



Local Development Finance Tools to Stimulate Energy Efficiency Markets

Energy Efficiency Strategy Webinar Series

MIT CoLab

Green Economic Development Initiative

June 24 2013

Agenda

- **Toby Rittner** – President & CEO,
Council of Development Finance Agencies
- **David Gabrielson** – ED, PACENow
- **Questions** – submit via Webex's Q&A box

MIT CoLab Green Economic Development Initiative

Local Development Finance Tools to Stimulate Energy Efficiency

June 24, 2013

Toby Rittner
President & CEO



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About CDFA

- National non-profit association representing the development finance industry.
- Provide education, advocacy, research, resources, and networking.
- Training Institute – Bond Finance (2), Tax Increment Finance (2), Tax Credit, Revolving Loan Fund, Innovation Finance, Energy Finance, P3 Finance, EB-5 Finance and Fundamentals of ED Finance Course.
- Advocacy – Active partner with Congress and Administration advocating for development finance concerns.
- Research – Produce annual State-By-State studies for Bond Volume Cap and Tax Increment Finance Statute changes, bond finance resource center, TIF resource center, RLF resource center, Federal Financing Clearinghouse, etc.
- Resources – Nearly 4,000 online resources through our various libraries and database.
- Networking – 330 member organizations throughout the country, 21,000 person network, - join today!



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Resources

- Over 4,000 online resources with dozens of categories and subcategories
- Designated resource centers to help break down some of the complexity

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December 6, 2012



CDFA Online Resource Database

The CDFA Online Resource Database (ORD) is the nation's only electronic resource collection dedicated exclusively to development finance.

To conduct a Search of the ORD, use the search features below. Users can conduct a basic keyword search or select various categories to narrow the search results. To search deeper within a given category, click the [+] symbol to show a list of subcategories. Many resources are available to all users while others are restricted to CDFA members only. CDFA members must login with their unique CDFA username and password to access restricted items. Non-members can join CDFA today to gain access to the entire database.

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- Rural Development [+] (select all)
- Tax Credits [+] (select all)
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Washington, DC
August 6-7, 2013

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 - Energy Finance Case Studies
 - Energy Revolving Loan Funds
 - New Clean Renewable Energy Bonds (New CREBS)
 - Property Assessed Clean Energy Bonds (PACE)
 - Qualified Energy Conservation Bonds (QECBs)
 - Renewable Energy Investment Tax Credit (ITC)
 - Renewable Energy Production Tax Credit (PTC)
 - State Energy Finance Programs
 - State Energy Tax Credits
 - Understanding Energy Finance
 - USDA Rural Energy for America Program Grants (REAP Grants)
 - USDA Rural Energy for America Program Guaranteed Loan Program (REAP Loans)
 - U.S. DOE Energy Efficiency and Conservation Block Grant (EECBG)
 - U.S. DOE Energy (DOE)\State Energy Program (SEP)
 - U.S. DOE Loan Guarantee Program

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Emerald Cities Cleveland - High Road Economic Development

[Energy Efficiency Programs](#) | [Energy Finance](#) | [Green Finance](#) | [Local Finance Program](#) | [Local Green Finance Programs](#)

Shanelle Smith with Emerald Cities Collaborative discusses the Emerald Cities Cleveland programs and financing strategies for renewable energy and energy efficiency.

Trends in Energy Development Finance Members only [Login](#)

[Bond Finance](#) | [Energy Efficiency Programs](#) | [Energy Finance](#) | [Green Finance](#) | [Understanding Energy Finance](#)
Matthew Brown from Harcourt Brown & Carey Energy and Finance gives this presentation discussing the trends in energy development finance. He discusses financial products in the post-stimulus world, credit enhancements, bundling projects, moving...

Opportunities in Energy Efficiency Financing Members only [Login](#)

[Access to Capital](#) | [Bond Finance](#) | [Energy Efficiency Programs](#) | [Energy Finance](#) | [Green Finance](#)
This presentation by David Carey of Harcourt Brown & Carey reviews emerging opportunities for funding energy efficiency from the market, commercial, and residential sectors. The presentation details the reasons for emerging opportunities and...

Ohio PACE: Responsible Solutions for Energy Transition Members only [Login](#)

[Energy Finance](#) | [Federal](#) | [Property Assessed Clean Energy Bonds \(PACE\)](#) | [U.S. Dept. of Energy \(DOE\)](#)
This presentation by Mary Cunningham and Russ Meeker of Community Reset covers Property Assessed Clean Energy programs. Specific topics include a review of the U.S. Dept. of Energy guidelines and a discussion of concerns with the PACE program.

Business Energy Investment Tax Credits (Solar) Members only [Login](#)

[Access to Capital](#) | [Energy Finance](#) | [Green Finance](#) | [Renewable Energy Investment Tax Credit \(ITC\)](#) | [Tax Credits](#)

This fact sheet from the Office of the Comptroller of the Currency provides a details on the Investment Tax Credit (ITC) program as it relates to solar energy. The sheet overviews the program and discusses how the tax credits can benefit banks.

PACE Financing in Ohio Members only [Login](#)

[Energy Finance](#) | [Property Assessed Clean Energy Bonds \(PACE\)](#)

This presentation by Bricker & Eckler covers Property Assessed Clean Energy (PACE) Financing and Ohio's Special Improvement District (SID) Law. Enabling legislation in 2009 and 2010 have made the use of these



Resource Centers

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Revolving Loan Fund Resource Center

RLF Resources

- >>> Understanding Revolving Loan Funds
- >>> RLF Lending Policies, Criteria & Conditions
- >>> RLF Marketing Examples
- >>> RLF Sample Applications
- >>> RLF Case Studies

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CDFA Original Research

How the Tool Works: Revolving Loan Funds
This CDFA "How the Tool Works" profile addresses revolving loan funds (RLFs), which use interest and...

DF Perspectives 3: Tips for Managing Your RLF Program
This article provides fund capitalization, RLF committee, program marketing, and loan servicing tips for...

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RLF Program Profiles

Featured Program

Facade Improvement Program

Managing Organization
Downtown Tucson Partnership

Capitalization Source(s)
Private, Local

Loan Terms
15 years

Loan Rates
0%

>>> RLF Programs
>>> Submit Your RLF
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Compare All States

RLF Applications

CDFA Revolving Loan Fund Resource Center
The CDFA Revolving Loan Fund Resource Center is a one-stop hub for all of the resources, reports, headlines,...

Salt Lake City Business Revolving Loan Fund Application Login
This is the complete application form for the Salt Lake City Business Revolving Loan Fund. Elements include...

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Bond Finance Resource Center

Bond Finance Resources

- >>> Understanding Bonds
- >>> Bond Volume Cap
- >>> Bond Deal Structuring
- >>> Bond Credit Enhancement
- >>> Investing Bond Proceeds
- >>> Bond Rating Agencies
- >>> Bond Swaps & Derivatives
- >>> Advance Refundings
- >>> Auction Rate Securities
- >>> Bond Arbitrage & Rebate
- >>> Bond Insurance
- >>> Bond Program Marketing Examples
- >>> Bond Banks
- >>> Federal Home Loan Bank Letter of Credit (LOC)
- >>> MSR's EMMA Muni Disclosures & Market Data

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Types of Bonds

- >>> Industrial Development Bonds (IDBs)
- >>> 501(c)(3) Bonds
- >>> Exempt Facility Bonds
- >>> TIF Bonds
- >>> Aggie Bonds
- >>> Green Bonds
- >>> New Clean Renewable Energy Bonds (New CREBs)
- >>> Property Assessed Clean Energy Bonds (PACE)
- >>> Qualified Energy Conservation Bonds (QECBs)
- >>> Qualified School Construction Bonds (QSCBs)
- >>> Qualified Zone Academy Bonds (QZABs)
- >>> Enterprise Zone Bonds

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Want more bond finance?

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The Bond Market

Interest Rate Risk Management
Key Bank | Oct. 23

Interest Rate Market Insight
Cardea Partners | Oct. 22

Municipal Bond Market Note
Janney Capital Markets | Oct. 19

Capital Markets Weekly Update
Wye River Group | Oct. 19

>>> MORE MARKET REPORTS

IRS Guidance & Resources

IRS Guidance: Qualified Energy Conservation Bonds Login
This guidance from the Internal Revenue Service provides detailed information on the use of Qualified Energy...

IRS: Your Responsibilities As A Conduit Issuer of Tax-Exempt Bonds Login
Internal Revenue Service Publication 5005 provides an overview for state and local governments of the...

>>> MORE IRS Guidance & Resources

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CDFA Federal Financing Clearinghouse

An online searchable clearinghouse of federal economic development finance programs.

CDFA's **Federal Financing Clearinghouse** is the only online resource cataloging the development finance programs offered by the federal government. The Clearinghouse includes program overviews of over 100 federal financing programs available to both public and private sector users.

This is an exclusive CDFA member benefit. Users must log-in with their unique CDFA username and password to search the Clearinghouse.

- Search By Agency
- Search By Program
- Search By Financing Category
- Search By Keyword

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504 Loan Program

Program Agency	U.S. Small Business Administration (SBA)
Financing Category	Access to Capital Community Development Urban Development
Financing Type	Direct Loan
Program Overview	<p>The Certified Development Company (CDC)/504 loan program is a long-term financing tool, designed to encourage economic development within a community. The 504 Program accomplishes this by providing small businesses with long-term, fixed-rate financing to acquire major fixed assets for expansion or modernization.</p> <p>A CDC is a private, nonprofit corporation which is set up to contribute to economic development within its community. CDCs work with SBA and private sector lenders to provide financing to small businesses, which accomplishes the goal of community economic development. Typically, a CDC/504 project includes:</p> <ul style="list-style-type: none"> A loan secured from a private sector lender with a senior lien covering up to 50 percent of the project cost; A loan secured from a CDC (backed by a 100 percent SBA-guaranteed debenture) with a junior lien covering up to 40 percent of the project cost; and A contribution from the borrower of at least 10 percent of the project cost (equity). <p>This type of setup means that 100 percent of the project cost is covered either by contribution of equity by the borrower, or the senior or junior lien.</p>
Eligible Users	To be eligible for a CDC/504 loan, businesses must be operated for profit and fall within the size standards set by the SBA. Under the 504 Program, a business qualifies as small if it does not have a tangible net worth in excess of \$7.5 million and does not have an average net income in excess of \$2.5 million after taxes for the preceding two years. Loans cannot be made to businesses engaged in speculation or investment in rental real estate.

speculation or investment in rental real estate.

Eligible Project Types	<p>504 loans must be used for fixed asset projects such as:</p> <ul style="list-style-type: none"> The purchase of land, including existing buildings; The purchase of improvements, including grading, street improvements, utilities, parking lots and landscaping; The construction of new facilities or modernizing, renovating or converting existing facilities; or The purchase of long-term machinery and equipment. <p>The 504 Program cannot be used for working capital or inventory, consolidating or repaying debt, or refinancing.</p>
Special Notes	
How to Apply	There are about 270 CDCs nationwide, each covering a specific geographic area. If you are interested in applying for a 504 loan, contact your local CDC. A list of SBA CDCs is available online.
Website & Contact Information	http://www.sba.gov/content/cdc504-loan-program

New Search

Additional Resources from CDFA's Online Resource Database:

Combining and Leveraging TIF with Other Tools

Access to Capital | Bond Case Studies | Bond Finance | Case Studies | Energy Finance | Federal | Green Bonds | Green Finance | Qualified Energy Conservation Bonds (QECBs) | Qualified Energy Conservation Bonds (QECBs) | SBA CDC 504 Loan Program | SBA CDC 504 Loan Program | State Resource | Tax Increment Finance (TIF) | TIF Case Studies | Understanding TIF | U.S. Small Business Administration (SBA)
Jim Snyder of Ice Miller LLP discusses layering TIF with other sources of financing and presents the Kone Center case study.

Chester County Economic Development Council

Access to Capital | Community Development | Community Development Corporation (CDC) | Federal | Innovation Finance | Local Finance Program | Local Green Finance Programs | Revolving Loan Funds (RLFs) | Rural Development | SBA CDC 504 Loan Program | SBA CDC 504 Loan Program | State Finance Program | State Tax Credit Programs | Tax Credits | Technology Financing | U.S. Small Business Administration (SBA)
Gary Smith of Chester County Economic Development Council reviews the organization's programs to support economic development and capital access in the region.

SBA Office of Capital Access Performance Highlights



Webcasts

CDFA-Stern Brothers & Co.
Renewable Energy Finance
Webcast Series



SternBrothers&Co.
INVESTMENT BANKING SINCE 1917

What's new in the energy financing landscape? Despite market constraints and questions about the long term viability of new technology, innovative energy deals are being done across the country. This installment of the CDFA-Stern Brothers Renewable Energy Webcast Series will bring together the leaders in energy efficiency and renewable energy financing to share best practices and deal strategies. Our expert panel will discuss a range of recently completed deals, from smaller retrofit projects to large-scale installations, and how they were successfully financed.

Julie Bennett
Executive Director
Michigan Saves

Doug Lamb
Partner
McGuire Woods LLP

August 8, 2013
@ 1:45pm

Anita Molino
President
Bostonia Partners

Les Krone, *Moderator*
Senior Vice President
Stern Brothers & Co.

Registration is FREE. Register now.



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Training



[Click Here to Register](#)

Intro Energy Finance WebCourse

December 11-12, 2013

Daily: 12-5pm (EST)

Energy development is the fastest growing area of development finance nationwide. From new production facilities and renewable energy source development to the retrofitting and renovation of existing buildings to support energy efficiency, energy finance has become a driving force in the economic development community.

CDFA's **Intro Energy Finance WebCourse** explores the wide range of tools available for financing energy projects, including bonds, tax credits, revolving loan funds, grant programs, and more. This course will cover how new energy production/generation, energy efficiency, retrofitting and support programs are used throughout the country to encourage investment in large and small projects alike.

The **Intro Energy Finance WebCourse** begins with an overview of the complex energy development industry and introduces attendees to the terminology and technology driving this movement. We'll then examine the entire spectrum of energy financing solutions from bonds to revolving loan funds and innovative incentive programs available to businesses, home owners, development professionals, investors, and government entities. This course will also explore programs and resources available through the federal government to support energy development. This course is essential for public leaders, economic development professionals, financial experts, and anyone working to address energy development challenges.



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Understanding Development Finance to Support Clean Energy Development



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What is Development Finance?

- Development finance is the efforts of local communities to support, encourage and catalyze expansion through public/private investment in physical development/redevelopment and/or business/industry.
- It is the act of contributing to a project/deal that causes that project/deal to materialize in a manner that benefits the long term health of the community.
- Development finance requires programs and solutions to challenges that the local environment creates.



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What Does DF Include?

- Debt, equity, credits, liabilities, remediation, guarantees, collateral, credit enhancement, venture/seed capital, early stage, workforce, technical assistance, planning, short-term, long-term, incentives, gap, etc.
- Proactive approaches that leverage public resources to solve the needs of business, industry, developers and investors.



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Why is DF Important?

- Businesses need working capital and the ability to invest in themselves
- Developers need assistance to achieve an acceptable ROI
- Communities need infrastructure and amenities
- Citizens need opportunities for advancement – jobs, small business, education, etc.
- Clean energy can catalyze economic development



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Trends in DF Tool Use

- 50% of finance agencies issue bonds
- 41% act as conduit bond issuers
- 50% provide direct loans
- 27% provide loan guarantees (collateral support)
- 39% provide grants
- 62% provide technical assistance



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Building the Development Finance Toolbox to Support Clean Energy



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Introducing the Toolbox Approach

- The Toolbox Approach is a full scale effort to building local and regional financing capacity to serve and impact a variety of business and industry needs.
- This is an investment in programs and resources that harness the full spectrum of a community's financial resources and is a dedication to public/private partnerships.
- For commercial energy efficiency and retrofit programs, the toolbox approach can have a major impact.



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Why the Toolbox Approach?

- Wide variety of programs already exist to help with both general and targeted financing needs (yet we continue to seek new programs and struggle to gain access to scarce sources of funding)
- One size does not fit all and there are different instruments for different users
- Markets also vary and certain technologies, industries and targeted audiences can be supported with a prescribed energy finance policy



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The Toolbox and Financing Spectrum

5 Practice Areas

Practice Area 1: Bedrock Tools

- Bonds and the Basics of Public Finance

Practice Area 2: Targeted Tools

- Tax Increment Finance, Special Assessment Districts, Government Districts and Project Specific District Financing



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The Toolbox and Financing Spectrum

Practice Area 3: Investment Tools

- Tax Credits, Seed & Venture Capital and Angel Funds

Practice Area 4: Access to Capital Lending Tools

- Revolving Loan Funds, Mezzanine Funds, Loan Guarantees and Microenterprise Finance

Practice Area 5: Support Tools

- Federal Funding and Abatements



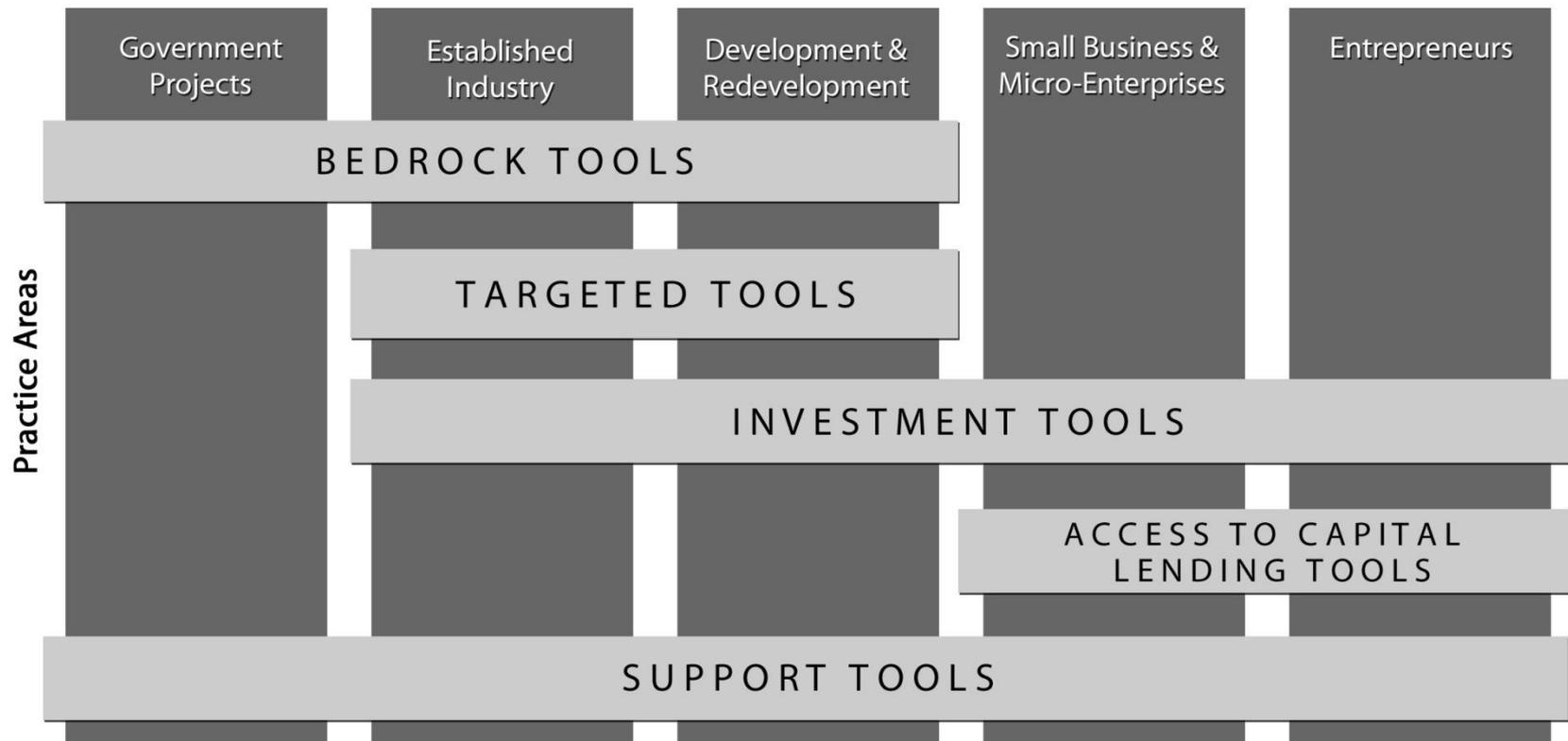
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Development Finance Spectrum



Development Finance SPECTRUM

Types of Financings



From the *Practitioner's Guide to Economic Development Finance*

How Does this Relate to Energy Policy?

- Traditional infrastructure (roads, bridges, sewer, water, etc.) are all financed using traditional financing tools (TIF, bonds, tax credits, loan funds, etc.).
- Why is energy treated differently?

Any answers?

- CDFFA believes it should be treated the same and has worked for the past two years to promote this logic.



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Approaching Energy Finance

1. Think traditionally & assess what is in your financing toolbox
2. Can these tools work on energy deals?
 - Tax Increment Finance – Yes
 - Tax-exempt bonds – Yes
 - Tax credits – Yes
 - Revolving loan funds – Yes
 - Special assessment – Yes
 - Public-private partnership finance – Yes
 - Loan guarantees & collateral support – Yes
 - Credit enhancement – Yes
 - Early stage capital – Yes
 - Microfinance – Yes



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Approaching Energy Finance

3. Use traditional site assessment tools to know your commercial property and potential for EE/RE upgrades
4. Champion a cause – district, strip, single manufacturer, office complex, city facilities, etc.
5. Pilot a project or program and measure all performance
 - jobs, investment, energy savings, returns, market development, secondary impact, media attention, spin-off growth, etc.



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How to get started

- Find partners – legal, energy, advisory, contractors, etc.
- Assess your property and the potential for deal flow – don't set up a program for one commercial strip, make them have an impact
- Find the right investors – may be outside of your community
- Funding – lots of support in this field for getting started – grants, federal, state, private, etc.
- Staffing – need to scale-up if you want to do work in-house, otherwise, outsource to partners



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Promising Energy Finance Models Emerging in US



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Bond Finance

- Host of models emerging nationwide that suggest that energy development is being treated more and more as traditional infrastructure
- Morris Model – public-private partnership (P3) EE/RE financing structure with wide applicability.
- Bond Backed Investment Authorities – bond banks basically that issue large issuances and then loan out to worthy EE/RD projects, can be commercial, municipal, residential potentially



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Bond Finance cont.

- Solid Waste Bonds – traditional tax-exempt bonds being used to finance solid waste to energy conversion, think of the south and the wood remnant industry
- Industrial Development Bonds – small issue bonds for manufacturers to install renewable energy facilities onsite
- Qualified Energy Conservation Bonds (QECBs) – considerable unused allocation of direct pays subsidy bonds nationally for energy projects but lots of politics involved



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Special Assessment Financing

- Property Assessed Clean Energy (PACE) – wide array of models emerging with CA and OH leading the pack
- Energy Special Improvement Districts – PACE-like model but large energy districts with multiple communities all buying into system
- Tax increment finance combined with assessment is making traditional real estate deals more achievable. Mix in energy efficiency and the deal can be even better.



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Credit Enhancements

- Host of structures emerging nationwide to help strengthen deals and improve credit ratings
- New York – EPA water revolving funds used as a credit backstop for issuance of bonds to support large EE loan portfolio
- California – state resources going towards credit enhancement on bonds issued for commercial EE
- Ohio – Toledo EE/RE retrofit program using credit enhancement of bond portfolio to scale up



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Revolving Loan Funds

- Host of RLF programs nationwide for supporting EE/RE projects. Notably:
 - Toledo, OH EE/RE Loan Fund
 - Clean Energy Works Portland, OR
 - Missouri's Energy's Revolving Loan Fund
 - Arkansas' Industrial Energy Technology Loan Program
 - Pennsylvania's Keystone Home Energy Loan Program (Keystone HELP)
 - Delaware Economic Development Authority Renewable Energy Facilities Revolving Loan Fund
- Literally hundreds of programs exist in this space



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Local Development Finance Tools to Stimulate Energy Efficiency

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PACE PROPERTY ASSESSED CLEAN ENERGY

MIT CoLab
Green Economic Development Initiative

24 June 2013 Webinar

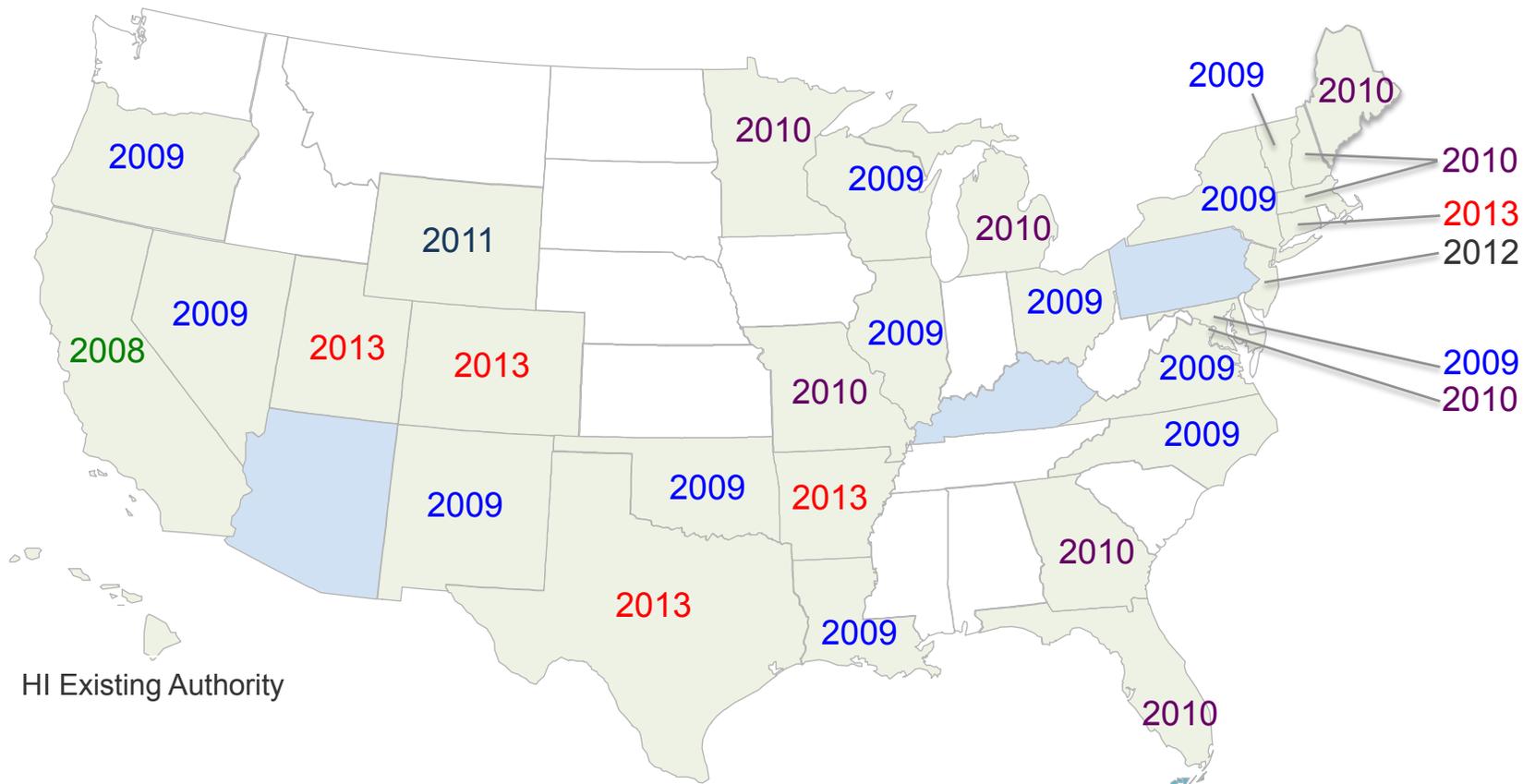
OLD CONCEPT



PHILADELPHIA OPT-IN FIRE DISTRICT
7 DECEMBER 1736

NEW APPLICATION

Today – 30 states and DC account for nearly 80% of US population

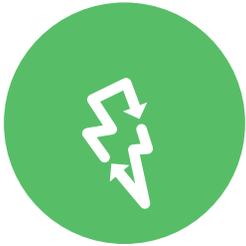


- PACE enabled
- 2013 legislative initiatives or planning to establish PACE legislation

How PACE WORKS



Local government creates PACE benefit district



Building owners choose cost saving projects

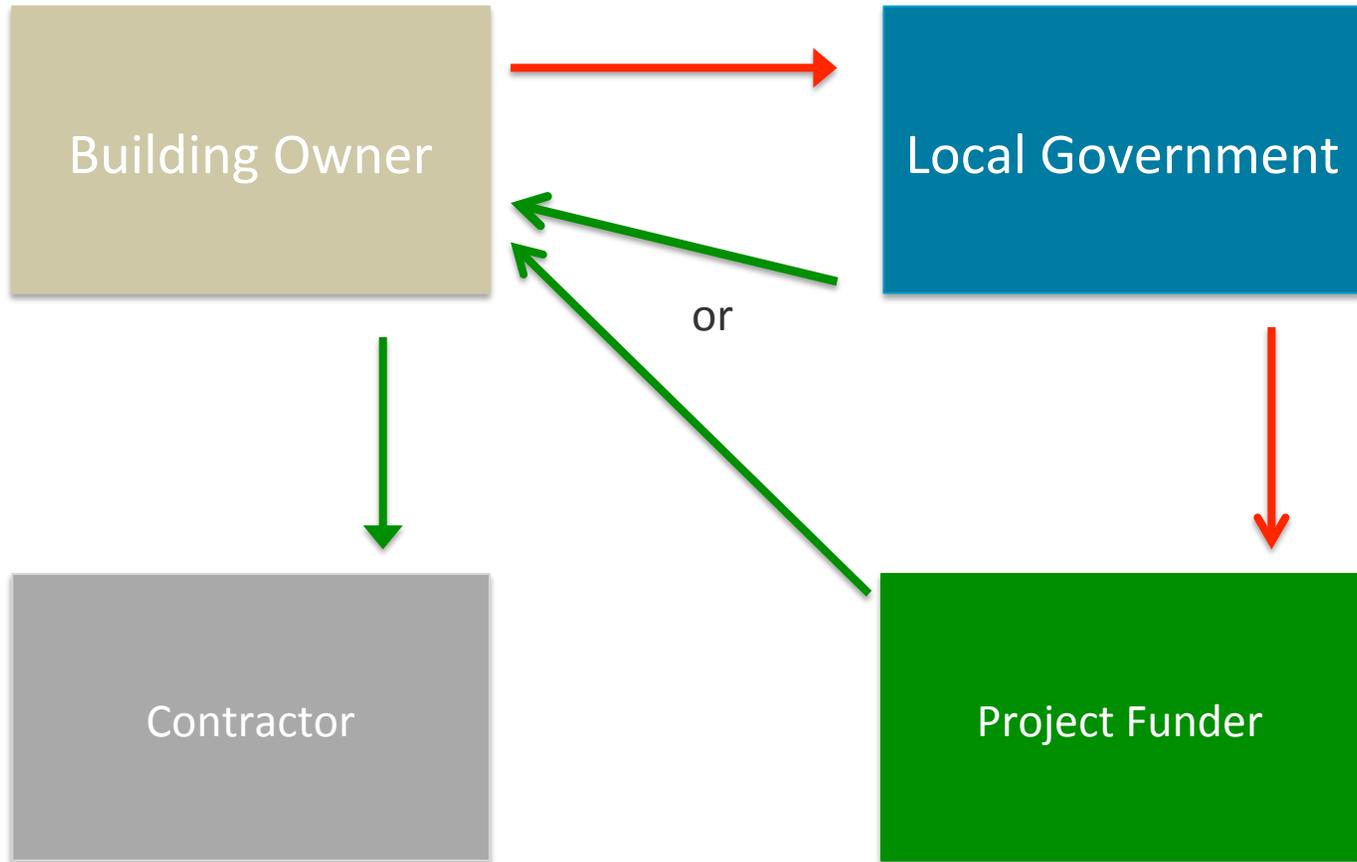


Local government arranges financing – adds PACE assessment to property tax roll



Building owner pays PACE assessment with other property taxes

PACE – SIMPLE CASH FLOWS



WHO & WHAT?

Who Can Use PACE?

- Large or small commercial
- Industrial
- Multi-family housing (5+)
- Agricultural
- Not-for-profits
- Government facilities

What Types of Projects?

- Projects that demonstrate savings
- Permanently affixed
 - ✓ Lighting fixtures & controls
 - ✓ HVAC upgrades
 - ✓ Roofing
 - ✓ Envelope upgrades
 - ✓ Elevator modernization
 - ✓ Solar PV or fuel cells
 - PACE PPA

WHY PACE?

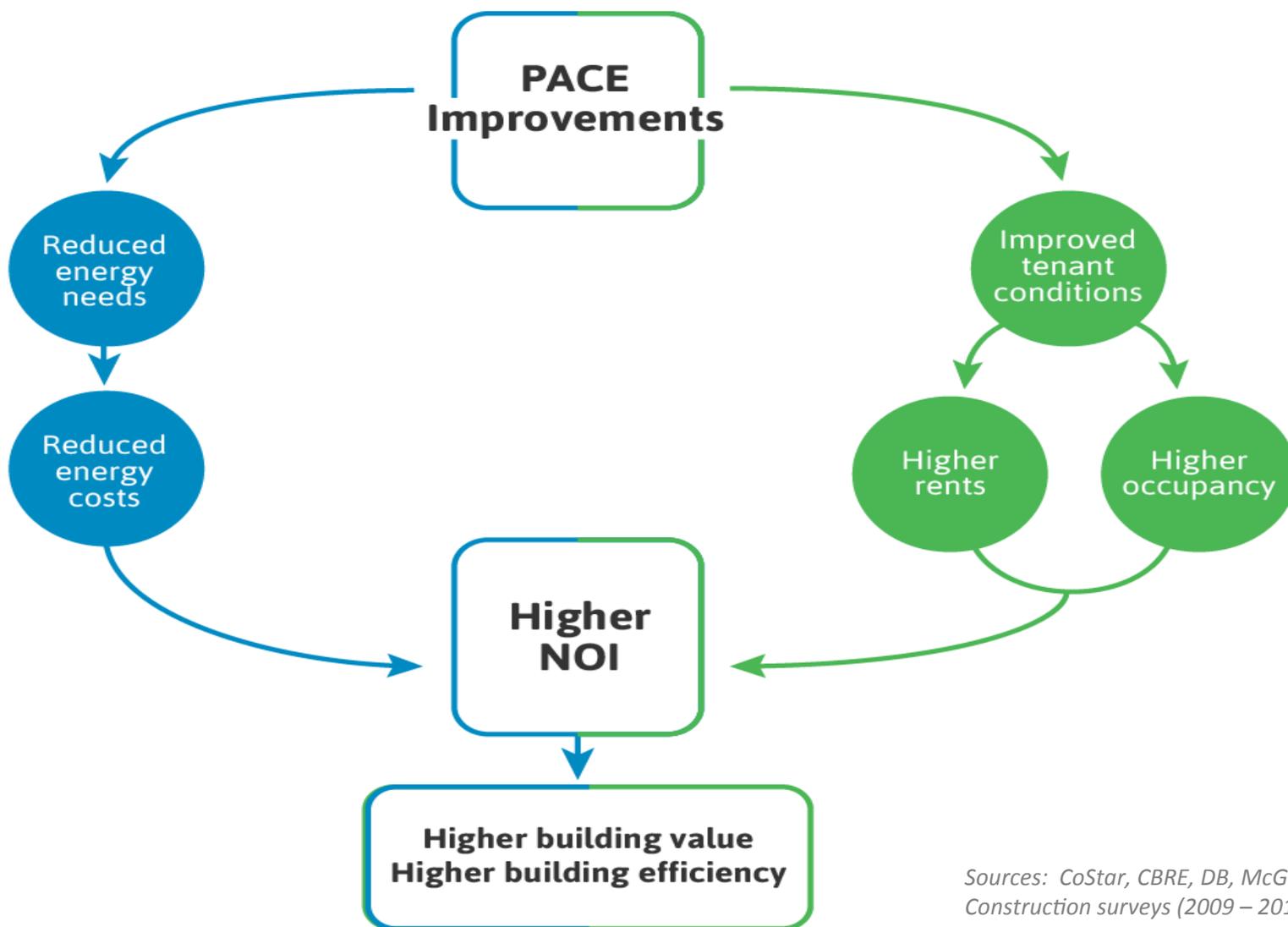
Barriers to EE Upgrades

1. Lack of funds
2. No lenders
3. Poor ROI – Short term funding
4. Might sell property
5. Split incentives
6. Information gaps

PACE Solutions

1. 100% external source
2. Unlimited private capital
3. Positive cash flow – Long term funding
4. Transfers to new owner
5. Tenants share cost & savings
6. Local awareness

ENERGY EFFICIENCY MAKES SENSE



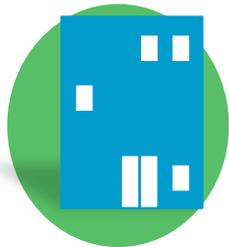
Sources: CoStar, CBRE, DB, McGraw Hill Construction surveys (2009 – 2012)

PACE PROJECT EXAMPLE

\$1,500,000 add to Building Value (8.9%)

Estimated Project cost \$550,000

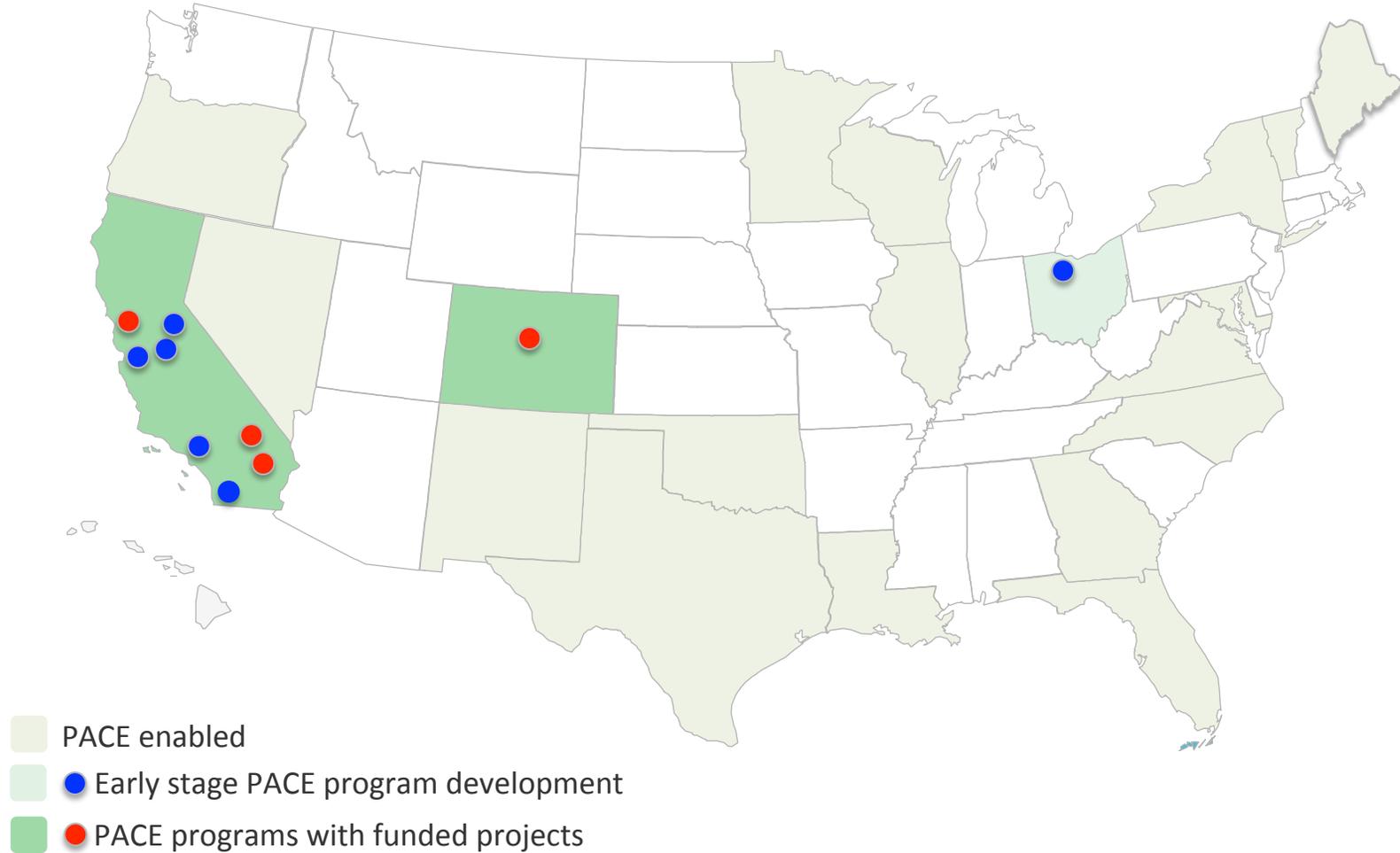
30 Year Old,
200,000 ft²
office
building in
Washington
, D.C



2000 Main Street Property	Before PACE	After PACE
Revenue		
Rental Income	2,735,000	2,735,000
Expense Reimbursement (PACE)		50,000
Total Revenue	2,735,000	2,785,000
Expenses		
Property Taxes & Assessments	515,000	515,000
PACE Assessment		50,000
Energy Costs	330,000	225,000
Other Expenses	705,000	705,000
Total Expenses	1,550,000	1,495,000
Net Operating Income (NOI)	1,185,000	1,240,000
Building Value (7% Cap Rate)	16,930,000	18,430,000

JUNE 2010

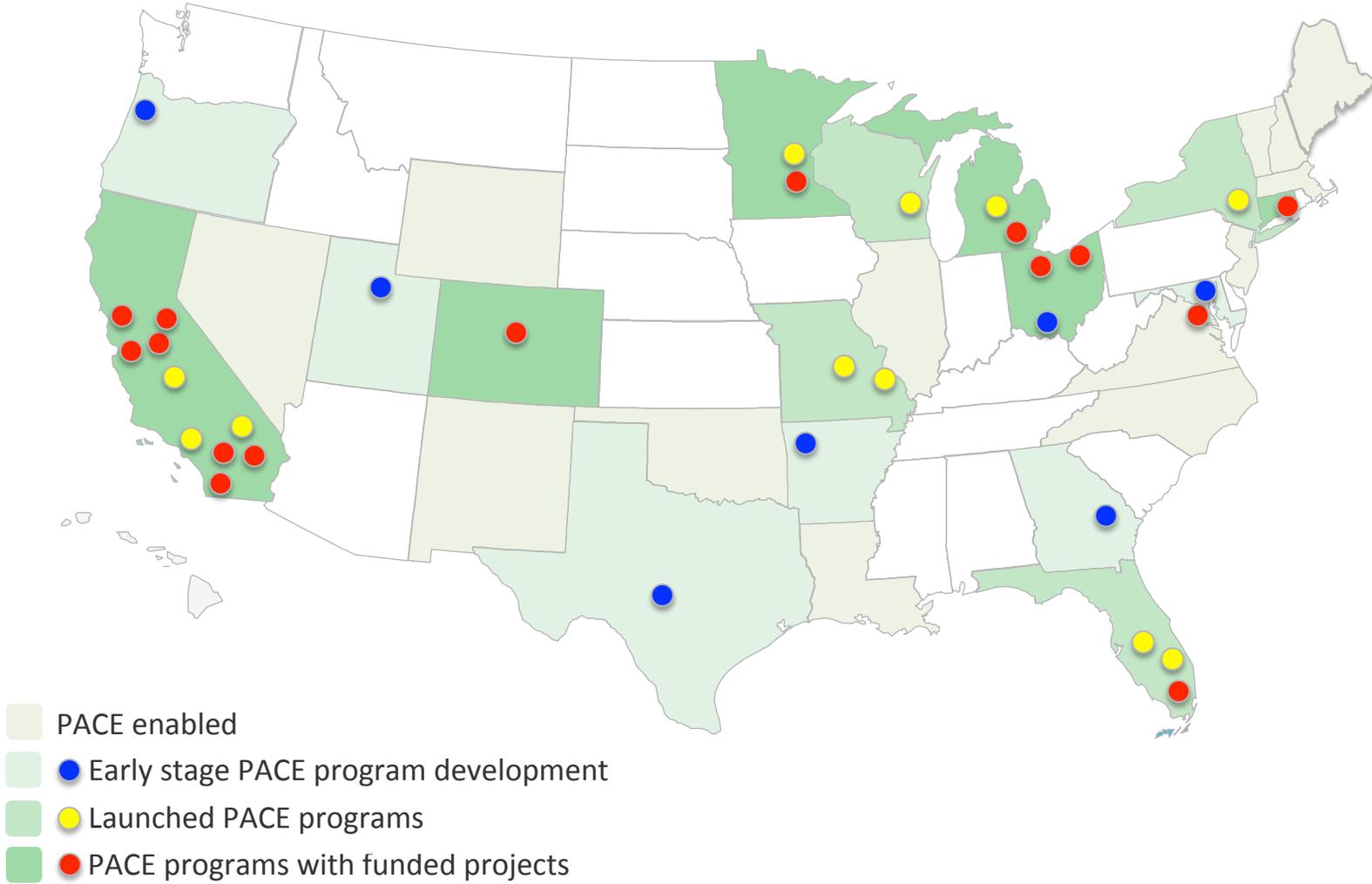
27 Projects completed - \$5 million



TODAY

168 Projects completed - \$33 million

145 Pipeline Projects - \$71 million



COMMERCIAL PACE CLOSE-UP

Commercial, Industrial, Multi-Family, Agricultural, Non-profit PACE					
Program Name	Lead Organization	Coverage		#	\$
● In Development	Arkansas Advance Energy Association	Fayetteville	AR		
● CaliforniaFIRST	Renewable Funding	16 Counties	CA		
● California PACE - FigTree	FIGTREE Energy	18 Counties	CA	6	735,745
● Clean Energy Sacramento	Ygrene Energy Fund	Sacramento	CA	1	513,000
● Energy Independence	City	Palm Desert	CA	6	600,000
● Energy Independence	City	Yucaipa	CA	1	20,252
● Energy Upgrade LA PACE	Sustento Group	Los Angeles County	CA		
● GreenFinanceSF	City / Renewable Funding	San Francisco	CA	1	1,400,000
● HERO Program	Samas Capital	2 Counties	CA		
● mPower Placer	County	Placer County	CA	5	742,000
● SCEIP	County	Sonoma County	CA	58	11,000,000
● Climate Smart	County	Boulder County	CO	29	1,520,000
● C-PACE	Clean Energy Finance & Investment Authority	Any municipality in CT	CT	1	185,000
● Green Energy DC	Urban Atlantic Advisors	Washington, D.C.	DC	1	290,000
● FL Green Energy Works	EcoCity Partners	Any municipality in FL	FL		
● FL PACE Funding Agency	SAIC, Bryant Miller & Olive	Any municipality in FL	FL		
● Green Corridor District	Ygrene Energy Fund	Any municipality in FL	FL	2	210,000
● Clean Energy Atlanta	Ygrene Energy Fund	Atlanta	GA		
● In Development	County	Montgomery County	MD		
● Ann Arbor PACE	Clean Energy Coalition	Ann Arbor	MI	5	565,000
● Lean & Green Michigan	Lean & Green Michigan	Any municipality in MI	MI		
● Edina Emerald Energy	Eutectics Consulting	Edina	MN	2	95,000
● Minnesota PACE	Eutectics Consulting	Any municipality in MN	MN		
● MO Clean Energy Distrit	Missouri Clean Energy Funding	Any municipality in MO	MO		
● Set the PACE St. Louis	Energy Equity Funding	St Louis	MO		
● Energize NY	Energy Independence Corporation	Any municipality ex NYC	NY		
● In Development	Greater Cincinnati Energy Alliance	Cincinnati	OH		
● Lake County PACE	Lake County Port Authority	County District	OH	1	3,375,000
● Toledo Municipal PACE	Toledo-Lucas Port Authority	County District	OH	49	12,000,000
● In Development	County	Multnomah County (Portland)	OR		
● In Development	Utah Clean Energy	Utah	UT		
● In Development	Keeping PACE in Texas	Texas	TX		
● Me2 Milwaukee	WECC	Milwaukee	WI		
All totals provided by program administrators			Total Buildings Upgraded:	168	\$33,250,997
			Reported Applications for Funding:	141	\$70,589,000

SIMON PROPERTY GROUP – SANTA ROSA, CA



Simon used PACE to finance a \$463 thousand cool roof project at its Santa Rosa Plaza Mall in Sonoma County, CA

“It is our hope that we will serve as pioneers in this arena, encouraging others to explore the many ways to reduce energy use now, rather than delaying sound financial and environmental decisions.”

George Caraghiaur, SVP Energy and Procurement at Simon Property Group

GRANDVIEW TIRE & AUTO – EDINA, MN



Family owned Grandview Tire & Auto used PACE to finance solar panels on its roof. The PACE portion of the project was \$34,000 and Edina's program cost the city just \$12,000 to implement.

“PACE preserves capital, makes good financial sense for property owners due to the fact that the assessment stays with the property. Most importantly, it is the right thing to do.”

Brad Hansen, Blue Horizon Energy

PROLOGIS, INC. – SAN FRANCISCO, CA



Prologis used PACE to finance a \$1.4 million energy efficiency and solar energy project at its San Francisco headquarters

“Prologis is optimistic about the future of PACE,. There are a number of opportunities over a long term in other property sectors too.”

Aaron Binkley, Director of Sustainability Programs

KEY ISSUES: PROGRAM DESIGN & ADMINISTRATION

A Range of Models

1. Sole Municipality
 - ✓ Edina (MN), San Francisco (CA), Ann Arbor (MI)
2. Multiple Municipalities can create economies of scale
 - ✓ Connecticut Model – State Authority
 - ✓ Counties
 - ✓ Consortia
 - California
 - Florida

KEY ISSUES: PROGRAM DESIGN

More is better

1. Support from elected and other community leaders
2. Administration – more people do more things
3. Marketing effort
 - ✓ Segmentation – identifying early adopters
 - ✓ Contractors – PACE helps them make their sale
 - ✓ Natural allies – economic development and sustainability groups
 - ✓ R/E and business organizations – help spread the word
 - ✓ Materials – print, online, and other media
 - ✓ Challenges – create competitive environment

KEY ISSUES: FUNDING PROJECTS

PACE is a strong credit

1. Funding sources to date:

- Government (Sonoma, Connecticut)
- Private Placement Bond issues (Toledo, Ann Arbor)
- Private investment pools (Sonoma, SF)
- Banks
- Turn-key (Sacramento, Florida)

2. Interest rates thus far - \$30 million market:

- 4% (subsidized) - 7% (lack of liquidity)
 - ✓ 4.75% 10 year bond in Ann Arbor

3. PACE financing at scale:

- 3.5 to 5.5% - AA / AAA rated bonds

SUMMARY

PACENow

- National, impartial, fact based advocate for PACE (and EE/RE)
- Foundation supported
 - Energy Foundation
 - Rockefeller Brothers Fund
 - Kresge Foundation
 - Tilia Fund
- Non-profit corporation w 501c3 status
 - Board members:
 - George Caraghiaur, SVP, Energy at Simon Property Group
 - Cisco DeVries, CEO, Renewable Funding
 - Beau Engman, VP, Johnson Controls
 - David Gabrielson, ED, PACENow
 - Ashok Gupta, Economist, Natural Resources Defense Council
 - Angela Sung Pinsky, VP, Real Estate Board of NY
 - Jigar Shah, former CEO, Carbon War Room
 - Jeff Tannenbaum, President, Fir Tree Partners

PACENow

- Staff backgrounds in government, municipal finance, corporate lending, public policy
 - David Gabrielson, Executive Director
 - david@pacenow.org
 - Natalie Trojan, Senior Director
 - Kristina Klimovich, Associate
- Provide information, resources, networking services and solutions to challenges
 - Support for legislative efforts and program design
 - Outreach to commercial real estate organizations and companies
 - Outreach to existing lenders
 - Development of financing solutions