



**Smart Energy Initiative**  
of Southeastern Pennsylvania™

# The 2013 Energy Briefing



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# **Act 129 Phase II Energy Briefing**

**Chester County Economic  
Development Council**

**February 15, 2013**

## Act 129 Background

- ✓ Act 129 signed into law in 2008
- ✓ Phase I summary
  - Four year program – June 2009 to May 2013
  - EDCs with more than 100,000 customers ordered to achieve state mandated energy efficiency and demand reduction goals
  - 3% consumption reduction by May 31, 2013
  - 4.5% reduction in top 100 hours of peak demand by May 31, 2013
  - PECO expects to meet its Phase I savings targets in January 2013
- ✓ In August 2012 the PA Public Utility Commission (PUC) issued an order for a second phase of Act 129

## Phase II PUC Implementation Order Summary

- ✓ Phase II is a three year program cycle
  - June 1, 2013 to May 31, 2016
  - PECO energy savings target is 2.9% or 1,125,852 MWh
- ✓ 4.5% of Plan savings must come from Low Income (new requirement)
- ✓ 10% of Plan savings must come from Government, Institutional and Non Profit business customers (existing requirement)
- ✓ No Demand Reduction target in Phase II
  - State Wide Evaluator analyzing cost effectiveness for possible Phase III requirement
- ✓ Excess savings banked from Phase I can be counted towards Phase II goal
- ✓ PECO filed its Phase II plan on November 1, 2012
- ✓ PUC ruling of PECO plan expected February 28, 2013

## PECO Phase II Plan Filing Summary

- ✓ A total of 13 programs in Phase II
- ✓ Seven (7) Residential programs
  - 4 new and 3 existing
- ✓ Six (6) Commercial programs
  - 3 new and 3 existing
- ✓ PECO Phase II plan design achieves a balanced portfolio responding to customer interests and needs



# Phase II Residential Programs



Residential Programs	Description
PECO Smart Home Rebates	Providing rebates for energy efficient appliances, hot water heaters and HVAC equipment along with discounts on CFLs and LEDs for residential customers
PECO Smart Appliance Recycling	Pick up and recycling of spare inefficient refrigerators and freezers and provide rebate to eligible customers.
Low Income Energy Efficiency	Educates and assists low income residential customers in reducing energy usage via direct installation of various measures including CFLs, appliances and HVAC equipment as appropriate.. Provides for refrigerator swap for customers not meeting audit requirements
PECO Smart Builder Rebates	This program targets builders of new or completely renovated single-family electric heated homes built to Energy Star 3.0 standards and offers incentives to builders and developers to incorporate energy efficiency into their designs.
PECO Smart House Call	Offers a comprehensive energy audit including blower door test for electric heated homes only and walk through assessment for all homes. Program includes installation of low cost measures at time of visit.
PECO Smart Usage Profile	PECO delivers customized home energy usage reports to residential customers using more than 14,000 kWh annually.
PECO Smart Energy Saver	Program to educate students in grades 5-7 about energy efficiency with curriculum and "take-home" energy savings kits



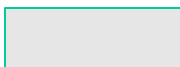
Phase I programs that continue in Phase II with eligibility changes



# Phase II Commercial Programs



Commercial Programs	Description
PECO Smart Equipment Incentives (C&I )	Offers incentives on a broad range of prescriptive and custom measures to commercial customers, including retrofit of energy efficient lighting and HVAC systems.
PECO Smart Equipment Incentives (GINP)	Offers incentives on a broad range of prescriptive and custom measures to the GINP sector customers including retrofit of energy efficient lighting and HVAC systems.
PECO Smart New Construction Incentives	Offers incentives for prescriptive, custom and whole-building energy savings tracks for new construction and major building renovations. Includes C&I and GINP customers.
PECO Smart Business Solutions	Provides direct Installation of prescriptive measures for small business customers with monthly usage billed below 100kW. Includes eligible lighting, HVAC and refrigeration measures. Program requires partial customer co-pay. Includes C&I and GINP customers.
PECO Smart Multifamily Solutions	Includes commercial and residential end-use measures. Provides in-unit direct install of CFLs and other prescriptive measures. Includes facility assessments and common area energy retrofits. Unit occupants, C&I and GINP customers are eligible.
PECO Smart On Site	Offers incentives to large and small CHP installation including micro-turbines, reciprocating engines and fuel cells. Will include incentive caps such that the economics of the project is not changed.



Phase I programs that continue in Phase II with eligibility changes

## PECO Smart Ideas

- ✓ PECO will leverage the success of the “Smart Ideas” brand and continue to market programs under “Smart Ideas” in Phase II
- ✓ PECO will employ both broad education and direct-to-customer tactics to promote Phase II program offerings and to ensure customer participation



**Thank you!**



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# Paul Spiegel

## Practical Energy Solutions



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# Energy Benchmarking & Disclosure



**PRESENTED BY:**

Paul Spiegel, P.E., LEED AP  
President

**Practical Energy Solutions**



A seven year old energy consulting company focused on energy assessments, strategic planning, and conservation & efficiency programs to assist in meeting short and long term energy goals

- Energy audits/assessments/benchmarking
- Energy modeling/building energy simulations
- Financial and technical evaluation of capital projects
- Energy behavior change programs for occupants
- Building operational review and conservation strategies
- Strategic energy planning
- Incentive and grant project support & implementation
- Carbon footprint analysis
- LEED O & M certifications
- Measurement and verification of savings from energy upgrades and initiatives



# Practical Energy Client List



## **Municipal Clients:**

City of Philadelphia  
Chester County  
Borough of West Chester  
Philadelphia Gas Works (PGW)  
Media Borough  
Delaware County  
Tredyffrin Township  
City of Coatesville  
Plymouth Township

## **Institutional Clients:**

West Chester Area School District  
Pottsgrove School District  
Westtown School  
Downingtown Area School District  
The Hill School  
Overbrook School for the Blind  
William Penn School District  
Devereux Foundation/School  
Upper Merion Area School District  
PIDC  
The Reinvestment Fund

## **Commercial/Industrial Clients:**

Vertex, Inc.  
Liberty Property Trust  
PJM Interconnect  
Bentley Systems  
Sikorsky Helicopter  
ING Insurance  
Devault Foods





# Agenda



- ~~1. Energy Focus and Why It's Important~~
2. Benchmarking and Disclosure – what's that all about?
3. The Philadelphia Ordinance – Who, what, when, where???
- ~~4. How Can a Building Owner Improve the Benchmark Score “BD”?~~



# Benchmarking & Disclosure



- Two very different concepts
- Stated reasons for B & D
  - Encourage building owners that don't pay the utility bills to engage in investing to make their buildings more energy efficient
  - Help markets work more efficiently by giving potential tenants information to choose leased space based on energy and environmental performance
  - Provide energy performance information to someone that may purchase a commercial building
  - Motivate building owners to get more energy efficient designs for new buildings



# Benchmarking



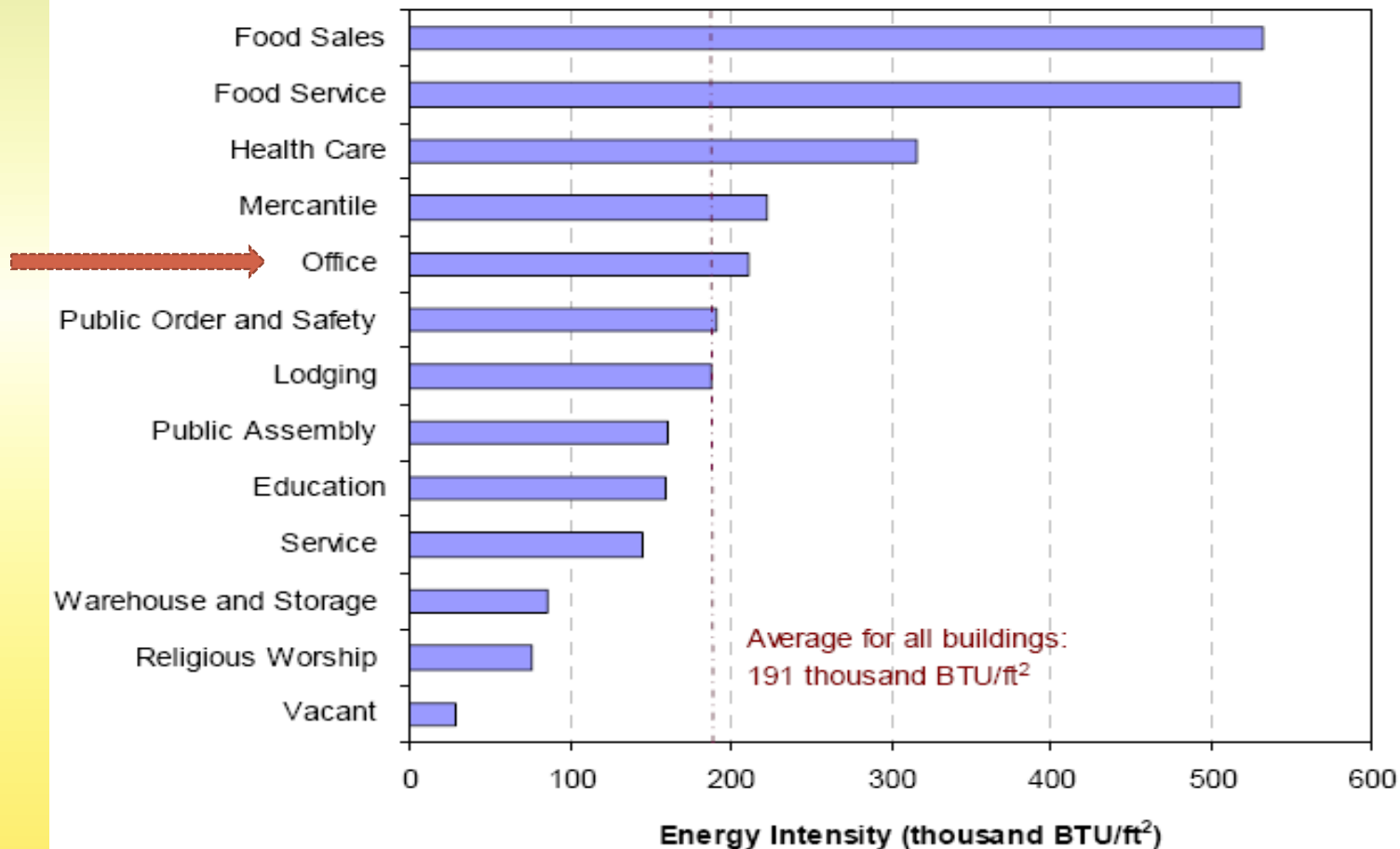
- Establishes a metric for measuring performance
  - What does 185 kbtu/sf mean to a building owner?
- Compares the performance to a standard or to comparable buildings
- Primary building benchmarking tool is ENERGY STAR Portfolio Manager

# Commercial Building Energy Use



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Primary Energy Intensity for U.S. Commercial Buildings (2003)<sup>2</sup>



# ENERGY STAR Portfolio Manager



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- A free tool that benchmarks your building against a database of similar buildings
- Corrects for occupancy (hours & number of people), weather, computers, square footage, and type of use, among other elements
- Provides a score of 1 – 100
- Provides a “Statement of Energy Performance” (SEP) as a benchmark report
- [www.energystar.gov](http://www.energystar.gov)

# ENERGY STAR Portfolio Manager



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## Facility Summary: Lower Pottsgrove Elementary School

[How do I use this page?](#)

Building ID: 1590841

Level of Access: Facility Editor

Access Provided by : Michael Katzenmoyer

Electric Distribution Utility: PECO Energy Co [Exelon Corp] ([change](#))

Regional Power Grid: [RFC East](#)

[Select my Power Generation Plant](#) to calculate my electric emissions rate

Electric Emissions Rate (kgCO<sub>2</sub>e/MBtu): 141.6 ([what is this?](#))

[Generate a Statement of Energy Performance](#) for uses other than applying for the ENERGY STAR.

### General Information [Edit](#)

**Address:** 1329 Buchert Rd , Pottstown, PA 19464

**Year Built:** 1970

**Property Type:** Single Facility

**ENERGY STAR Leaders Account:** Pottsgrove School District

**Baseline Rating:** 58

**Current Rating:** 92

#### [View Period Ending Dates](#)

#### Water Period Ending Dates

Current: March 2012

Baseline: June 2008

#### Energy Period Ending Dates

Current: June 2012

Baseline: December 2008

### Eligibility for the ENERGY STAR

Not Eligible: Less than one year since the period ending date of the last ENERGY STAR application. Eligible again on 12/31/2012

## Facility Performance [Set Baseline Periods](#) | [Set Energy Performance Target](#)

**Select View:** Performance: Environmental [Create View](#) | [Edit View](#)

12 Months Ending	Current Rating (1-100)	Current Source Energy Intensity (kBtu/Sq. Ft.)	Change from Baseline: Adjusted Energy Use (%)	Change from Baseline: GHG Emissions (MtCO <sub>2</sub> e)
December 2011	89	94.7	-31.0	-210.94
Select Date				

# Disclosure



- Disclosure is a requirement that the building owner report their benchmarked score to a public agency
- A key element to getting the action that is wanted from building owners
- Not enough for owners to just “know the score” – Disclosure means that it needs to be available to potential tenants, buyers, customers, other stakeholders, and the general public



# Philadelphia's B & D Ordinance



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- An Ordinance was passed in July of 2012 amending Chapter 9-3400 of The Philadelphia Code, entitled “Energy Conservation,” to provide for the benchmarking and reporting of energy and water usage data for certain buildings
  - Utilize free benchmarking tool – ENERGY STAR Portfolio Manager
  - Covered Buildings – who must comply?
    - ✦ Commercial buildings with indoor floor space of 50,000 sf or more
    - ✦ Commercial portions of mixed-use buildings where at least 50,000 sf is devoted to commercial use
    - ✦ Single and multi-family residential are excluded
  - - Energy (Electricity, natural gas, steam, and heating oil), and water

# When Does the Law Take Effect?



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- Took effect during the summer (July 2012), but no action is required until 2013 – timetable:
  - Data must be entered and reported to the Mayor's Office of Sustainability no later than October 31 each year
  - For tenant-paid energy bills, owner must request bills in June, tenant must provide bills by July 15
  - By October 31, 2013, benchmarking of 2012 performance will be required, along with reporting (SEP) to the City
  - In October 2014, benchmarking of 2013 performance will be required, along with reporting to the City, and the City will post scores publicly for the first time
- MOS still working out final details/regulations



# Non-Compliance



- A building owner and/or tenant will be subject to the following for non-compliance:
  - If benchmarking report has not been submitted to the City within 30 days of due date (by November 30), there will be a \$300 fine levied
  - For every day after November 30 that the owner/tenant is non-compliant, there will be a \$100/day fine
- Penalties are subject to revision/change between now and March 31, 2013, during development of regulations

# Why do we care about this now?



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- Building owners with low scores will have an opportunity to improve in the year between initial benchmarking (October 2013) and disclosure one year later (June 2014)
  - Operational efficiency, controls
  - Capital upgrades
- Building owners with scores over 75 can apply for the ENERGY STAR label for their building, and have it in hand before the disclosure date

# What comes after benchmarking?



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- Why a building owner should consider doing more than just meeting the ordinance:
  - Keep up with the leaders in the industry (or be the leader in the industry!)
  - Stay ahead of the pack, differentiate from most other building owners and managers

# Financial Resources



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- Low Interest Energy Efficiency Loans
  - ✦ EnergyWorks ([www.EnergyWorksNow.com](http://www.EnergyWorksNow.com))
    - Commercial, municipal (3.5%), and residential (0.99%)
  - ✦ Green Energy Loan Fund
  - ✦ NFF
  - ✦ New Jersey P4P Program
  - ✦ PGW EnergySense Program
    - <http://www.pgwenergysense.com/>

## Sample Large Upgrade Project – Dual Measure, Lighting (\$50,000) & HVAC (\$200,000)



<b>Project Cost</b>	<b>\$ 250,000.00</b>
PECO Rebate	\$ 25,000.00
Net Project Cost/Loan Amount	\$ 225,000.00
Annual Lighting Energy Savings (2 year payback)	\$ 25,000.00
HVAC Energy Savings (10 year payback)	\$ 20,000.00
TOTAL Annual Savings	\$ 45,000.00
Monthly Energy Savings	\$ 3,750.00
Monthly Loan Payment (10 year, 3.5%)	\$ 2,224.90
Monthly Net Profit/Revenue	\$ 1,525.10
Annual Net Profit/Revenue	\$ 18,301.20
<b>10 Year Net Profit</b>	<b>\$ 183,012.00</b>





# Steps in the Process



- Benchmarking –
- For buildings with low to medium scores, assess the facilities to:
  - Examine operations for conservation opportunities, educate staff
  - Develop capital upgrade strategies for equipment/retrofits
  - Help identify incentives and financing
  - Implement the projects and capital improvements that help improve the scores before disclosure law takes effect
- For buildings with high scores (over 75)
  - Apply for ENERGY STAR label
- Disclosure one year after initial benchmark report



# Questions?



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