

Innovations in Solar Financing for Non-Profits and Affordable Housing

**CESA Workshop on Deploying Solar in Public and
Affordable Housing**

Ingenuity Solar Platform: *The Team*



URBAN INGENUITY

NHT-Enterprise.

Urban Ingenuity: Project oversight,
Legal, Energy & Financial Underwriting

National Housing Trust: Lead developer,
Debt origination, Strong balance sheet



The DC Solar For All Pilot:

- ✓ *Committed \$1.5M Grant*
- ✓ *Generating 1MW free solar*
- ✓ *Cuts bills 50% in 400+ homes*
- ✓ *Builds scalable platform*
- ✓ *\$50M in national investment*

Market Opportunity: *Non-Profit Solar*

Market Barriers: *Non-Profit Solar & Affordable Housing*

- x ***No Tax Appetite:*** Can't monetize solar tax incentives
- x ***Small Size:*** Small individual projects often across portfolios
- x ***Complex Ownership:*** Many owners & special purpose entities
- x ***Weak Credit Quality:*** Unconventional cash flows & credit profiles

Solutions: *Building a Resilient Community Solar Platform*

- ✓ ***Credit Enhancement:*** Impact PRI with financial & mission returns
- ✓ ***Aggregation:*** Package scaled project pools with channel partners
- ✓ ***Standardization:*** Streamline ownership, standard documentation
- ✓ ***Asset Management:*** Uniform high-quality management of projects
- ✓ ***Clear Customer Benefit:*** Transparency, control & new cash flows

Pilot Project: *Multifamily Affordable Housing*

Bldg. Type: Affordable Multifamily Housing
Owner: Non-Profit Developer (Committed)
System size: 1 MW
Location: Washington D.C.
Site: Distributed Portfolio (~20 Buildings)
PPA Term: 15 Years at \$0.06/kWh (50% savings)
PRI Scope: \$1M (10 Year, 3% Yield, DSCR = 2.0)

Capital Investment Structure

<i>Tax Equity</i>	\$1,200,000
<i>Cash Equity</i>	\$250,000
<i>Traditional Debt</i>	\$1,100,000
<i>PRI Debt (3% / 10 Year)</i>	\$1,000,000
System Cost	\$3,550,000



Community Benefits: *The "Impact ROI"*



Impact Return on Investment

Initial Investment	(\$1,000,000)
Return on Investment (3% yield)	\$1,172,305
Community Benefits (15 yrs)	\$1,444,946
<i>Tenant Energy Bill Savings (50%)</i>	\$1,158,446
<i>Payments to Mission Based Host</i>	\$286,500
Carbon Emission Reduction (25 yrs)	24,140
<i>4,700 cars or 25,800 acres forest</i>	Tons CO ²

- ✓ *Full return of principal with 3% interest*
- ✓ *+ 100% return in community benefits*
- ✓ *Increased housing affordability*
- ✓ *Enhanced climate resilience*
- ✓ *Lower NOx, SOx & Particulate*

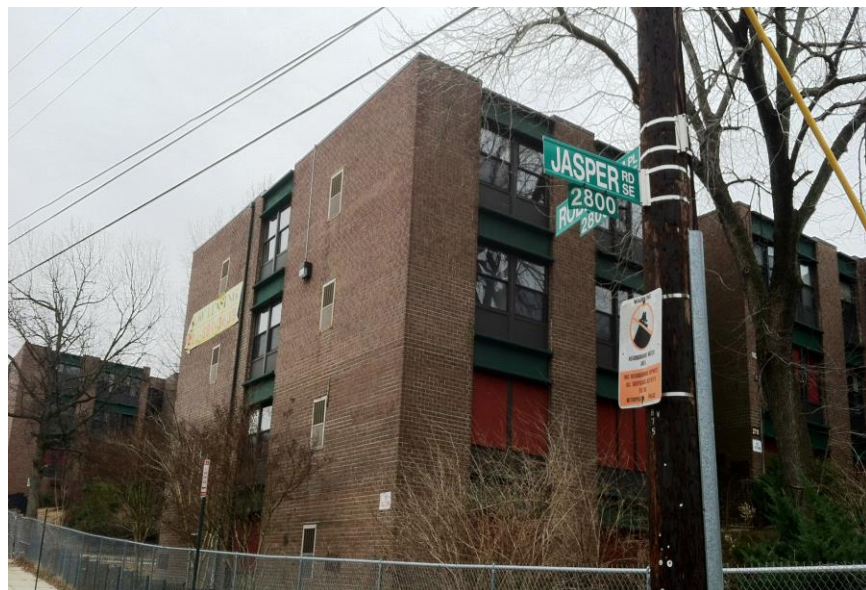
PACE for Solar and Resilience: Case Study

Solving to the Challenge:

- 4% LIHTC Financing
 - Shrinking Tax Equity
 - Declining Subsidies
- = *Capital Gaps !!!*

Opportunity for Innovation:

- Large solar PV
- Tenant community solar
- Battery storage
- Green building ECMs



PACE in the Capital Stack: *Affordable Rehab*

Uses	
Acquisition	\$16,000,000
Hard Costs	\$29,000,000
Soft Costs	\$7,000,000
Total Costs	\$52,000,000

Sources	
LIHTC (4%)	\$22,000,000
Tax-Exempt Mortgage	\$18,000,000
Local Govt. Soft Debt	\$10,000,000
Total Sources	\$50,000,000
Gap	\$2,000,000

Options for addressing a \$2M gap...

1. **Do Nothing:** *Project stalls or dies*
2. **Owner's Equity:** *High opportunity costs*
3. **Value Engineering:** *Lock in high operating costs*
4. **Tax-Exempt PACE:** *Increase NOI & Displace equity*



PACE in the Capital Stack: *Increasing NOI*

Project Basics

Gap filled	\$2,000,000
+ 350 kW solar	\$1,000,000
Total PACE =	\$3,000,000

**PACE improves project
& property value**

Average Annual Cash Flow

Utility Savings	\$110,000
O&M Savings	\$80,000
Solar (Energy + RECs)	\$120,000
Total Savings	\$310,000
PACE Payments	-\$240,000
Net Cash Flow	\$70,000

\$190K in annual savings offsets debt service for \$2M+ in PACE
Self financing \$1M more in solar PV further improves cash flow

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

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Tax-Exempt Mortgage	\$18,000,000
Local Govt. Soft Debt	\$10,000,000
PACE	\$3,000,000
Total Sources	\$53,000,000

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PACE in the Capital Stack: *Displacing Equity*

	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 structure for multi-family housing!



Thank you!

Bracken Hendricks
President & CEO, Urban Ingenuity

Cell Phone: 301-502-0532

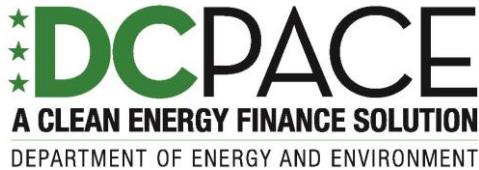
bhendricks@urbaningenuity.com

www.urbaningenuity.com

[Twitter: @IngenuityPower](https://twitter.com/IngenuityPower)

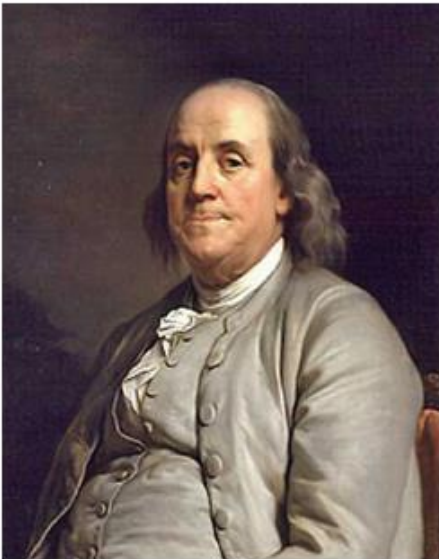


PACE: A New Use for an Old Concept



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

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

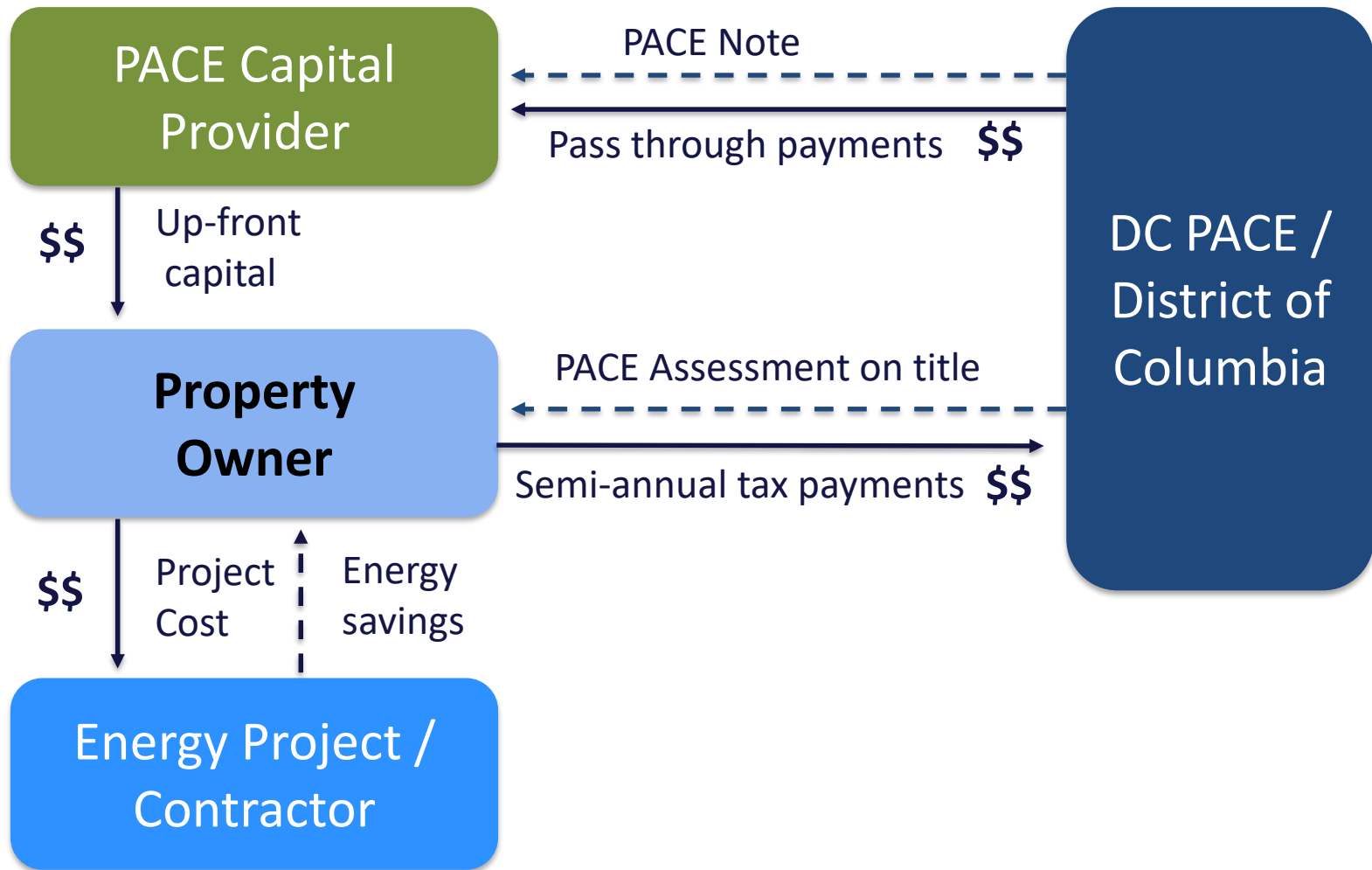


Philadelphia first used this mechanism for an opt-In Fire District in 1736

About Property Assessed Clean Energy

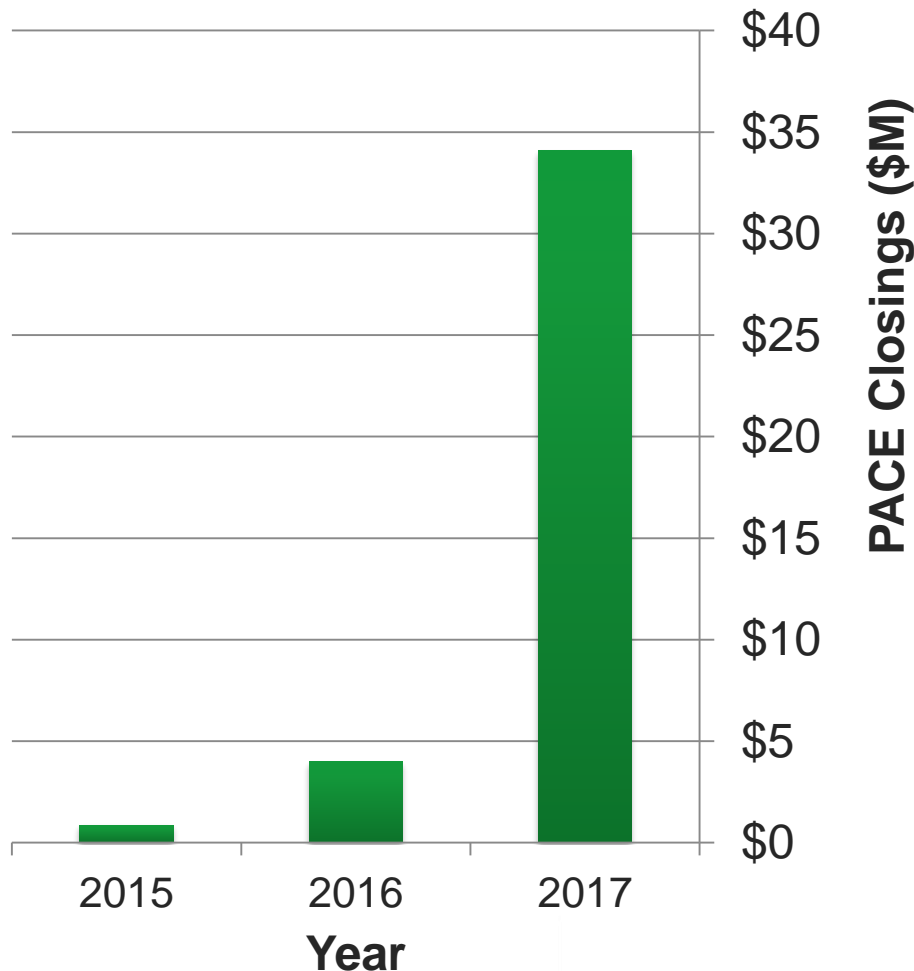
- **Zero Dollars Out-of-Pocket:** PACE provides property owners with up to 100% financing for energy and water upgrades at long (15 - 20 year) terms
- **NOI Positive:** Owners realize savings immediately, and use those savings to pay back the cost of the measures through a special assessment that is placed on the property
- **Off-Balance Sheet:** Extend the capital budget and finance comprehensive projects with potentially off-balance sheet financing – PACE is not conventional debt

How it works: *PACE Transaction Structure*



DC: Innovations in Energy Finance

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
- ✓ Housing Bonds & IRBs

How It Works: *The Solar Platform*

