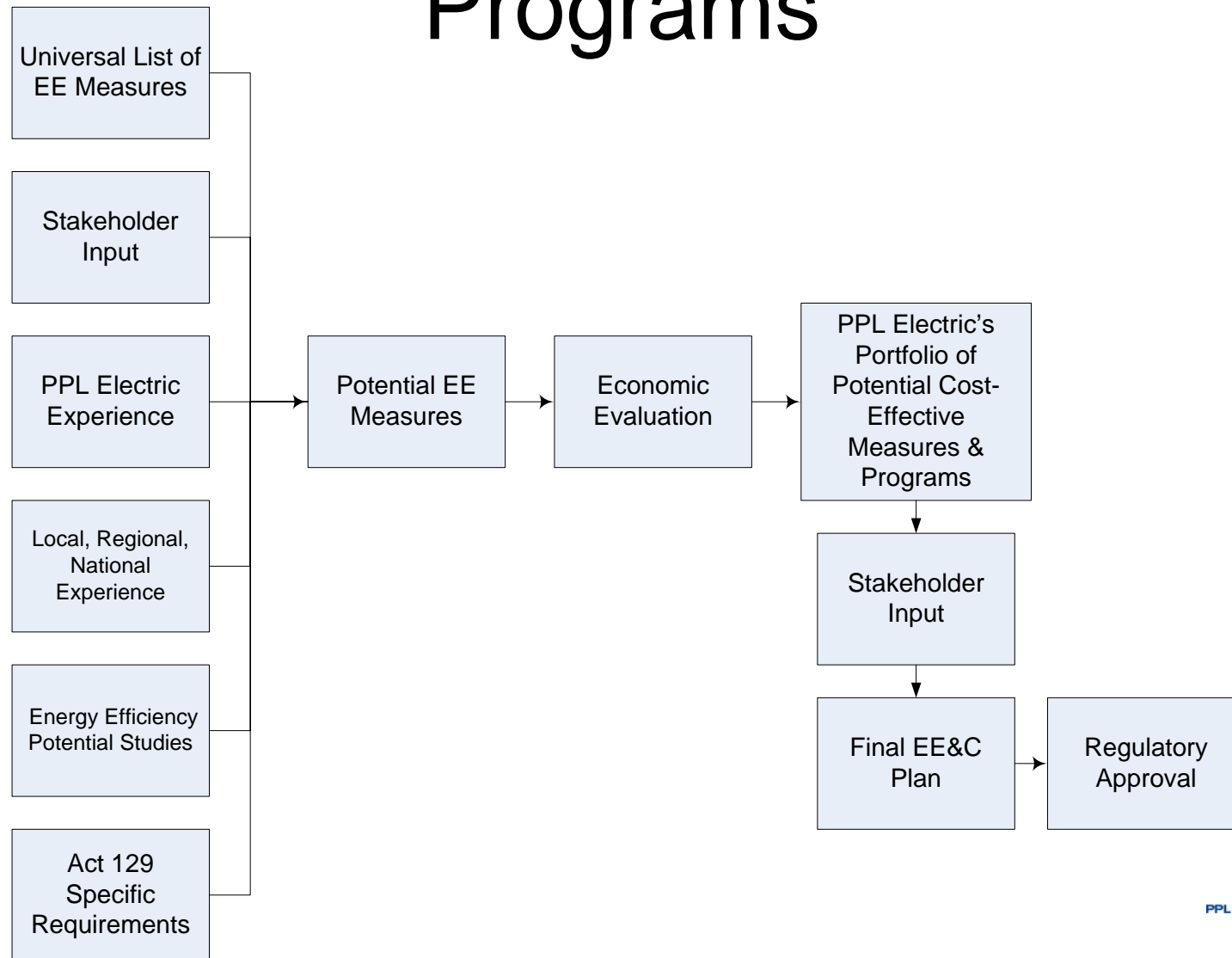
Process, Timing and General Approach for EE&C Plan

- PPL Electric has retained the Cadmus Group, a nationally recognized energy and environmental consulting firm, to assist in development of its plan.
- Research is underway to define the framework for the portfolio, identify suitable energy efficiency measures and programs, collect data and conduct preliminary analysis.
- The plan will be available in draft form in mid-May.
- A nearly final draft plan is scheduled for mid-June.

PPL Electric's Targets

- Energy Reduction Targets
 - 1% consumption = 382,000 MWh/yr = 44 average MW
 - 3% consumption = 1,146,000 MWh/yr = 132 average MW
 - 4.5% peak load = ~300 MW
- Cost Targets
 - 2% of 2006 Annual Revenues = approx. \$61.5 MM/yr

Process to Identify Measures & Programs



Distribution of Energy Efficiency Potentials

	Residential	Commercial	Industrial
HVAC	46.8%	23.5%	0.0%
Water Heating	14.1%	1.2%	0.0%
Lighting	23.4%	50.9%	5.9%
Refrigeration	2.6%	5.0%	0.0%
Plug Loads	5.9%	19.3%	0.0%
Industrial Facility	0.0%	0.0%	17.1%
Industrial Process	0.0%	0.0%	58.6%
Other	7.2%	0.0%	18.4%
	100.0%	100.0%	100.0%
Approx. # of Customers	1,218,000	174,000	1,200
Approx. Yearly Consumption (MWh)	14,600,000	14,100,000	9,300,000



Portfolio Approach

- The concept of “portfolio” is central to PPL Electric’s approach to developing, implementing and managing its EE&C programs.
- The portfolio will seek to offer a well-balanced suite of cost-effective energy efficiency and demand response measures and programs that meet Act 129 targets and is responsive to the needs of PPL Electric’s customers.
 - “Measures” are specific energy efficiency actions, technology, or services. Ex: add insulation; install more efficient lighting.
 - “Programs” are multiple measures that are packaged together.
 - “Portfolio” is a collection of programs.
- The portfolio must meet multiple constraints set forth in the Act.

Guiding Principles in Portfolio Design

- Equity – programs available to all customer classes.
- Scope – select proven, cost-effective programs with a high likelihood of success and sustainability.
- Transparent – program design data and assumptions based on accepted methods and auditable.
- Verifiable – program costs and impacts are verifiable through sound Q/A and industry-standard M&V procedures.
- Flexible – the ability to change and refine programs over time based on evaluation findings, market changes, and as customer awareness and acceptance change.

Guiding Principles in Portfolio Design

- Responsive to requirements of the Act
- Consider customer and other stakeholder input:
 - Provide reasonable choices
 - Ensure programs meet the needs of customers
 - Maximize depth of savings
 - Avoid cream-skimming where possible to maximize sustainability
- Leverage, to the extent possible, existing state & federal programs
- Maximize, to the extent possible, operating efficiency:
 - Competitive selection of CSPs
 - Take advantage of joint & cross marketing, delivery, and administration of programs
 - Leverage existing trade allies and marketing channels
 - Coordinate with other EDCs (e.g. co-sponsoring outreach and education, volume purchases, etc.) where feasible
 - Joint delivery of electric and gas programs (may not be feasible in short term)
 - Robust program management system-- cost and activity tracking & management
- Cost-effectiveness
 - Portfolio level
 - Program level

Structure of the Portfolio

- Resource type
 - Energy efficiency (technology, operation and maintenance), demand response, renewables, outreach and education
- Customer class
 - Residential
 - Single-family, multi-family, low-income
 - Commercial & Industrial
 - Commercial facilities, institutional buildings, industrial facility, industrial processes, agricultural
- Vintage
 - Only existing buildings for now
- Incentive structures
 - Type (mechanism)
 - Amount

Program Design Elements

- Program features & benefits
- Eligibility
 - Customer class, building type & vintage, customer size, business type, fuel use, ownership, geography
- Eligible measures
 - Technology specification, O&M practices
- Incentive structure
 - e.g., prescriptive, custom, service, pay-for-savings
- Role of Conservation Service Providers

Conservation Service Providers (CSP)

- Hired by the Electric Distribution Company
- Provide consultation, design, administration, or management services to an EDC related to the implementation of the EE&C Plan.

Program Elements

- Marketing strategy
 - Trade allies, marketing allies, target customers, marketing channels & tactics
 - Collaborative opportunities
 - Encourage consumers to use existing programs, especially low-income
- Operations
 - Delivery strategy, work flow, implementation milestones
 - Collaborative opportunities
- Education & outreach
 - Approach, targets, goals & outcomes
- Market barriers & strategies for overcoming
- Value proposition

Program Elements

- Metrics
 - Participation, projected energy & demand savings, cost effectiveness
- Budgets
- Quality assurance
- Measurement, verification, & evaluation
 - Robust program management and reporting systems and processes required (“tracking systems”)
 - Evaluation assessment (baseline data), process evaluation, impact verification

Potential Programs

- Residential
 - Audit (direct install, weatherization)
 - “Whole house” approach where possible
 - Equipment rebates (Central AC, electric heat pump, appliances, etc.)
 - Demand response (direct load control, time-of-use rates)
 - Low-income (single family & multi-family).
 - Deliver through existing channels.
 - Appliance recycling (refrigerator, freezer, room A/C)
 - Lighting
 - Customer-sited solar or other renewable generation

Potential Programs

- Commercial & Industrial
 - Equipment rebates (cooling, lighting, motors)
 - Custom projects (comprehensive or bundled measures)
 - Demand response (direct load control, curtailment contracts, time-of-use rates)
 - HVAC tune up
- Education & Outreach
 - Contractor training, building operator training, schools benchmarking, in-home energy education and monitoring, web-based calculator, consumer education & awareness, etc.

Potential Incentive Mechanisms

- Direct install, technical assistance
- Upstream buy-down
- Equipment rebates (\$/qualifying equipment)
- Custom (pay-for-performance or project cost-sharing)
- Dealer incentives
- Bill credit
- Discounted financing

How Savings will be Determined

- Deemed savings: pre-defined kWh and kW savings for each qualified measure, mainly from the Technical Reference Manual (under development by Pa PUC)
- Calculated savings: based on engineering calculations, mostly for custom measures and applications not in the TRM
- Verified savings: calculated based on measurement and verification after installation of the measure

Cost-Effectiveness

- Will be determined by a Total Resource Cost Test (TRC)
- TRC is under development by the Pa PUC.

Key Challenges

- Meeting multiple objectives of the Act simultaneously:
 - Energy saving targets
 - Peak demand reduction targets
 - Definition of peak coincidence (100 hours during summer)
 - Peak hours are not known until after-the-fact
 - Expenditure cap
 - Low-income and institutional facility set-asides
 - Cost-effectiveness
- Peak reduction requirement may preclude many measures with low peak-coincidence factors
- Expenditure cap falls below most other states, possibly precluding some measures

Important Open Issues Requiring Stakeholder Consensus

- Is 2% cost cap a yearly cap or a yearly average?
- Allocation of energy savings for jointly funded programs.
- How to integrate, leverage, simplify, and coordinate Act 129 and existing low-income programs.
- How to define “equitable” number of low-income programs.
- How to identify low-income customers.
- Do energy savings from multi-family housing units count toward Act 129 “low-income” requirements?
- Any others?
- These issues can be explored in more detail at this afternoon’s breakout sessions.

2% Cost Cap

- Is the 2% cost cap a yearly absolute cap or a yearly average?
- PPL Electric suggests it is a yearly average over the life of the Program.
- Early analysis indicates that progressive spending is required to cost-effectively succeed— i.e. “ramping-up” of programs (1% in year 1 and 3% in year 2 for example).
- Practical experience in other states confirms customer acceptance follows a ramping-up period and program costs typically increase over time.
- Allowing “variable” yearly spending that is averaged over the life of the Program provides the flexibility to absorb normal cash flow/spending uncertainties from one year to another.

Allocation of Energy Savings for Jointly Funded Programs

- PPL Electric believes it should get full credit for Act 129 energy efficiency savings if a program is jointly funded by PPL Electric and other sources (such as DCED, DEP, PHFA, or federal stimulus).
- Prorating savings is overly complex and it would be difficult to determine if a customer would have participated “but for” PPL Electric’s portion of the funding and marketing efforts.
- PPL Electric will contribute additional funding and encourage customers to use existing programs, especially low-income programs, expanding participation and increasing the opportunity for a “whole house” approach.
- PPL Electric will not compete with those programs.

Coordination of Low-Income Programs

- Integrate, leverage, simplify, and coordinate Act 129 and existing low-income programs.
- “One stop shopping” for low-income customers minimizes consumer confusion, maximizes participation, and should reduce program administrative costs.
- Increased focus on a “whole house” approach.
- Significant collaboration among state agencies, local agencies, EDCs, and other stakeholders is required to accomplish this (fully or partially), especially given major time constraints.

Number of Low-Income Programs

- How to define the “equitable” number of programs, number of measures, or the target amount of energy savings for low-income customers.
- Act 129 requires the number of measures for low-income customers to be proportionate to those households’ share of total energy usage in the service territory.
- So, if low-income customers use 10% of the total energy, is the objective to provide them with:
 - 10% of the measures (i.e. the quantity of energy efficiency actions), or
 - 10% of the energy reductions (consumption and peak load) regardless of how many measures or programs that requires. PPL Electric thinks this is the objective.
- PPL Electric cannot identify many/most of its “low-income” customers unless they currently participate in payment agreements or existing low-income programs.
- Strict application of the “proportionate” language may lead to results where either too many or too few programs/measures are offered to low-income customers.

Multifamily housing units

- PPL Electric suggests that energy savings from multifamily housing units count toward Act 129 “low-income” requirements.
- The PUC strongly encourage programs specifically for multifamily, low-income housing units, especially those supported by PHFA.
- Many of these units are in a “commercial” rate class, have a single meter where the tenant does not directly pay for electricity and the actual PPL Electric customer (bldg owner or property manager) is not likely to be a low-income consumer.
- The low-income residents should benefit directly or indirectly from the programs.
- Energy savings increase the financial viability of these properties and, in some cases, help to keep them from closing due to higher electricity costs.
- There may be a significant opportunity for energy savings from this program, especially if a “whole house” approach is taken. PPL Electric believes there will be challenges to cost-effectively meeting the energy targets for low-income customers, especially without the ability to count savings from multifamily housing units.

Recap

- Have We Met Your Expectations?
 - Do you better understand Act 129 and why it is important to you?
 - Have you provided essential input for PPL Electric's energy efficiency program selection and design?
 - Have we established a good process for on-going collaboration?
- Next Step-- We need more input at this afternoon's breakout sessions.
 - Low-income customer programs and open issues.
 - Large commercial & industrial programs and open issues.
 - Residential, small commercial, and institutional programs & issues.