

PPL Energy Services

PERFORMANCE CONTRACTING

Presented to:

**PENNSYLVANIA ASSOCIATION OF
ENVIRONMENTAL PROFESSIONALS**

By: Shayne Homan

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What is Performance Contracting?

- ❑ **Energy and operational savings through PA Act 77**
- ❑ **PA Act 77 is the 3rd generation of the original Act 29 and was passed by legislation in 2004.**
- ❑ **PA Act 77 enables government entities (counties, municipalities, townships, boroughs, school districts, etc) to enter into a PC agreement for a max term of 15 years**
- ❑ **Allows for a single (Turn Key) procurement of services by an Energy Services Company (ESCO)**

What is Performance Contracting?

- ❑ **PA Act 77 is regarded as a Professional Service, therefore allowing the facility to sole source and not be forced to accept lowest bidder.**
- ❑ **Contracts are negotiated and project specific**
- ❑ **Savings are generated through:**
 - ❑ **Energy**
 - ❑ **Operational**
 - ❑ **Maintenance**
 - ❑ **Capital Avoidance**
- ❑ **Stated energy savings are guaranteed**



“Turn Key” Solution

- ❑ **Engineering, Construction, Commissioning & Measurement & Verification are all managed through ONE company.**
- ❑ **Construction is done through the Design / Build method resulting in NO change orders.**
- ❑ **Each solution is project specific and tailored to the Owner’s needs.**
- ❑ **Equipment brand neutral. Owner has ability to specify equipment and / or ATC contractor.**



Plan & Spec vs Performance Contracting

Low Bidder	→	Best value for Life Cycle
Individual Subs	→	Turn Key Design / Build
Change orders on missed specs / engineering mistakes	→	No change orders
Budget over runs	→	Can be entirely funded w/o incurring further debt
Energy savings not verified	→	Energy savings guaranteed & verified

Sample Energy Conservation Measures

■ **Lighting**

- ❑ Interior & Exterior
- ❑ Day lighting
- ❑ Motion Sensors

■ **HVAC**

- ❑ Variable speed air handlers
- ❑ Variable speed pumping
- ❑ Hot water reset
- ❑ Chiller / boiler plant replacement
- ❑ Boiler combustion efficiency improvement
- ❑ Air and water side heat recovery
- ❑ Air and water side free cooling
- ❑ Steam trap replacement



Sample Energy Conservation Measures

■ HVAC (cont'd)

- ❑ Demand Control Ventilation
- ❑ Building Automation System upgrades / replacement
- ❑ Re-commissioning

■ Utilities

- ❑ Provide dual fuel capabilities
- ❑ Power factor correction

■ Water

- ❑ Low flow plumbing fixtures

■ Water Treatment Plants

- ❑ Variable speed pumping
- ❑ Plant automation



Main P.C. Advantages

- **Reduce energy consumption**
- **Reduce operational & maintenance expenses**
- **Replace equipment that is at the end of its life cycle**
- **Use excess savings to help fund other capital improvement projects:**
 - ✓ **Roofing**
 - ✓ **Windows**
 - ✓ **Generators**
- **Guaranteed results**
- **Turn key solution**



Sample Project Cash Flow

COSTS

Project = \$3M

Lease Payments (with financing) = \$3.9M

SAVINGS

Energy = \$4.2M

Operational Savings = \$450K

Total= \$4.7M

Positive Cash Flow = \$800K (\$4.7M - \$3.9M)

Sample Project Cash Flow

Energy Conservation Upgrades Project Proforma Cash Flows 15 Year Lease Term

Total Project Cost	2,953,747	
Less: Customer Equity	-	
Total Amount Financed	2,953,747	
First Year Energy Savings	208,113	4.00% Annual Increase
First year Operational Savings	20,310	3.00% Annual Increase
Total First Year Savings	228,423	

1	2	3	4	5	6	7	8	9
Year	Energy Savings	Operational Savings	Total Savings	Avoided Capital Outlays	Lease Payments	Fees	Net Savings	Accumulated Savings
const.	22,209		22,209	-			22,209	22,209
1	208,113	35,400	243,513	-	259,060	-	(15,547)	6,663
2	216,438	36,386	252,824	-	259,060	-	(6,236)	427
3	225,095	37,401	262,496	-	259,060	-	3,436	3,863
4	234,099	26,255	260,354	-	259,060	-	1,294	5,158
5	243,463	25,982	269,445	-	259,060	-	10,385	15,543
6	253,201	23,545	276,746	-	259,060	-	17,687	33,229
7	263,329	24,251	287,581	-	259,060	-	28,521	61,750
8	273,863	24,979	298,841	-	259,060	-	39,782	101,532
9	284,817	25,728	310,545	-	259,060	-	51,485	153,017
10	296,210	26,500	322,710	-	259,060	-	63,650	216,667
11	308,058	27,295	335,353	-	259,060	-	76,293	292,961
12	320,381	28,114	348,494	-	259,060	-	89,435	382,395
13	333,196	28,957	362,153	-	259,060	-	103,093	485,489
14	346,524	29,826	376,349	-	259,060	-	117,290	602,778
15	360,385	30,721	391,105	-	259,060	-	132,045	734,824
	4,189,380	431,340	4,620,720	-	3,885,896	-	734,824	

Notes by column:

- (1) Contract Year as defined in the Agreement.
- (2) Projected Energy Use Savings are escalated at 4% per year.
- (3) Projected Operational Savings are escalated at 3% per year
- (4) Columns (2) plus (3)
- (5) Capital Expenditures avoided by completing proposed Project.
- (6) Estimated payment to financing entity based on financing \$2,953,747 at 3.739% for a 15 year term.
- (7) Ongoing Fees for Measurement & Verification
- (8) Annual savings equals columns (4) plus (5) less (6) less (7)
- (9) Accumulated savings

Basic Steps for Implementation

- 1. Contact PPL Energy Services to schedule a walk through**
- 2. PPL works with Owner to identify project goals**
- 3. PPL performs Scoping Audit to indentify major ECMs**
- 4. PPL presents SA report to Owner. Both parties decide if the project is viable to move forward**
- 5. PPL performs Investment Grade Audit. The IGA is an in depth study with final calculations and project costs.**
- 6. Sign contract and implement project.**
- 7. Payback begins during construction**



Current Performance

Contracting Customers

- Sunbury Community Hospital
- Bloomsburg Hospital
- The City of Lock Haven
- Carlisle Waste Water Treatment
- Masonic Homes of Elizabethtown
- Lehighon School District
- Carbon County AVTS
- Northwest Area SD
- Greenwood SD
- Ringgold School District
- ELCO School District
- East Lycoming School District
- Lycoming County AVTS Addition
- Bald Eagle Area School District
- Clearfield County Career & Technology Center
- Jim Thorpe Area School District
- Steelton-Highspire School District
- Hazleton Area School District
- Central PA Institute of Science & Tech
- Bishop Hafey Junior/Senior High School
- Juniata County School District
- Millville Area School District
- Columbia-Montour AVTS
- Bellefonte Area School District
- Forest City Regional School District
- Upper Dauphin Area School District
- South Eastern School District
- Mount Carmel Area School District
- West Branch Area School District
- Halifax Area School District