



Game Plans for Financing Energy Improvements

Monday, November 13, 2017

GAME TIME!

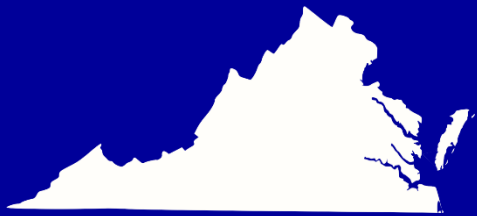
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www.pacealliance.org

Who is the Mid-Atlantic PACE Alliance?

We are a partnership between stakeholders in Virginia, Maryland and the District of Columbia, created to accelerate the implementation of Commercial PACE programs and drive Commercial PACE project closings in the tri-state region through increased harmonization.



Our team is led by the Virginia Department of Mines, Minerals & Energy supported with funding from the U.S. Department of Energy State Energy Program.

Mid-Atlantic PACE Alliance Partners



WELCOME

Steve Walz

Director of Environmental Programs

Metropolitan Washington Area Council of Governments

Brandi Martin

Project Officer

State Energy Program , U.S. Department of Energy

WELCOME

Honorable

Deputy Mayor Brian Kenner

District of Columbia

PLENARY I

What is PACE and Why Be a Fan?

Moderator

Kenley P. Farmer

District of Columbia

Department of Energy & Environment

PLENARY I Panelists

Tom Nida – Senior Vice President

John Marshall Bank

Sandy Fazeli – Managing Director

National Association of State Energy Officials (NASEO)

Mike Healy – CEO

New Columbia Solar

TIME OUT

11:00 – 11:15

PLENARY II

SCORING PROJECTS: Case Studies of PACE in Play

Moderator

I. Katherine Magruder

Executive Director

Maryland Clean Energy Center

- How can the PACE financing model be used to fill gaps in the market for financing improvement for affordable housing, hospitals, churches and not- for-profit community projects as well as commercial and industrial buildings?
- Panelists will share success stories and winning local project examples and models that could be replicated in your community.

PLENARY II Panelists

Corey Powell, COO

Dantes Partners



Jessica Bailey, CEO and Founder

Greenworks Lending



Bracken Hendricks, CEO

Urban Ingenuity





DC PACE and The Phyllis Wheatley YWCA
*A case study on maximizing financing
opportunities*

November 13, 2017



Case Study - Phyllis Wheatley YWCA Background: Our Customers



Case Study - Phyllis Wheatley YWCA Overview



TDC:	\$17 mil.
Unit Count:	84 Units (42 DBH / 42 DHS)
Financing:	9% Tax Credits \$2.188 mil. (DBH) \$1.5 mil (DCHA)
Operating:	ACC/LRSP DHS Funding

Phyllis Wheatley YWCA

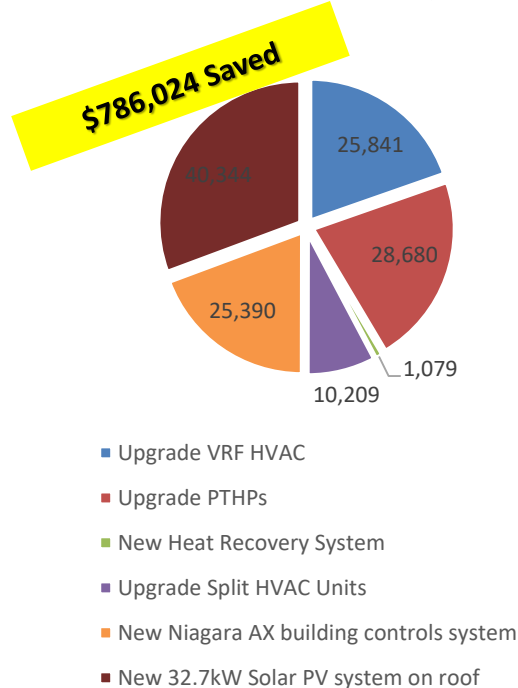


Savings Securitization:

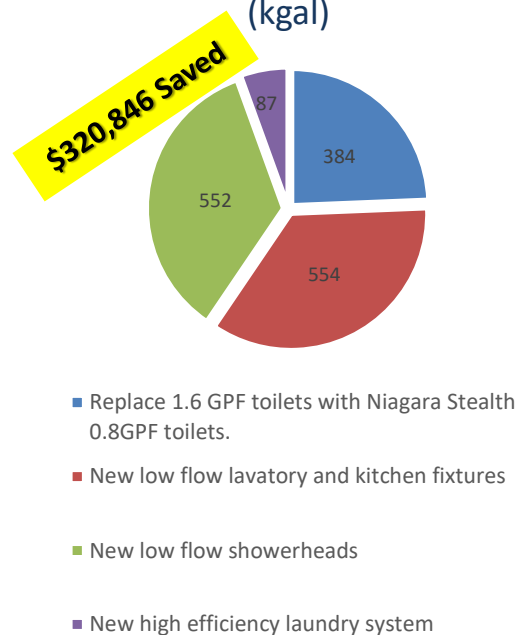
Using the estimated savings from high-efficiency appliances and fixtures to
secure purchase at discounted cost

• Maximizing Energy Efficiencies Means Maximizing Financing Options

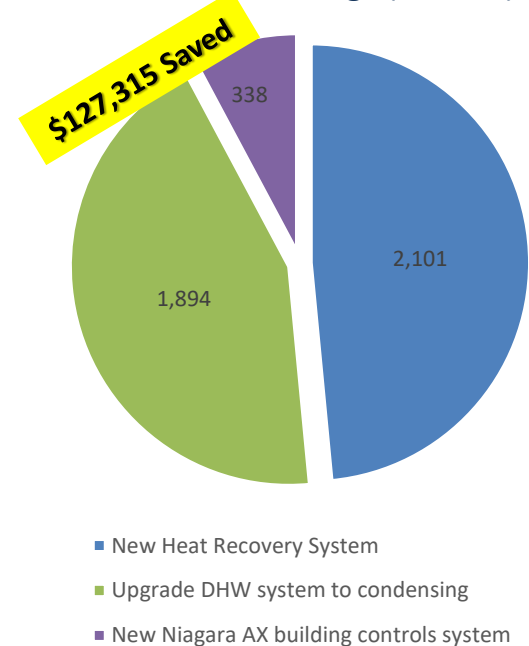
Annual Electric Savings (kWh)



Water Conservation Results (kgal)



Annual Gas Savings (therms)



Savings of \$365,000 in 5 years and \$1.2 million over systems life

Total Savings											
ECM	Year 1	2	3	4	5	16	17	18	19	20	
Upgrade VRF HVAC (18 Cus and 53 cassettes)	\$ 12,895	\$ 12,966	\$ 13,038	\$ 13,111	\$ 13,186	\$ 14,116	\$ 14,211	\$ 14,308	\$ 14,407	\$ 14,508	
Upgrade PTHPs (58)	\$ 11,651	\$ 11,729	\$ 11,809	\$ 11,891	\$ 11,974	\$ -	\$ -	\$ -	\$ -	\$ -	
Install Heat Recovery Dedicated Outdoor Air Unit for Ventilation Air	\$ 2,084	\$ 2,136	\$ 2,189	\$ 2,243	\$ 2,297	\$ -	\$ -	\$ -	\$ -	\$ -	
Upgrade Split HVAC Units for Common Area (4)	\$ 3,859	\$ 3,887	\$ 3,915	\$ 3,944	\$ 3,974	\$ -	\$ -	\$ -	\$ -	\$ -	
Upgrade DHW system to condensing with new controls	\$ 5,894	\$ 5,938	\$ 5,982	\$ 6,028	\$ 6,075	\$ 6,654	\$ 6,713	\$ 6,773	\$ 6,835	\$ 6,897	
Install new Niagara AX building controls system including wireless communicating thermostats	\$ 1,860	\$ 1,937	\$ 2,016	\$ 2,096	\$ 2,178	\$ 3,195	\$ 3,299	\$ 3,405	\$ 3,513	\$ 3,623	
Upgrade all interior, common, unit, and exterior lighting to 100% LED	\$ 10,695	\$ 10,879	\$ 11,067	\$ 11,258	\$ 11,453	\$ -	\$ -	\$ -	\$ -	\$ -	
Upgrade toilets and lavatories to high efficiency	\$ 17,868	\$ 18,225	\$ 18,590	\$ 18,961	\$ 19,341	\$ -	\$ -	\$ -	\$ -	\$ -	
Upgrade laundry to high efficiency	\$ 1,082	\$ 1,104	\$ 1,126	\$ 1,149	\$ 1,172	\$ -	\$ -	\$ -	\$ -	\$ -	
Install Solar PV system on roof	\$ 3,011	\$ 3,109	\$ 3,209	\$ 3,311	\$ 3,415	\$ 4,723	\$ 4,858	\$ 4,996	\$ 5,136	\$ (4,720)	
Totals	\$ 70,899	\$ 71,910	\$ 72,940	\$ 73,992	\$ 75,065	\$ 28,688	\$ 29,081	\$ 29,482	\$ 29,891	\$ 20,308	

Benefit to YWCA											
	Year 1	2	3	4	5	16	17	18	19	20	
Benefit to YWCA	\$ 70,899	\$ 71,910	\$ 72,940	\$ 73,992	\$ 75,065	\$ 28,688	\$ 29,081	\$ 29,482	\$ 29,891	\$ 20,308	
PACE Payment	\$ (68,756)	\$ (68,756)	\$ (68,756)	\$ (68,756)	\$ (68,756)	\$ -	\$ -	\$ -	\$ -	\$ -	
Net	\$ 2,143	\$ 3,154	\$ 4,184	\$ 5,236	\$ 6,308	\$ 28,688	\$ 29,081	\$ 29,482	\$ 29,891	\$ 20,308	

Additional Benefits Gained Via Solar Financing

Sources		Uses	
Lessee Capital Payment	71,556	[RESEVED]	-
Owner Equity (Solar)	47,704	[RESEVED]	-
[RESERVED]	-	Solar Installation	119,260
Total Sources	119,260	Total Uses	119,260

Solar Benefits (SREC, ITC and Depreciation)							
ECM	Year 1		2	3	4	5	
SREC Value	\$	18,639	\$	13,047	\$	11,183	\$ 7,456
ITC	\$	33,000					
Depreciation	\$	6,545	\$	10,472	\$	6,283	\$ 3,770
Totals	\$	58,184	\$	23,519	\$	17,467	\$ 11,226

Returns Analysis	
Equity Investment	\$ 47,704
Total Return	\$ 138,417
CoC	2.9x
Internal Rate of Return	72.0%



Budgetary Impact of PACE

Pre-PACE Sources & Uses

Sources		Uses	
LIHTC Equity	9,658,679	Acquisition	2,426,263
Deferred Developer Fee	570,902	Construction	8,217,867
DBH Grant / Sponsor Loan	2,188,000	Permits & Bonds	57,324
DCHA Capital Funds	1,500,000	Utilities/Testing & Inspection	172,225
Assumed Debt	2,339,591	Architect & Engineering	383,123
Financing Gap	427,950	Legal	425,000
		Financing	234,357
		Carrying Costs & Reserves	2,036,642
		Miscellaneous & Other	695,723
		Soft Cost Contingency	217,915
		Developer Fee - Construction	1,291,551
		YWCA Dev. Fees	227,921
		Loan Servicing - Construction	299,211
Total Sources		Total Uses	16,685,122

Post-PACE Sources & Uses

Sources		Uses	
LIHTC Equity	9,658,679	Acquisition	2,426,263
Deferred Developer Fee	570,902	Construction	8,337,867
DBH Grant / Sponsor Loan	2,188,000	Permits & Bonds	57,324
DCHA Capital Funds	1,500,000	Utilities/Testing & Inspection	172,225
Assumed Debt	2,339,591	Architect & Engineering	383,123
PACE Loan	547,950	Legal	425,000
		Financing	234,357
		Carrying Costs & Reserves	2,036,642
		Miscellaneous & Other	695,723
		Soft Cost Contingency	217,915
		Developer Fee - Construction	1,291,551
		YWCA Dev. Fees	227,921
		Loan Servicing - Construction	299,211
Total Sources		Total Uses	16,805,122

Estimated Incremental
Expense of ~\$120,000.00



Lessons Learned

- Involve credible third party vendors (DP partnered with Thinkbox, whose expertise was crucial to achieving end goals)
- Communicate early and often with capital counterparties. (DP worked closely with DCHA, DCSEU, DHCD, HUD) Amalgamated, Wells Fargo and most importantly, our non-profit partner Phyllis Wheatley YWCA, (Whose approvals were necessary to maximize opportunities)



GREENWORKS
LENDING

CASE STUDY: COMFORT INN AND MEDICAL OFFICES

Project Need & Solution

Commercial office building and hotel on a single parcel in Gaithersburg MD. implementing cost-saving energy efficiency upgrades.

Project Type: building envelope, HVAC replacement, LED

Lighting

Total Project Cost: \$ 1,400,000

Money Down: \$ 0.00

C-PACE Financing: \$ 1,400,000

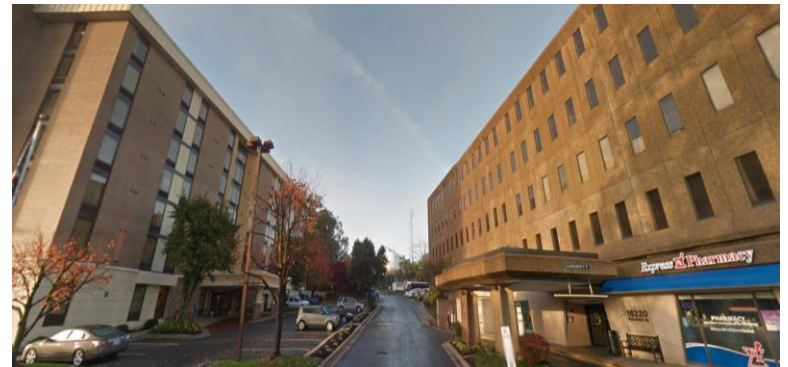
Term: 20 years

Annual Assessment: \$ 124,567

Year One Savings \$ 34,444

Lifetime Cost Savings: \$ 3,174,510

PACE to Value <10%



Highlight: Hotel received Choice Hotel's (ComfortINN) highest level certification for sustainability following the improvements.

CASE STUDY: RETAIL ON MAIN STREET

Project Need & Solution

Main St. retail shop replaced air conditioners and windows that dated back to 1978. The HVAC upgrades and the replacement of more than 1,000 sq.ft. of low R-value glass improved the building's overall energy efficiency year-round.

Energy: HVAC and building envelope (windows)

Total Project Cost: \$134,408

Money Down: \$0.00

C-PACE Financing: \$134,408

Term: 20 years

Annual Assessment: \$12,060

Year One Savings: (\$498)

Lifetime Cost Savings: \$300,704

PACE to Value 10%



Legislator Quote: “A Downtown business will be able to upgrade his commercial property and take immediate advantage of decreased operating costs, while increasing energy efficiency.”

Kent County Commissioner, William Short

CASE STUDY: MULTIFAMILY RE-DEVELOPMENT

Project Need & Solution

Multifamily property management firm replaced obsolete/end of life boilers in 11 buildings spanning across state/district border of Maryland and D.C.

Project Type: Energy efficiency
boiler replacement

Total Project Cost: \$ 4,816,131

Money Down: \$ 0.00

C-PACE Financing: \$ 4,816,131

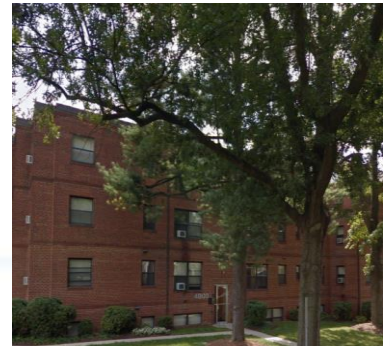
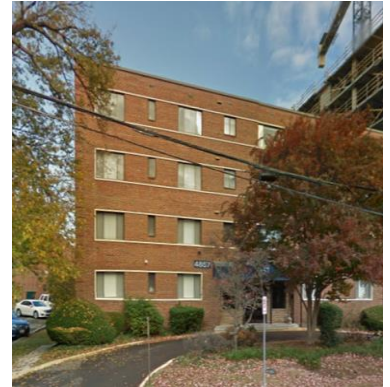
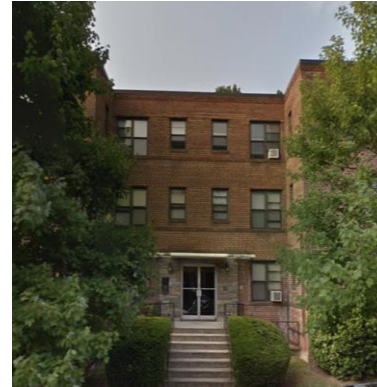
Term: 20 years

Annual Assessment: \$ 420,939

Year One Savings \$ 843,258

Lifetime Cost Savings: \$ 3,767,263

PACE to Value <10%

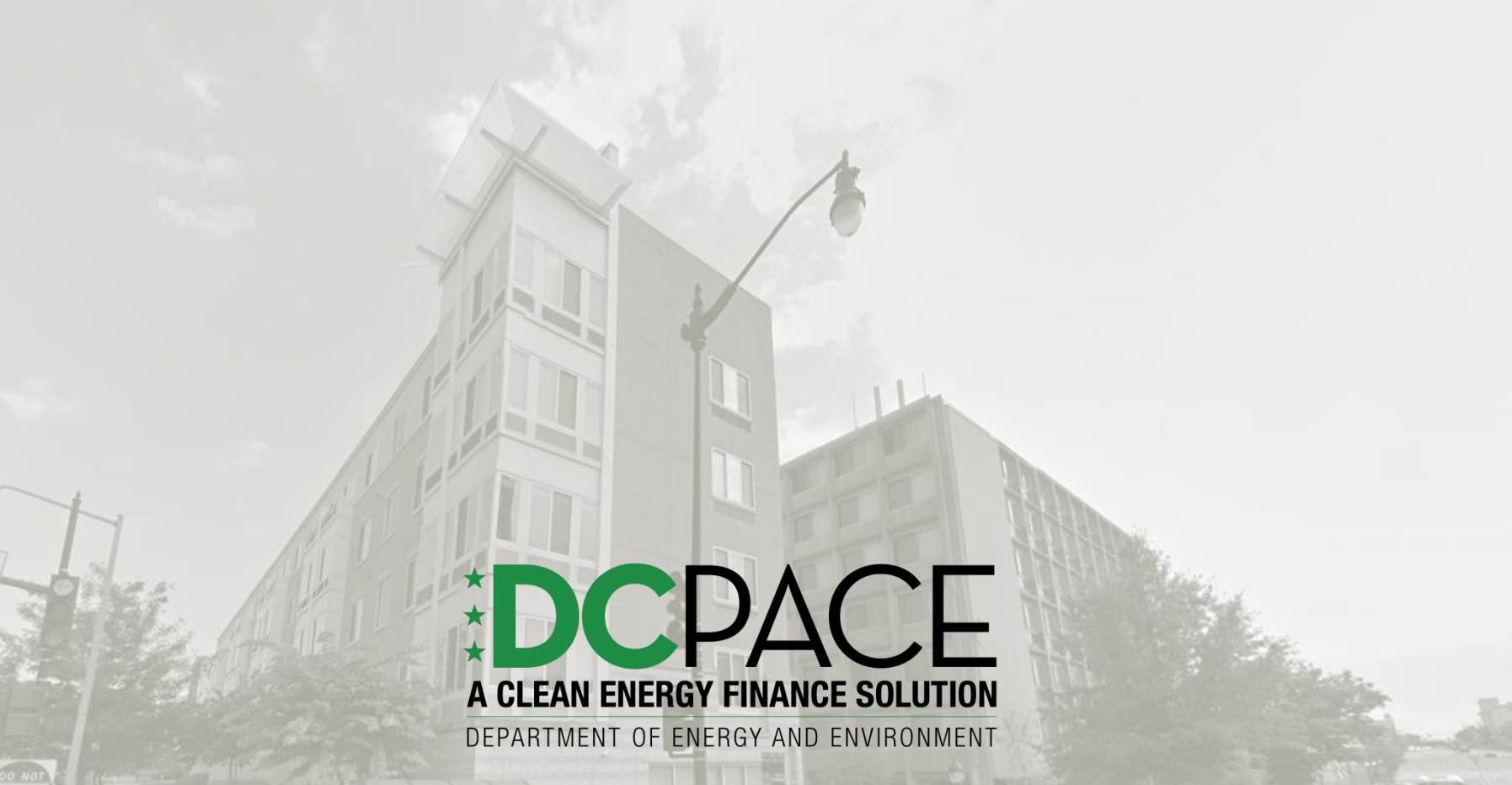


Contractor View: “What C-PACE represents for multifamily property owners is an opportunity to improve NOI for aging properties.”

John Cain, Director of Energy Services at Boland

PACE & Financial Innovation:

Case Studies from DC PACE



★ **DCPACE**
★ **A CLEAN ENERGY FINANCE SOLUTION**
★
DEPARTMENT OF ENERGY AND ENVIRONMENT

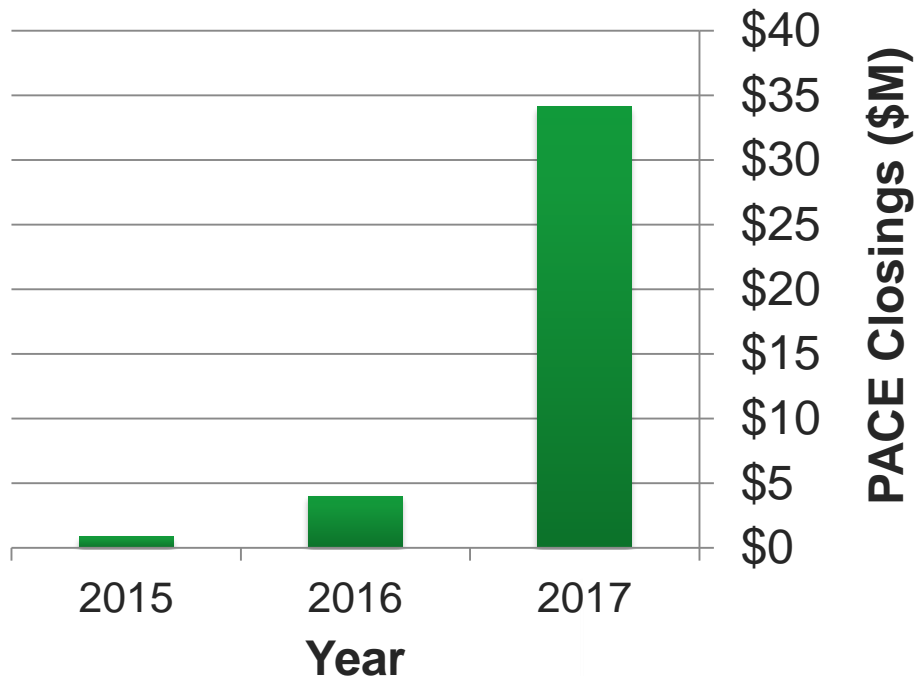
Washington DC: *Green Finance Innovations*



DC PACE is the District's clean energy financing program for building upgrades.

Urban Ingenuity is the DC PACE program administrator, under contract to DOEE

DC PACE Market Growth



Milestones & Building Blocks:

- *First PACE for LIHTC*
- *First HUD approval of PACE*
- *First tax-exempt PACE*
- ✓ Green Bank
- ✓ Solar for All
- ✓ PACE & PABs

Case Study: *Non-Profit Public Charter School*

Elsie Whitlow Stokes PCS

Customer:

- Washington DC, Charter School

Capital Need:

- High annual energy spend
- Large looming out-of-pocket-expenses to fix leaky roof, replace failing HVAC, etc.

Financial Challenge:

- Finance large retrofit project without impacting annual budget
- Offset payments with savings



Case Study: *Public Charter School*

Project Basics

- **Hard Cost = \$1.6 M / DC SEU Incentive = \$189,000**
- **Financed Amount: \$1,421,000**
- **Annual PACE Payments: \$130,000**

Avoided Capital Outlays

Boiler Retrofit	\$273,000
Chiller Retrofit	\$230,000
Cooling Tower	\$82,000
Fan Coil Units	\$320,000
Roof replacement	\$231,000
Total	\$1,136,000

Annual Cash Flow

Energy Savings	\$55,500
Water Savings	\$1,500
SREC Income	\$15,000
Savings on O&M Costs	\$64,000
Total Savings	\$136,000
PACE Payments	-\$130,000
Net Cash Flow	\$6,000

DC PACE funded \$1 M+ in looming expenses through long-term savings

Case Study: *DC United – Audi Field*

PACE Financing: \$25M (part of ~\$350M project)

Challenge: Displace expensive equity and extend capital budget

Impact: 820metric tons/yr. CO², 25% energy savings, LEED Gold

Key measures:

- *Storm water retention (55K ft³)*
- *800+ kW solar PV*
- *LED field lighting*
- *Low-flow fixtures*
- *Insulation*
- *Green roof*
- *HVAC*



Case Study: *Tax-Exempt PACE*

Far Southeast Family Strengthening Collaborative

- ✓ Gap finance for new HQ of a local non-profit
- ✓ Build the better building without increased equity
- ✓ Lower op-ex over time



Sources & Uses

IRB (tax-exempt)	\$6,000,000
IRB (taxable)	\$2,000,000
Local Govt. Grant	\$3,000,000
Financing Gap	\$3,000,000
Project Cost	\$14,000,000

***\$2.9 M savings above code over 20 years
qualified the property for \$2 M+ in PACE***

PACE Financing

Tax-Exempt PACE	\$1,500,000
Taxable PACE	\$500,000
Total PACE	\$2,000,000

Project financials simplified for illustrative purposes.

PACE for Affordable Housing

Uses	
Acquisition	\$16,000,000
Hard Costs	\$29,00,000
Soft Costs	\$7,000,000
Solar	\$1,000,000
Total Costs	\$53,000,000

Sources	
LIHTC (4%)	\$22,000,000
Tax-Exempt Mortgage	\$18,000,000
Local Govt. Soft Debt	\$10,000,000
PACE	\$3,000,000
Total Sources	\$53,000,000

Addressing a \$2M gap...

1. Do Nothing
2. Owner's Equity
3. Value Engineering
- ★ 4. Tax-Exempt PACE



Note: Project financials have been simplified for illustrative purposes.

PACE: *Financial Value Proposition*

	Self-Funded	PACE
Investment by Property Owner	\$3,000,000	\$0.00
Annual Benefits	\$310,000	\$310,000
Annual PACE Payment	\$0.00	\$(240,000)
Net Benefit Year 1	\$(2,690,000)	\$70,000
Annual Net Benefit Years 2-20	\$310,000	\$70,000
5-year NPV of Cash Flows (@ 6% discount rate)	\$(1,524,000)	\$295,000
10-year NPV of Cash Flows (@ 6% discount rate)	\$(549,000)	\$515,000
5-year IRR	-19%	Infinite
10-year IRR	1%	Infinite

PACE is a valuable layer in structured finance

Bracken Hendricks
CEO, Urban Ingenuity
DC PACE Program Administrator

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Phone: 202-796-8925
www.urbaningenuity.com



HALF TIME

LUNCH KEYNOTE

Charlene Heydinger, President

Texas PACE Authority



BREAKOUT SESSIONS

GOVERNMENT

“Fielding a Team: How to Build a PACE Program in Your Jurisdiction”

Moderator

Jessica Greene

Virginia Energy Efficiency Council (VAEEC)

GOVERNMENT SESSION

PANELISTS

Rich Dooley, Community Energy Coordinator

Arlington County, VA

Abby Johnson, President

Abacus Property Solutions

Jamie Williams, Economic Development Coordinator

Kent County, MD

CONTRACTORS

**“Rules of the Game: How to use PACE Project
Financing for your Customers”**

Moderator

Steve Morgan, President

Clean Energy Solutions, Inc.

CONTRACTOR SESSION

PANELISTS

Daron Coates, Managing Director

ThinkBox

Brian McCarter, President and CEO

SRS

Andrew Zech, Head of Business Development

Greenworks Lending

PROPERTY OWNERS SESSION

**“SCORE !: Meeting Energy Improvement Goals with
PACE”**

Moderator

Daniel Farrell, Program Manager

Virginia State Energy Office



PROPERTY OWNERS SESSION

PANELISTS

Cliff Kellogg, Vice President - Strategic Initiatives

Petros PACE Finance

Perry Moon, Executive Director

Far Southeast Family Strengthening Cooperative

Gerard Neely, Manager

Maryland Commercial PACE, PACE Financial Servicing

ROUNDTABLE

Discussion Leaders

Scott Dicke, Director, VA C-PACE Program

SRS

Daniel Farrell, Program Manager

VA State Energy Office

GAME OVER!

Thanks to our Hosts

Metropolitan Washington Area Council of Governments

WINNING WITH PACE

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