

The Pennsylvania Sustainable Energy Finance (PennSEF) Program

Webinar

December 4, 2014



PENNSYLVANIA
TREASURY
Earn. Learn. Invest.

FR
ee 
Foundation for Renewable
Energy & Environment
<http://freefutures.org/>

Drinker Biddle



WPPSEF
WEST PENN POWER
SUSTAINABLE
ENERGY FUND


BECKER CAPITAL & FINANCE

Key Program Features

- ✓ Prequalification of local and national energy service companies (ESCOs) through an RFQ process
- ✓ Standardized documentation that facilitates pooled financing – which lowers costs for ***all*** Participants
- ✓ Guaranteed Savings Agreement is a transparent construction contract with a strong guarantee and spells out a monitoring and verification (M&V) plan in detail
- ✓ Guarantee is based on energy and water savings alone – operational savings, deferred maintenance are a bonus
- ✓ FREE's legal, financial and technical team assists throughout negotiations

Program Benefits

- ✓ Preliminary audit provided at no cost
- ✓ Investment grade audit must offer self-financing measures based on participant priorities providing at least 90% of the savings quoted in the pre-contract audit
- ✓ All program costs are paid within the bond issue
- ✓ No cross collateralization or risk associated with involvement of other participants
- ✓ Customized and serialized financing optimization
- ✓ Significant Pennsylvania job creation

Why Act Now?

Reduce energy and water costs

Replace aging, high-maintenance equipment

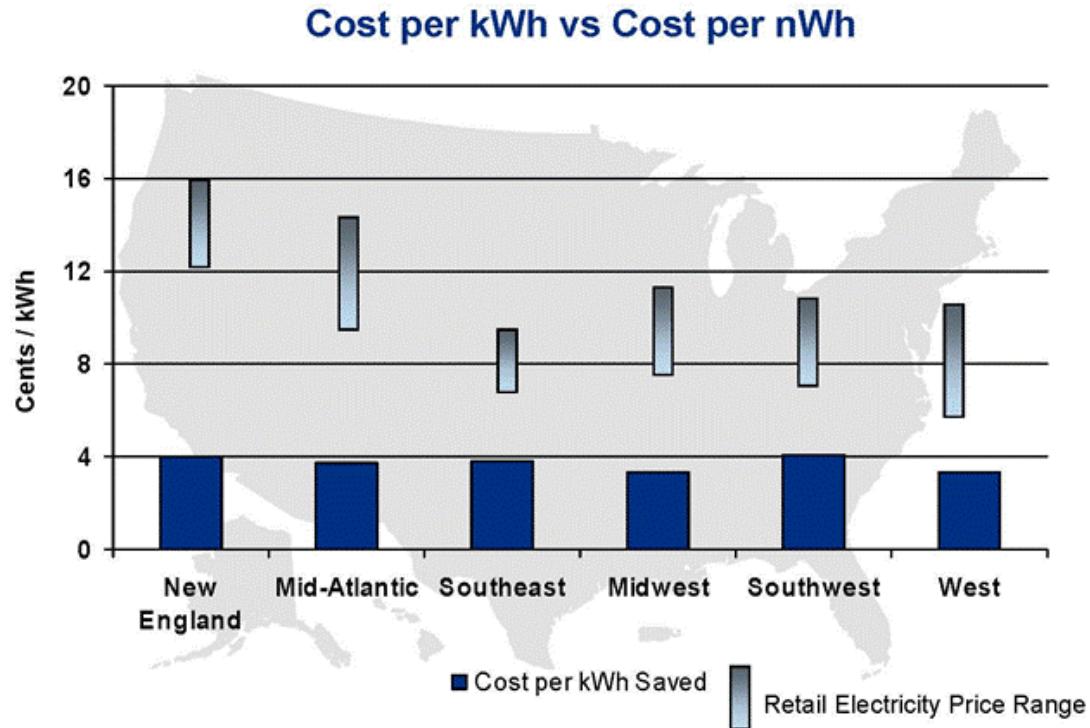
Improve safety and resiliency

Reduce operating costs

Reduce carbon footprint

Negawatt hours (not consuming) – Cheaper than Kilowatt hours

The cost of saving energy is significantly less than electricity rates throughout the U.S.



Source: Erhardt-Martinez & Laitner (2008) *The Size of the U.S. Energy Efficiency Market*. ACEEE.

How does it Work?

Low financing rates are available in the bond markets

Long-term financing allows deep retrofits to be self-funding

Pooled financing saves on average financing costs and permits smaller projects to take advantage of bond financing

Program provides negotiating leverage

Indicative Borrowing Rates

PA Tax-Exempt Revenue Curve 11/21/14					PA Taxable Curve 11/21/14				
Term	AAA	AA	A	BAA	Term	AAA	AA	A	BAA
1	0.16	0.17	0.29	0.68	1	0.15	0.21	0.36	1.09
5	1.28	1.41	1.62	2.14	5	1.86	1.91	2.12	3.21
10	2.31	2.52	2.87	3.32	10	2.92	3.00	3.38	4.44
15	2.72	2.96	3.32	3.74	15	3.52	3.60	4.00	5.11
20	2.93	3.17	3.54	3.94	20	3.63	3.72	4.15	5.25

Rates are *indicative only* and are quoted for general category ratings and not for sub-categories such as Aa3.

Rates are as close of the market on November 21, 2014.

Rates are generalized for a category rating and do not reflect the various nuances in the market in terms of the way investors see credits. For instance hospital credits are not seen in as positive a light as school district credits, and even within those credit categories it depends on the name of the hospital or school district. In addition, it does not account for various possible increases in ratings due to things like Pennsylvania's Intercept Program if that can back a school district's bonds.

Rates in the Revenue Curve table are quoted as trading off the same GO category. The amount they trade off will depend on the borrower and the perception in the market of that borrower. The same rates may or may not apply for Lease Revenue Bonds or Certificates of Participation.

Who Can Participate?

Program assists governmental and non-profit entities to procure and finance sustainable energy improvements

This includes:

Municipalities	Correctional Institutions
Community Colleges	Universities
Counties	Hospitals
Water/Wastewater Authorities	Private Schools
School Districts	Large Non-profit Agencies

What Measures Are Included?

Many! A wide range of energy & water conservation measures (electrical **and** thermal) can be financed

Distributed generation (including solar PV and combined heat and power), microgrids, smart energy management are important candidates for this Program

Major lighting upgrades, HVAC improvements (including boiler and chiller replacement), process and steam redesigns, building envelope upgrades, & motor drive/pumping systems overhauls are examples – ***the key is that the new equipment creates energy and water bill savings sufficient to finance the investment***

The most attractive projects integrate ***deep retrofits*** with ‘low hanging fruit’

How to Become a Participant?

1. Provide a non-binding Letter of Interest and begin discussions with the FREE Team to identify your goals and concerns.

2. Attend the Education Day organized by FREE for potential Participants.

3. Provide the ESCO(s) you choose with access to your site, facilities staff and energy and water bills.

4. Use a simplified procurement to select an ESCO to perform a pre-contract audit and present an initial proposal.

Your LOI will be shared with FREE's pre-qualified ESCO list.

The FREE Team will review in detail on Education Day how the financing works. You will also have an opportunity to meet ESCO representatives.

We work with electric, natural gas and water suppliers to help make access to bills from multiple sites a simple process.

The pre-contract audit establishes a benchmark. Any resulting project must provide savings equal to at least 90% of the savings the audit predicts.

Contracting and Financing

5. Sign a Guaranteed Savings Agreement, pursuant to which the ESCO will provide an investment grade audit, a construction proposal, and savings guarantee.

6. Accept the proposal, which spells out how the guarantee works and how savings are monitored and verified.

7. Retrofit work is performed by the ESCO, and all equipment is regularly checked to ensure performance specifications are met.

8. Your financial savings are verified over the minimum period of time needed to pay off all retrofit costs.

The investment grade audit (IGA) is used by the ESCO to establish its dollar savings guarantee to you.

The FREE Team will provide comparative metrics so that you can compare your guarantee to ones provided to other Participants. This creates a competitive process in your favor!

You sign off on construction payments after you review and approve ESCO documentation.

The verification of savings is extremely important, and you will receive regular reports from ESCOs documenting them.

Procurement Process

Pennsylvania government units can procure using a flexible process under the Guaranteed Energy Savings Act.

The government unit issues an RFP that permits selection on the basis of multiple criteria to meet its needs. Criteria can include being a qualified ESCO under the program.

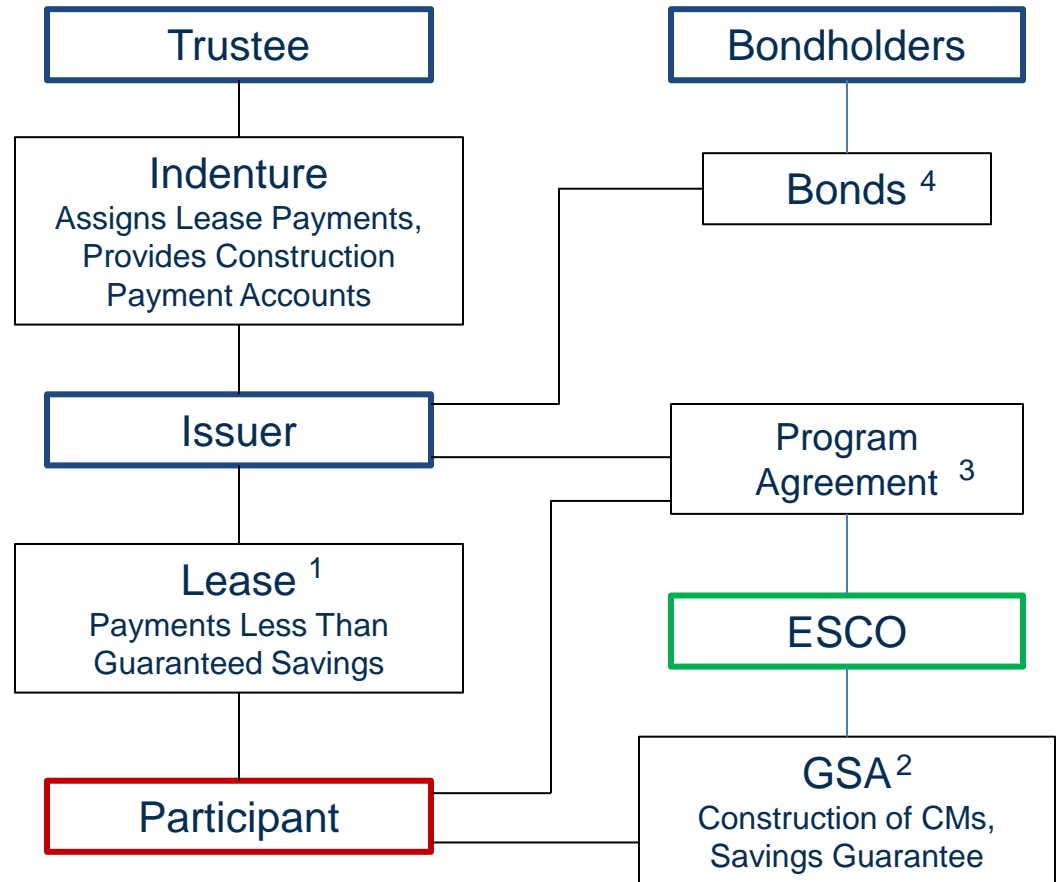
The government unit selects one ESCO to prepare a preliminary audit.

If satisfied with the preliminary audit, the government unit makes a final selection of the ESCO and signs a Guaranteed Savings Agreement.

If not satisfied the government unit can exit the program at no cost or engage another ESCO.

Financing Structure

1. Participant enters into Lease with the Issuer in which it agrees to make quarterly payments for installation of energy/water conservation measures (“CMs”).
2. Participant enters into a Guaranteed Savings Agreement (“GSA”) with an Energy Service Company (“ESCO”), which constructs CMs and guarantees annual savings for the life of the agreement.
3. Participant and ESCO enter into Program Agreement and agree to report performance of the CMs and job creation.
4. Issuer issues bonds secured by payments under the Participants’ Leases.



Guaranteed Energy Savings Agreement



Purpose

-Agreement between ESCO and Participant to undertake implementation of one or more conservation measures at the host's facility.



Mechanism

-ESCO agrees to design, construct and install conservation measures selected by Participant

-ESCO guarantees that the amount of savings (after payment of operation and maintenance costs) will exceed the payments due under the Lease.

-The Participant assumes operating responsibility, starting at the project's time of completion.

Improved Measurement & Verification

Fixed escalation of energy and water rates determined by the Program

Dollar savings are guaranteed as technical performance times escalated energy/water rates

Only energy/water savings are counted, not operational savings or deferred maintenance

ESCOs installing measures agree to use best efforts to attain dollar savings through additional work (make payment to cure shortfall, if needed)

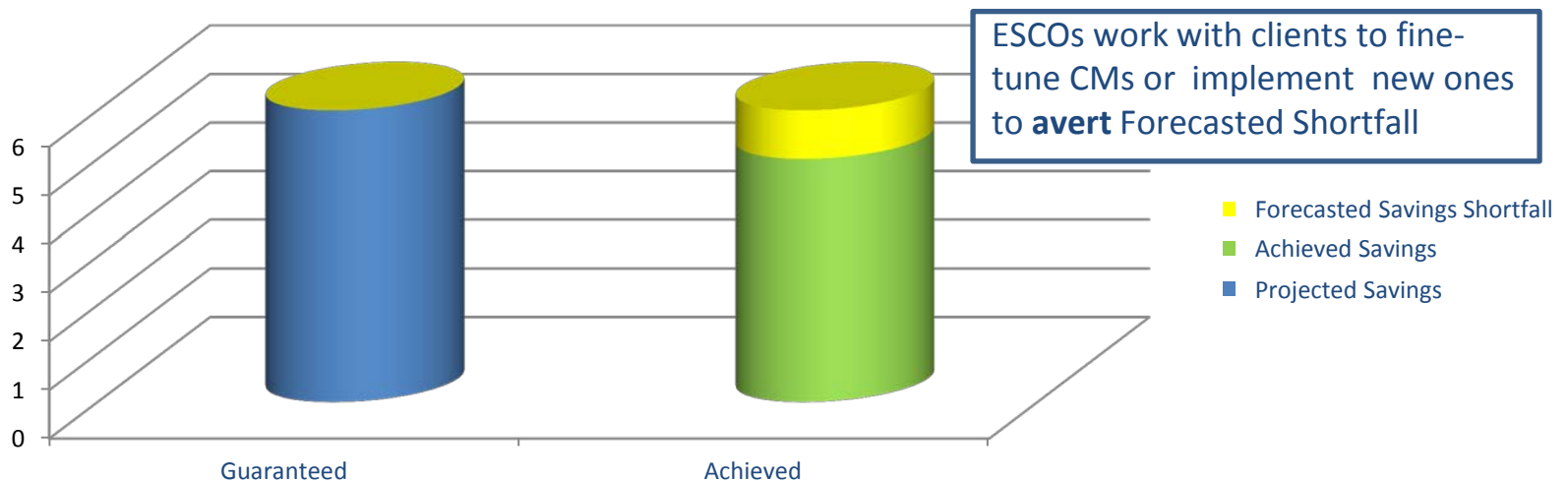
Internationally recognized Monitoring and Verification (M&V) protocols are used

FREE's IMPROVED M&V

Purpose

Diagnose Progress by Quarter – will the Project annually meet its Guarantee? Contractual remedies implemented as necessary.

- ✓ Uses the same DOE Sponsored IPMVP
- ✓ Based on FEMP Guidelines: Measurement and Verification for Federal Energy Projects Version 3.0
 - Option A** – ISOLATE RETROFIT-MEASURE KEY PARAMETER
 - Option B** – ISOLATE RETROFIT-MEASURE ALL PARAMETERS
 - Option C** – WHOLE BUILDING DATA ANALYSIS
 - Option D** – CALIBRATED SIMULATION



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If Pam or Pat cannot answer your question, they will find the person who can!



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