



Pick up the PACE:

Accelerating the PACE of Investment in Energy Improvements

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Yale Center for Business and the Environment “Blueprint for Efficiency” Webinar

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Agenda

- Defining the Problem
- Property Assessed Clean Energy (PACE) 101
- Residential PACE Status Update
- Commercial PACE Financing Models
- Key Challenges

Defining the Problem

- **The up-front cost of energy efficiency and renewable energy upgrades is a significant investment barrier.**
  - **$100's of billions of investment necessary**
- **BUT, this is just one of several barriers…**

+ INFO ≠ ACTION

Financing is NOT a Panacea

- **Non-Financing Barriers include:**
  - Energy use is not a priority.
  - Buying energy is simple and convenient.
  - Uncertainty about the benefits of energy improvements.

Defining the Problem

- **Access to capital is constrained:**
  - 40-50% of applicants to residential unsecured energy loan programs often rejected
  - Capital access often limited to large, Class A (investment grade) commercial buildings
- **Existing financial products not well-suited to EE/RE investments.**
  - Double digit interest rates are common and products are often short term.

Can Property Assessed Clean Energy (PACE) increase access to capital and/or increase the attractiveness of capital for EE/RE investments?

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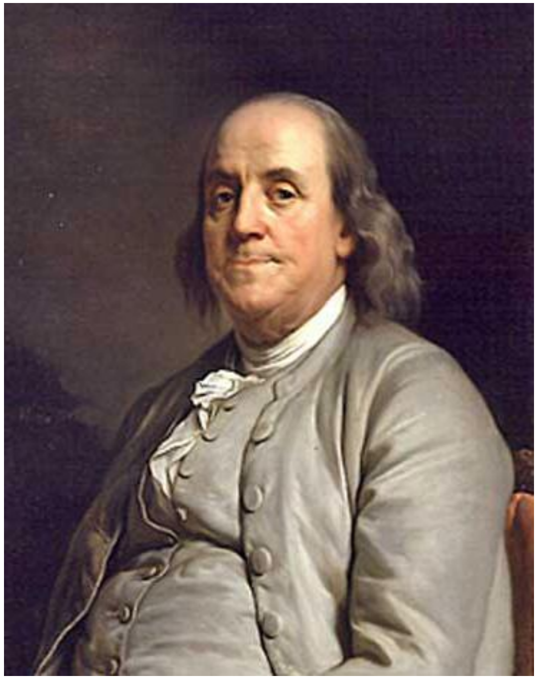
The Father of PACE

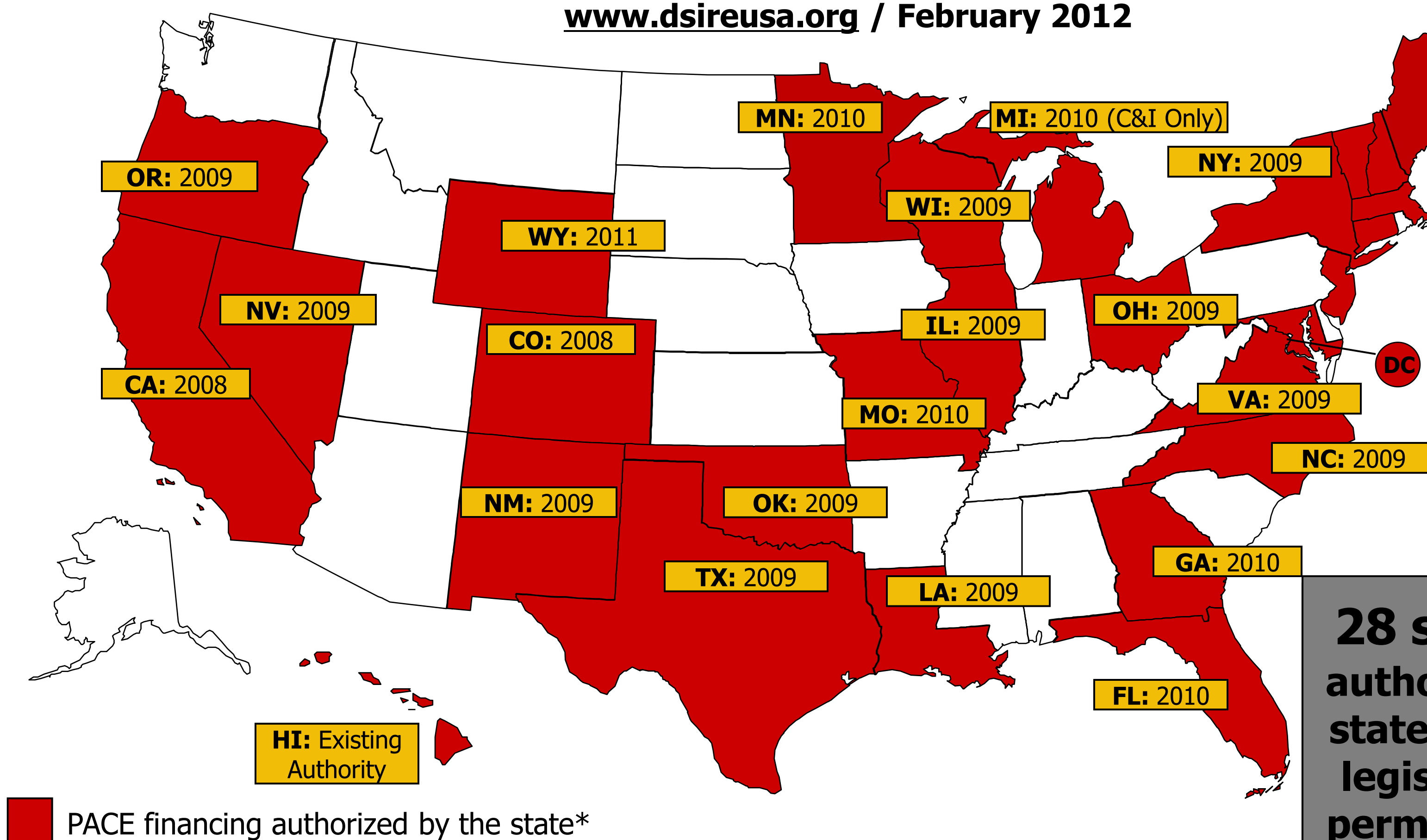


PHILADELPHIA OPT-IN FIRE DISTRICT

Source: Renewable Funding

Property Assessed Clean Energy (PACE)

www.dsireusa.org / February 2012



28 states + DC authorize PACE (27 states have passed legislation and HI permits it based on existing law)

PACE Financing Basics

Government Sponsor

Property Owner

- Creates financing district & approval process
- Attaches repayment obligation to the building via voluntary property assessment
- May provide upfront capital

- Identifies work & chooses contractor
- Repays financing as a line item on the property tax bill (typically over 5-20 years)

Key PACE Benefits

- **No or Low Upfront Costs.**
  - Removes high first cost barrier to investment.
- **Debt of property not person or corporation.**
  - Minimizes need to underwrite to personal or business credit.
- **Very Secure.**
  - Provides investors with repayment security through priority of tax lien. Security enables lower interest rates and longer terms than typical financing vehicles.
- **Minimizes holding period bias.**
  - Assessment stays with the property, not the owner.
- **Addresses split incentives.**
  - Property tax assessments may qualify as “pass-through expenses”.
- **Attractive across a wide variety of property types and sizes.**
  - Property owners have financed $5K to $1 million+ improvements.

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Residential PACE Status Update

- FHFA action in June 2010 halted most programs.
  - Several California programs operating:
    - Sonoma County continues, WRCOG recently launched and Palm Desert, CA offers to households with jumbo mortgages.
  - Other models being tested:
    - Subordinated lien PACE in VT, hybrid in Babylon, NY
- Lawsuits in process and federal legislation introduced. But, outcome and timeline unclear.
  - FHFA rulemaking comment period just completed—30,000+ comments submitted. DOE comments: http://www.fhfa.gov/webfiles/23801/369_U.S._Department_of_Energy_with_Attachments.pdf
  - No clear pathway for legislation.
- Bottom line.
  - No clear short-term pathway to reinstatement of residential PACE.

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PACE Financing Structures

- **Source of capital varies across programs**
  - Warehouse model
  - Pooled Bond model
  - Open Market (Owner-arranged) model
  - Hybrid models

Warehouse Model

- Government or third party program sponsor uses a credit line (or internal capital) to fund projects, followed – potentially - by 'takeout financing'.

Pros

- Simple and streamlined!!

Cons

- Program sponsor, at least temporarily, takes assessments onto its balance sheet, which entails risk. If a third party credit line is used, can be expensive.
- A single interest rate for all participants - a disadvantage for those with strong credits.

Pooled Bond Model

- **Government or third party program sponsor aggregates project applications and issues a bond to fund all projects at the same time.**

Pros

- **No risk to the program sponsor.**

Cons

- **There can be significant lag time between when a property owner applies for funding and when the project is funded.**
- **Low visibility on financing costs.**
- **A single interest rate for all participants - a disadvantage for those with strong credits.**

Open Market Model

- **Each owner negotiates financing terms directly with an investor. Government program sponsor issues bond to investor and passes through assessment payments to investor.**

Pros

  - **Allows building owners to develop and fund projects on their own schedule and at terms that more accurately reflect the credit profile of their specific building.**
  - **Program sponsor has relatively few responsibilities - acts as pass-through agent, collecting taxes and passing assessment payments to investor.**

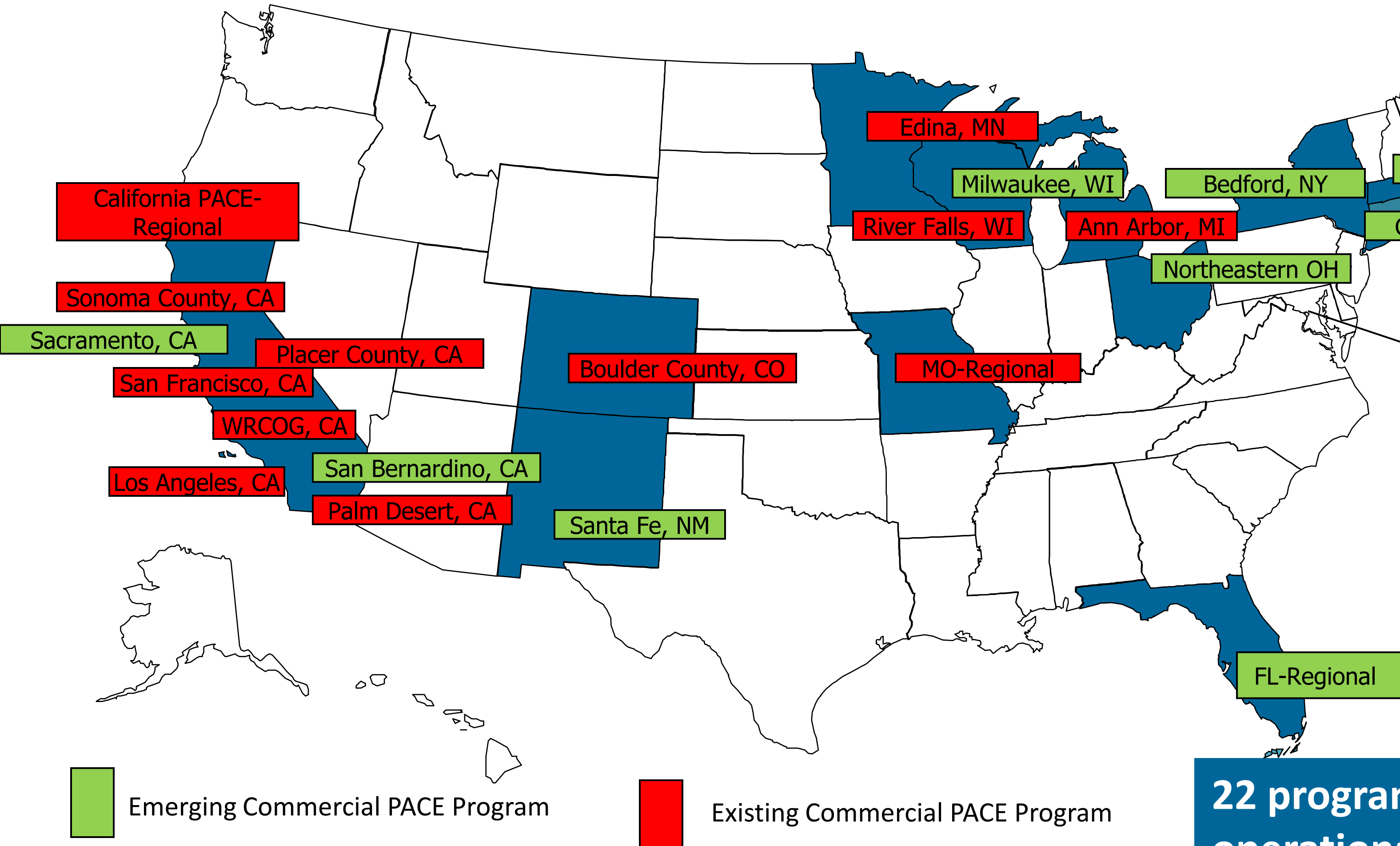
Cons

  - **More appropriate for large buildings as this structure involves relatively high transaction costs for building owners.**
  - **What problem are you solving?**

Hybrid Models

- **A range of potential structures**
- **Ygrene**
  - **Expected to be 3rd party administrator in launch of 2-3 programs in summer 2012**
  - **Private line of credit to aggregate assessments**
  - **Assessments sold to local investors on short term basis (2-5 yrs) as volume aggregated**
  - **Long term secondary market takeout**

Existing & Emerging Commercial PACE Programs



22 programs may be operational in next 6-12 months. 12 programs are currently operating.

Commercial PACE Projects Update

Govt. Sponsor	Amount Financed ($)	# Projects	PACE model
Sonoma County, CA	$10 M	52	Warehouse
Boulder County, CO	$1.52 M	29	Pooled Bond
California PACE	$725 K	7	Pooled Bond
Palm Desert, CA	$600 K	5	Warehouse
Placer County, CA*	$319 K*	2*	Warehouse
Edina, MN	$40 K	1	Open Market
Ann Arbor, MI	$0	0	Warehouse
Los Angeles, CA	$0	0	Open Market
Missouri-Regional	$0	0	Hybrid
River Falls, WI	Not available	Not available	Warehouse
San Francisco, CA	$0	0	Open Market
WRCOG, CA	$0	0	Hybrid
TOTAL	~$13 M-$14 M	96	

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Commercial PACE Challenges

- **High Legal and Administrative Setup Costs.** Models in the works to defray these costs.
- **Need Significant Deal Flow.** May not be appropriate for small towns and cities as scale is required to reduce costs (regional/ statewide models can help). Only **~$15 million** financed to date.
- **Mortgage Holder Consent/Acknowledgement Required.**
- **Regulatory Uncertainty.** The OCC has expressed concern about commercial PACE.

Questions?

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