

ENERGY EFFICIENCY FINANCE SEMINAR



**SAVE ENERGY,
SAVE MONEY,
MAKE MONEY.**

**INVEST IN
EFFICIENCY.**

**January 14, 2016
8:30 am — 5 pm**

**Alaska Pacific University
Carr-Gottstein Lecture Hall**

Energy Efficiency Financing: Programs & Money & Tools, Oh My!

**Toby Rittner, DFCP
President & CEO
January 14, 2016**

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About CDFA & Finance 101



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About CDFA

- 34 year old non-profit association of development finance agencies and private sector partners (450 members)
- Education – 16 training course (2 more coming in 2016)
- Advocacy – federal legislative agenda focused on improving bonds, sustaining energy finance momentum, supporting small business finance
- Research – volume cap, TIF state by state, impact investing, financing models and thought leadership
- Resources – 8,000 online resources, 10 targeted newsletters, 4 federal partnerships (EPA, DOE, USDA, SBA)
- Networking – 35,000 industry professionals, 17 state roundtables, dozen topic specific newsgroups
- Headquartered in Columbus, OH – 16 FTE, 5 PTE



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Fundamentals of Economic Development Finance WebCourse



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Development Finance Review

This Week's Headlines

Q&A: Center for Rural Affairs

UC Food Observer | Jan. 14 | [Rural Development](#)

White House Nominates Republican to Export-Import Board

The Wall Street Journal | Jan. 13 | [Export Import Bank of the United States \(Ex-Im Bank\)](#) | [Federal](#) | [Legislative](#)

CT Senator Gets a Tour of Shelton Redevelopment

Valley Independent Sentinel | Jan. 13 | [Brownfield Financing](#)

Renewable Energy Tax Credits News Brief

Novogradac | Jan. 12 | [Energy Finance](#) | [Green Finance](#) | [State Finance Program](#) | [Tax Credits](#)

State Roundtables

Arizona	Georgia	Oregon
California	Illinois	Pennsylvania
Colorado	Kentucky	S. Carolina
Florida	Michigan	Texas
	Missouri	Washington
	NY/NJ	Wisconsin
	Ohio	



CDFA State

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.

Leverage – Language – Credit



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Landscape of Tools – 100s of Them

Tax-Exempt
Bonds

Microlending
New Markets
Tax Credits

Tax Increment
Finance

504 Loans

Linked Deposit
Programs

Grants

LIHTC

Impact
Investing

CRA
Requirements

Collateral
Support

Revolving
Loan Funds

EB-5

Industrial
Development
Bonds

PACE

Seed &
Venture
Capital

Special
Assessment

501(c)3 Bonds

BIDs/SIDs

Historic Tax
Credits

Tax
Abatement

Credit
Enhancement

Mezzanine
Funds



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EE Finance Growth & Emerging Mechanisms



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EE Finance Growth – 10 Years Ago

- Unsupported credit market – no debt market
- Technology, project and developer risks too high
- Very few lending and access to capital tools
- No state green banks or publically supported programming
- Little private sector financing interest
- Misaligned federal programming
- Little motivation within residential and commercial sectors



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EE Finance Growth – Today

- Strongly supported credit market – perhaps the strongest
- Dozens of state and local “green bank” models emerging
- Implementation of numerous programming models
- Shift from equity risk based financing to debt risk financing
- Tool emergence is diverse – bonds, district based, loans, credit enhancement, guarantees, securitization, etc.
- Major policy shifts by federal, state and local govt. resulting in keen interest in both residential and commercial energy investment



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Emerging Mechanisms

- **Bond Financing** – Toledo bond/loan program, tax-exempt bond Morris Model, Hawaii GEMS bond securitization, district EIDs
- **Lending** – St. Lucie Florida EE/RE home and commercial loan fund capitalized by federal grant and now three CRA investments, CA HUB program, Cincinnati home EE loan program, etc.
- **Secondary Market Purchases of Loan Funds** – New York through EPA SRF credit enhancement, Pennsylvania sell off of portfolio
- **Property Assessed Clean Energy (PACE)** – Over 35 states now authorize, commercial focus, residential still happening
- **On-Bill Financing** – many private sector models emerging



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Key Components Supporting EE Finance & Energy Investment Partnerships (EIPs)



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Key Components

- Understand technology and treat these types of investments as normal infrastructure. Less focus on environmental justice. More on financial returns.
- Invest in programs that attract private sector interest by reducing risk exposure – credit enhancement, guarantees, collateral support, loan loss reserve, tax assessment, etc.
- Quantify the outcomes – savings, assessments, values, etc.,
- Keep it simple – PPAs, dispersed risk, solve for the gap – not the entire project, etc.
- Leverage – small dollars to leverage big dollars



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Energy Investment Partnerships (EIPs)

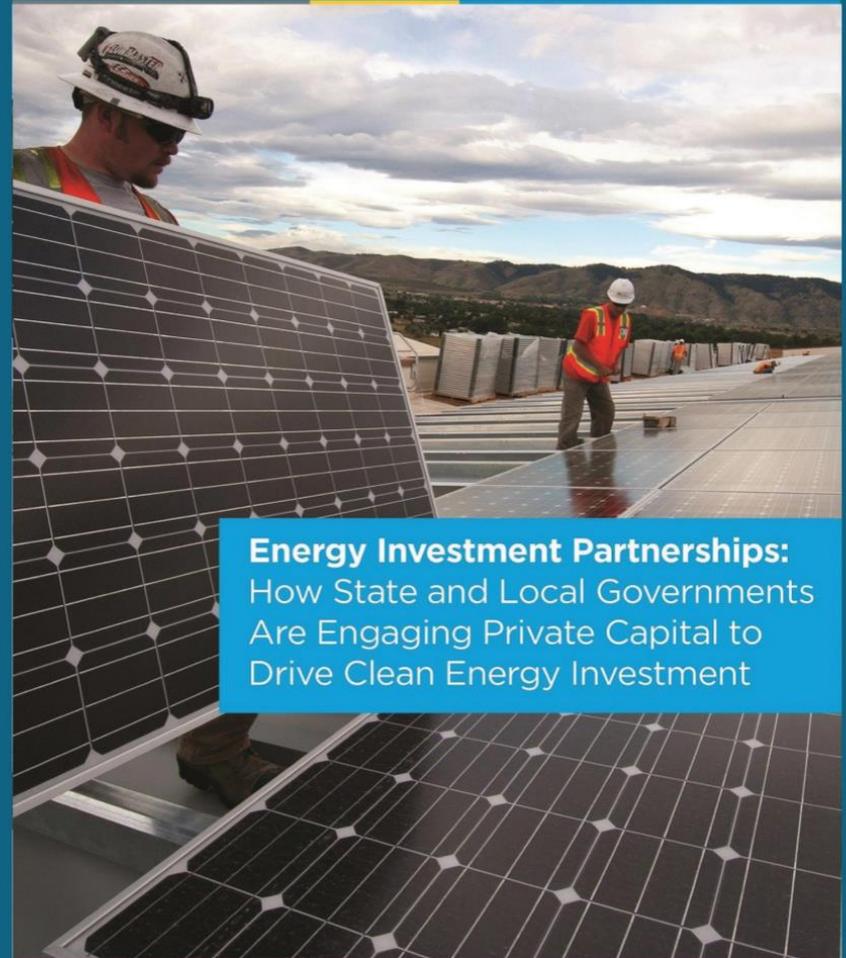
- Catalyzed by the U.S. DOE and CDFIA over a three year period.
- Concept – use existing financing structures, mechanisms, authorities, institutions and resources to financially support energy finance.
- Instead of creating “new” entities, use existing infrastructure of existing development finance agencies to achieve energy finance goals
- Treat energy finance like any other asset or infrastructure – roads, water, transit, public facilities, etc.



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EIP Guide Released – Dec 2015

- Series of 4 free webinars coming in 2016 to highlight eight case study examples of agencies and programs utilizing the EIP approach
- Publication is free online at www.cdfa.net
- Keyword Search: EIP



Energy Investment Partnerships:
How State and Local Governments
Are Engaging Private Capital to
Drive Clean Energy Investment

December 2015

1.1. Summary Table of Energy Investment Partnerships and Programs

State	Entity	Programs (in report)	Legal Structure	Capitalization	Market Sectors
CA	CA Alternative Energy & Advanced Transportation Financing Authority	PACE Loss Reserve; CA Hub for Energy Efficiency Financing	State agency	State allocation + CA Public Utility Commission allocation	Residential & commercial; efficiency & renewables
CA	CA Infrastructure and Economic Development Bank	CA Lending for Energy and Environmental Needs Center	State agency	Self-capitalized	State and local govt.; efficiency, renewable, water conservation, & distribution
CT	CT Green Bank	CT Solar Lease; Energize Connecticut Smart E-Loan; Commercial PACE; CT Solar Loan	State agency	Systems Benefits Charge + Regional Greenhouse Gas Initiative funds + U.S. Dept. of Energy grant + private investments + fees	Residential & commercial; efficiency & renewables
FL	Solar & Energy Loan Fund	Clean Energy Loan Fund	Nonprofit, CDFI	U.S. Dept. of Energy grant + private investments	Residential & commercial; efficiency & renewables
HI	Hawaii Green Infrastructure Authority	Green Energy Market Securitization	State agency	Bonds + utility fees	Resident & commercial; efficiency & renewables
NJ	NJ Board of Public Utilities	NJ Clean Energy	State agency	Self-capitalized	Residential & commercial; efficiency & renewables
	NJ Energy Resilience Bank	Wastewater and Water Treatment Plant Funding	State agency	U.S. Dept. of Housing & Urban Development grant	Utilities; renewables
NY	NY State Energy Research & Development Authority	Green Jobs – Green NY	State agency	Systems Benefits Charge + Regional Greenhouse Gas Initiative funds + U.S. Dept. of Energy grant + Qualified Energy Conservation Bonds	Residential & commercial; efficiency
	NY Green Bank	Clean energy financial products and advisory services	Division of a state agency, NYSERDA	Allocation of uncommitted Efficiency & Renewable Portfolio Standard & System Benefits Charge funds	Residential & commercial; efficiency & renewables
OH	Toledo-Lucas County Port Authority	BetterBuildings Northwest OH	Local agency	Fees + U.S. Dept. of Energy grant + tax levy	Residential & commercial; efficiency & renewables
	Greater Cincinnati Energy Alliance	Greater Cincinnati Home Energy Loan; Building Communities Loan	Nonprofit	U.S. Dept. of Energy grant + private impact investment + fees	Residential & nonprofit; efficiency & renewables
	Port of Greater Cincinnati Development Authority	Greater Cincinnati PACE	Local agency	Fees + county & city allocation	Commercial; efficiency & renewables
OR	Energy Trust of OR	General efficiency incentives	Nonprofit	System Benefits Charge	Residential & commercial;

Emergence of State & Regional Focus

Connecticut – System-wide clean energy financing approach

Oregon – Targeted and effective clean energy approach

California – Bedrock financing, collaborative approach

New York – Major system-wide reboot

Florida – Maximizing local strengths approach

Ohio – Regional collaboration approach

Federal – Innovation and policy approach slowly developing





California

California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA)

- Agency reboot in 2010 with state budget allocation, fees from users, loans and bonds specific to programs.
- CAEATFA is envisioned to be self-sustaining from fees in the future.
- Direct and indirect financing for the energy development
- No regulatory function
- Qualified Energy Conservation Bonds, a state sales tax exclusion, small business lending solutions, and a PACE Bond reserve program.
- Projects Financed: Renewable energy, energy efficiency, new technologies



California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA)

- California Hub for Energy Efficiency Financing (CHEEF) is a new on-bill repayment (OBR) pilot program partnered through investor owned utilities
- Residential and Commercial Energy Efficiency and Renewable Energy
- \$65.9 million pilot program to test OBR and other IOU investment and payment methodologies
- Three residential pilot programs, all targeting low to moderate income (LMI) households
- Three commercial pilot OBR programs, small business with/without credit enhancement and lease structure





Connecticut

Clean Energy Finance and Investment Authority

CEFIA, Connecticut's Green Bank, was born from the Connecticut Clean Energy Fund (CCEF) in 2011 to expand Connecticut's direct financing programs and increase private sector investment in clean energy.

- ***Solarize Connecticut.*** Through a partnership with SmartPower, CEFIA offers a bulk solar purchasing program to individual communities. The more households sign up for solar installations, the deeper the group discounts available.
- ***Residential Solar Investment Programs:*** CEFIA offers declining performance based or upfront incentives along with a suite of financing products to make solar PV more accessible and affordable to consumers.
- ***Bridgeport Fuel Cell Project :*** CEFIA contributed \$7.35 million in financing toward the development of a 14.9 megawatt fuel cell park in the City of Bridgeport, CT – the 2nd largest fuel cell park in the world.



Clean Energy Finance and Investment Authority

- C-PACE - Commercial, industrial, and multi-family (5 or more units) property owners for energy efficiency and renewable energy
- As of January 2014, 72 towns had opted into CEFIA's C-PACE program, giving over 80 percent of the commercial and industrial properties in the state access to C-PACE financing.
- Over 200 contractors had been trained for participation in the program, and 16 capital providers had been approved. Additionally, over \$20 million in loans had been approved.
- Portfolio sold in late 2013 and bond issuance replenished fund





Florida

Solar and Energy Loan Fund (SELF) Clean Energy Loan Fund (CELF)

SELF operates the Clean Energy Loan Fund (CELF) and serves as the underwriter for St. Lucie County's Commercial PACE program.

SELF is only CDFI in Florida that targets energy investments in underserved regions.

- Borrower Profile: Residential and small commercial
- Projects Financed: Energy efficiency and renewable energy
- Financing Range: \$1,000-\$50,000, depending on the category of borrower and improvement.
- Term of financing: 8-15 years, depending on the category of borrower and improvement.
- Cost of financing: 6-9%, depending on the category of borrower and improvement.





New York, Ohio, Oregon...



Trending Throughout the US

New York Green Bank – full overhaul of clean energy investment approach, selloff of loan portfolio using US EAP revolving loan fund as collateral source.

Oregon – Clean Energy Works Oregon, most successful loan program for EE/RE in country, virtually no defaults, selloff of portfolio through CRAFT 3 CDFI happening

Ohio – two regional approaches emerged as national examples

Elsewhere – GA, IL, PACE explosion, etc.

Federal Engagement – DOE and Energy Investment Partnerships



Questions?

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