

CDFA – Stern Brothers Renewable Energy Finance Webcast Series: Pooled Bonds for Energy Projects

The Broadcast will begin at 1:00pm (EDT).

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Finance WebCourse**



September 18-19, 2012
Daily: 12-5pm (EDT)



**Advanced
Tax Increment
Finance WebCourse**



September 20-21, 2012
Daily: 12-5pm (EDT)

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



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Pooled Bonds for Energy Projects

Katie Kramer

**Director, Education & Programs
Council of Development Finance Agencies
Columbus, OH**



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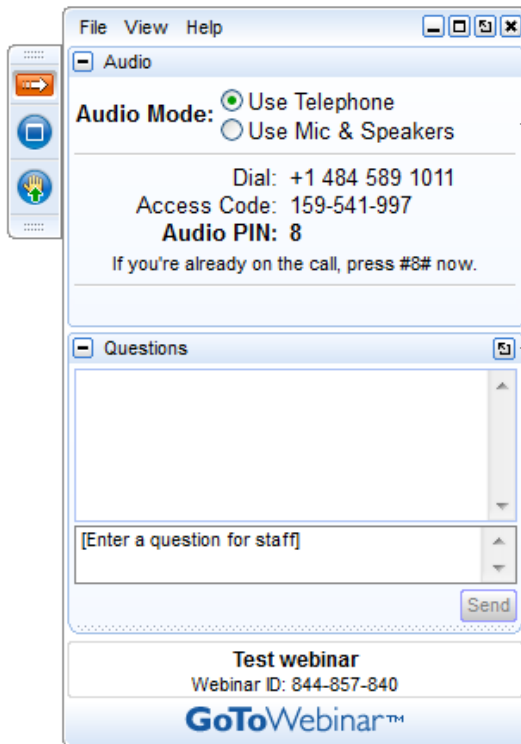


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Pooled Bonds for Energy Projects



The screenshot shows a GoToWebinar interface with two main sections. The top section is titled 'Audio' and contains the following text: 'Audio Mode: Use Telephone Use Mic & Speakers', 'Dial: +1 484 589 1011', 'Access Code: 159-541-997', 'Audio PIN: 8', and 'If you're already on the call, press #8# now.'. The bottom section is titled 'Questions' and contains a text input field with the placeholder '[Enter a question for staff]' and a 'Send' button. At the bottom of the interface, it says 'Test webinar', 'Webinar ID: 844-857-840', and the 'GoToWebinar™' logo.

Using your telephone will give you better audio quality.

Submit your questions to the panelists here.

■ ■ Want to watch again?

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Speakers

Les Krone, Moderator
Stern Brothers & Co.

Toby Rittner
CDFA

Lewis Milford
Clean Energy Group

Baird Brown
Drinker Biddle & Reath LLP

Craig Hill
Clean Fund



Innovation Finance WebCourse
May 8-9, 2012
Daily: 12-5pm (EDT)



Intro Energy Finance Course
July 31 - August 1, 2012
Washington, DC



Intro Tax Increment Finance WebCourse
September 18-19, 2012
Daily: 12-5pm (EDT)



Advanced Tax Increment Finance WebCourse
September 20-21, 2012
Daily: 12-5pm (EDT)



Intro Tax Credit Finance WebCourse
November 6-7, 2012
Daily: 12-5pm (EST)



Intro Public-Private Partnership (P3) Finance WebCourse
December 12-13, 2012
Daily: 12-5pm (EST)

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Les Krone

**Managing Director
Stern Brothers & Co.
St. Louis, MO**



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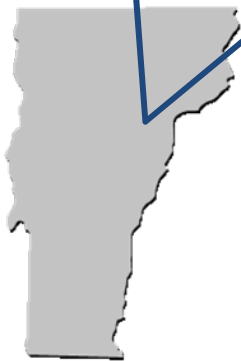
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Pooled Bonds for Energy Projects

Lewis Milford

**President
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Toby Rittner

**President & CEO
CDFA
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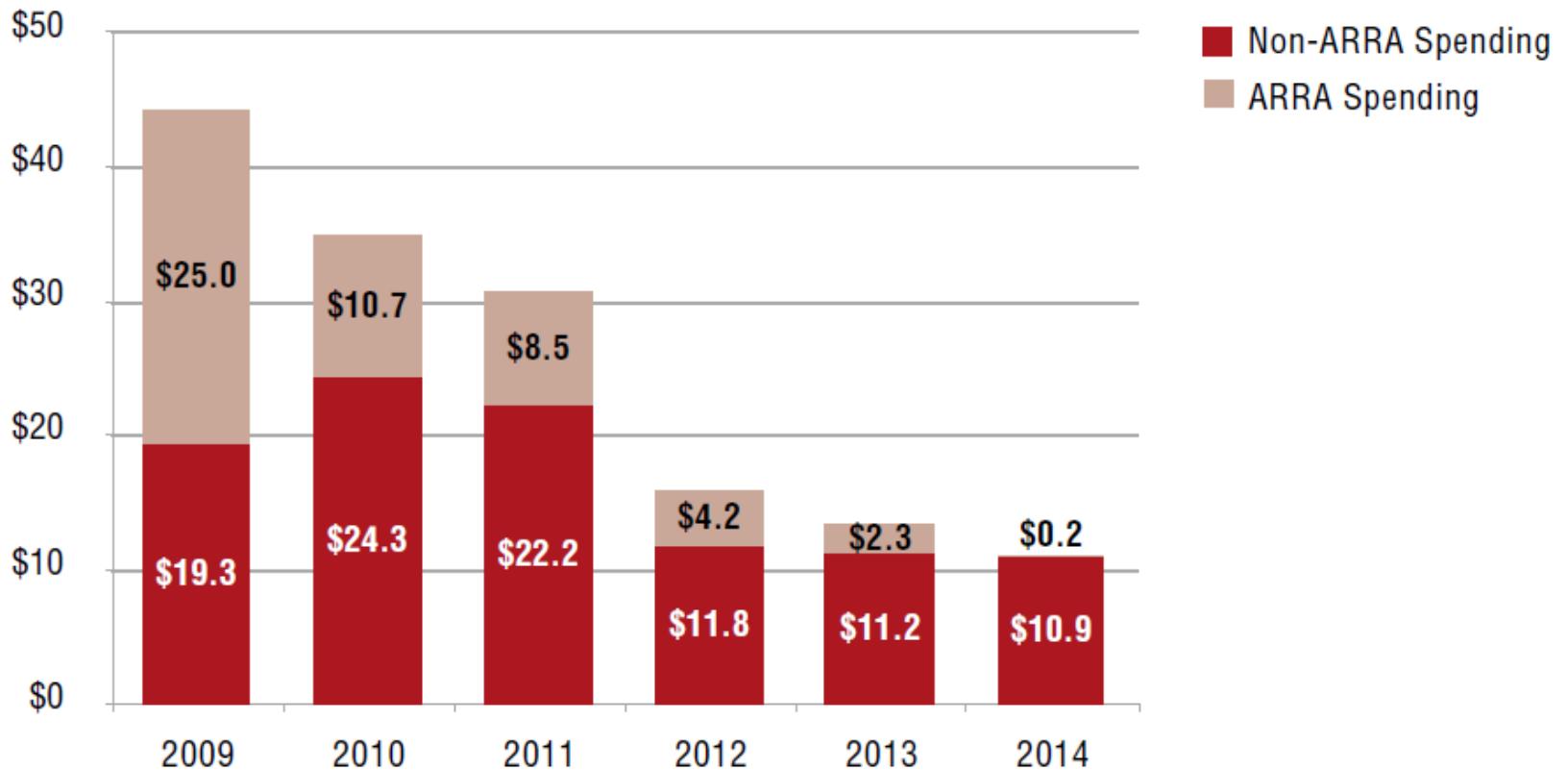
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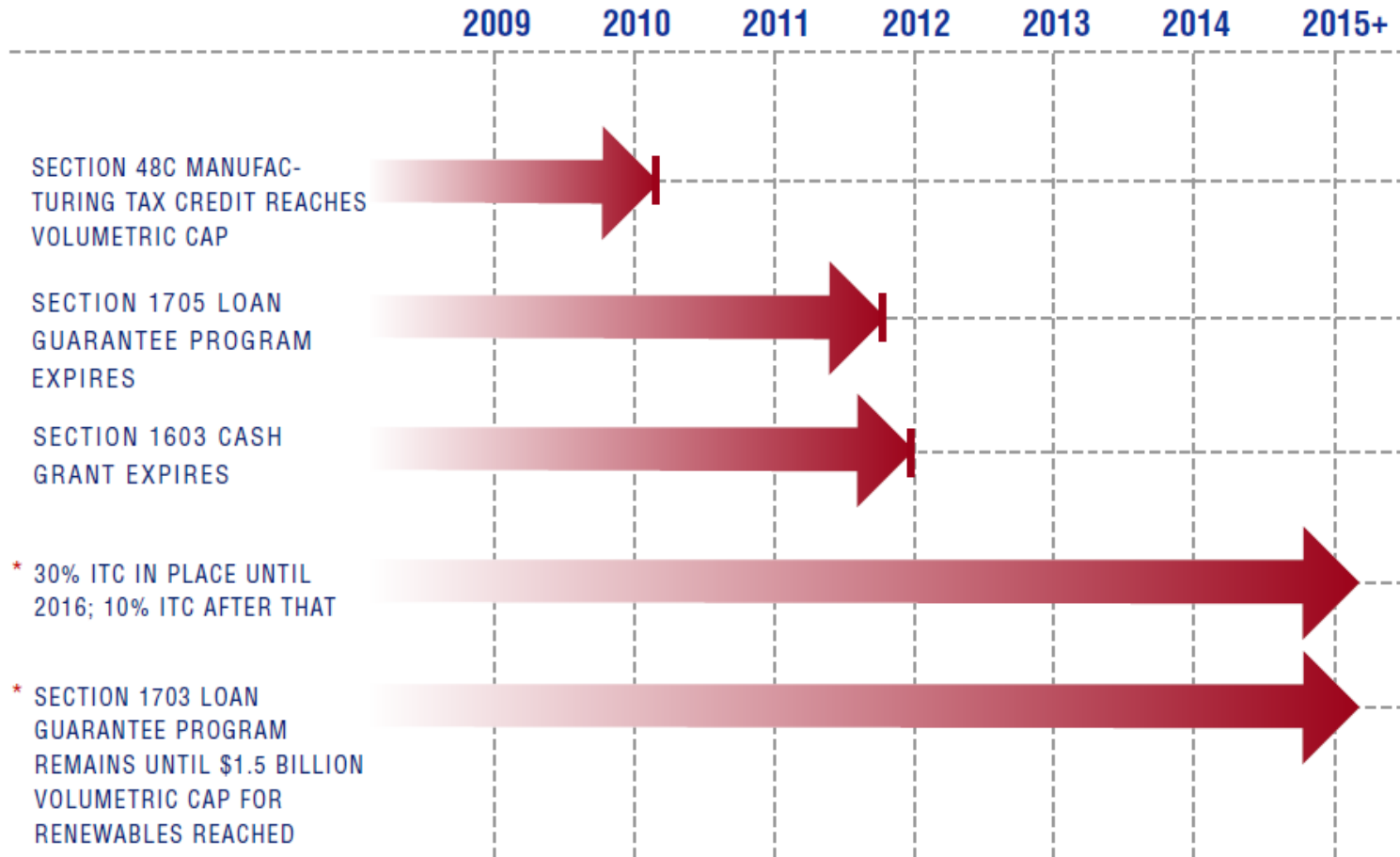
A 70% Funding Cliff Without Legislation Action

Federal ARRA and Non-ARRA Spending on Clean Tech by Year (billions)



"Beyond Boom & Bust", Breakthrough Institute, Brookings Institution and World Resources Institute. April 2012.

End of Federal Programs

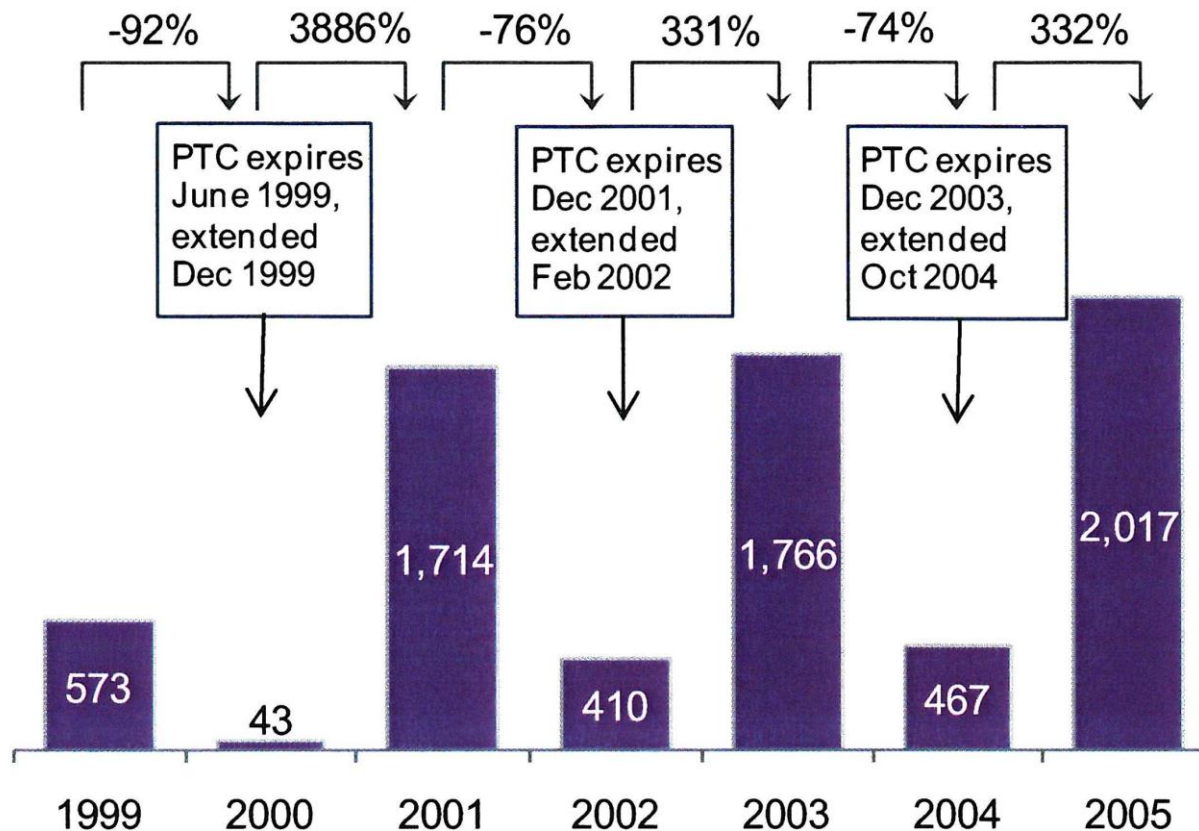


* Program expires in 2015 or later. Where applicable, volumetric cap may be reached at earlier date.

“Beyond Boom & Bust”, Breakthrough Institute, Brookings Institution and World Resources Institute. April 2012.

Boom and Bust Tax Driven Industry

U.S. Wind Project Installations, 1999-2005 (MW)



Source: Bloomberg New Energy Finance, AWEA

Bank Lending Down

- The great recession of 2008 has led to reduced bank lending in the clean energy sector, among both European and American banks.
- Many American banks refuse to lend beyond ten years, dealing a blow to infrastructure type investment in clean energy projects.
- *Result:* higher lending costs and reduced capital availability.

New Energy Finance Model

DOE' s Top Financing Expert Says:

*“Projects in the US rely upon an old fashioned and anachronistic form of financing that is different than how other parts of the US economy are financed. Rather than use bond or stock markets, projects depend on non-capital markets sources of so called tax equity, bank debt, and private equity where **rates of return can approach typical private equity rates of return of 12-15 percent.** [New strategies}... don't require going to the lab; they involve applying financing techniques that have already been invented and are used widely in other parts of the economy, but have not yet been applied to this sector.”*

Comments of Richard Kaufman, Special Adviser to Secretary Chu (July 25, 2012), in a public note to colleagues in the field.

New Sources of Capital: Debt?

Tax Exempt Bonds are the Bedrock of Public Finance

Over 50,000 state and local governments and authorities have used tax-exempt bonds to invest in three quarters of the U.S. infrastructure representing a \$3 trillion industry.

- 4 million miles of roadway
- 500,000 bridges
- 1,000 mass transit systems
- 16,000 airports
- 25,000 miles of inter-coastal waterways
- 70,000 dams
- 900,000 miles of pipe in water systems
- 15,000 waste water treatment plants

New National Partnership Explores State Bond Finance to Scale up Clean Energy Investment



Clean Energy and Bond Finance Initiative (CE+BFI): An Action Plan to Access Capital Markets

by
Lewis Milford and Rob Sanders, Clean Energy Group
Toby Rittner, Council of Development Finance Agencies¹

August 2012

CE+BFI

- **CE+BFI:** The Clean Energy Group (CEG) and the Council of Development Finance Agencies (CDFA) will announce tomorrow the *Clean Energy + Bond Finance Initiative (CE+BFI)*. The CE+BFI will work with public infrastructure finance agencies, clean energy public fund managers and institutional investors across the country to explore how to raise capital at scale for clean energy through bond financing.
- **Goal:** increasing clean energy investment from \$5 to \$20 billion in the next five years through bond financing
- **Task Force:** includes over 50 representatives from the top public and private clean energy and development finance organizations throughout the country, including DOE, states, cities, law firms, private banks, and other clean energy and bond finance industry professionals.

CE+BFI

To achieve these goals, the first priority of CE+BFI is to scale up the use of existing development finance tools for clean energy. This would not require changes in law, reliance on new policies, or creation of new institutions. It would be a matter of bringing the existing partners together to work on creating new opportunities and investments with existing bond tools.

Bond Finance Models

- Project Models
- Fund Models
- Enabling Tools

Project Based	Tools to create bond finance for specific projects or groups of projects
Morris County	Public entity issues government bonds for solar on public buildings, transfers low cost capital to developer for lower PPA price; we will explore the model and opportunities to scale-up in multiple jurisdictions for tax exempt and taxable bonds.
Tax Increment / Special Assessment	Bonds issued against tax revenue, increment or assessment, for small wind or energy efficiency (EE), usually in designated improvement districts; their expanded use will be examined.
Large Renewable Projects	Tax-exempt and taxable bonds for large wind projects (Windy Flats \$500M, 20 year PPA); or solar (Topaz \$2.4 billion); we will identify the right model(s) for public private partnerships with utilities, developers and bond issuers.
Nonprofit Finance	Use of 501(c)(3) bonds for nonprofits seeking clean energy (CE) or EE financing; we will identify common credit enhancement tools that can be applied nationally and in regions.
Suppliers / Manufacturers	Use of industrial development bonds to boost clean energy sector; example of NJEDA programs for suppliers and manufacturers; further use of these tools will be explored.
Offshore Wind	Aggregated multi-state procurement of offshore wind power, combined with bond financing of projects across jurisdictions—either with pooled bond funds (see below) or with coordinated issuers will be explored.
PACE Financing	Municipal bonds that fund EE retrofits and on-site solar PV that are repaid through an annual assessment on the property tax bill; will be one tool examined in EE.
CDFI funds	CDFIs could aggregate projects, provide companion financing and receive credit enhancement from bond-funded development finance agency programs, a new approach we will examine.
QEGB Bonds	Bonds that fund energy conservation and efficiency projects in publicly owned buildings could be significantly expanded across the country.
IFA Moral Obligation Bonds	Illinois Finance Authority can provide loan guarantees or bonds to facilitate the development of renewable energy projects, and the guarantees or bonds are second to project revenues; we will examine the efficacy of this model.

Fund Models	Bonds to create new pools of capital to finance clean energy projects
System Benefits Charge Flows	Bond financing model that uses rated credit support in the form of a contingent intercept on existing System Benefit Charges (“SBCs”) that would be tapped to compensate for defaulted loan payments; could be used in conjunction with a bond fund or a PACE program; this new model will be examined in many jurisdictions with SBC funds.
Investor-Backed Bond Fund	Model that would capitalize bond funds with investments from state and/or private funds in order to provide second- or lower- level backing for CE or EE projects; this potential model will be explored.
Pooled Bond Funds	Municipal bond issuance where proceeds are used—whether through an infrastructure bank, revolving loan fund, or other model—by a number of cities and projects in order to achieve market efficiencies for CE and EE development; we will explore both encouraging existing funds to emphasize CE and the creation of new funds.
Bond Backed Investment Authorities	General obligation bonds are used to finance authorities capable of making investments in funds, projects, and companies, all grouped around a specific purpose (e.g., Ohio Third Frontier and California Institute for Regenerative Medicine); we will explore possibility of creating similar authorities for CE investments.
Collaborative Action	In recognition of the fact that neither geographic features nor energy grids perfectly align with state boundaries, a framework for state collaboration on cross-border bond issuances for large CE projects could achieve significant savings; the legal and political challenges for such collaborations will be investigated.

Enabling Finance Tools	Explore complementary finance vehicles to boost use of bond finance
Standardization / Securitization	<p>Consider models that create liquidity for EE and CE loans by securitizing the federal or state-guaranteed portions of qualifying loans. Explore how to create a secondary market for energy-related loans as was done for small business loans through the private bundling and sale of SBA 7(a) guaranteed loans, which are underwritten, originated and serviced by non-government lenders using standardized SBA loan documents.</p>
Tax Equity Pool	<p>To access larger tax equity investors for renewable investment, and to go beyond the one-off syndication of such deals, consider creation of a tax equity fund model for CE, similar to the LIHTC investment funds that pool tax equity investment and facilitate affordable housing development; we will explore such pools as a means of expanding the availability of CE project capital sources that can be combined with bond finance.</p>
CE Credit Enhancements	<p>Work with state clean energy funding agencies to leverage state CE funds by their provision of credit enhancement for bond issuances that raise capital for qualified projects.</p>

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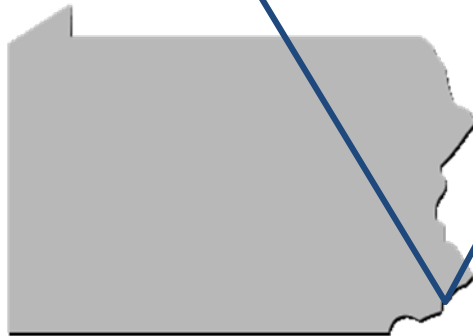
Pooled Bonds for Energy Projects

Baird Brown

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Sustainability Finance

Pooled Bonds for Energy Projects

CDFA Webinar

September 13, 2012

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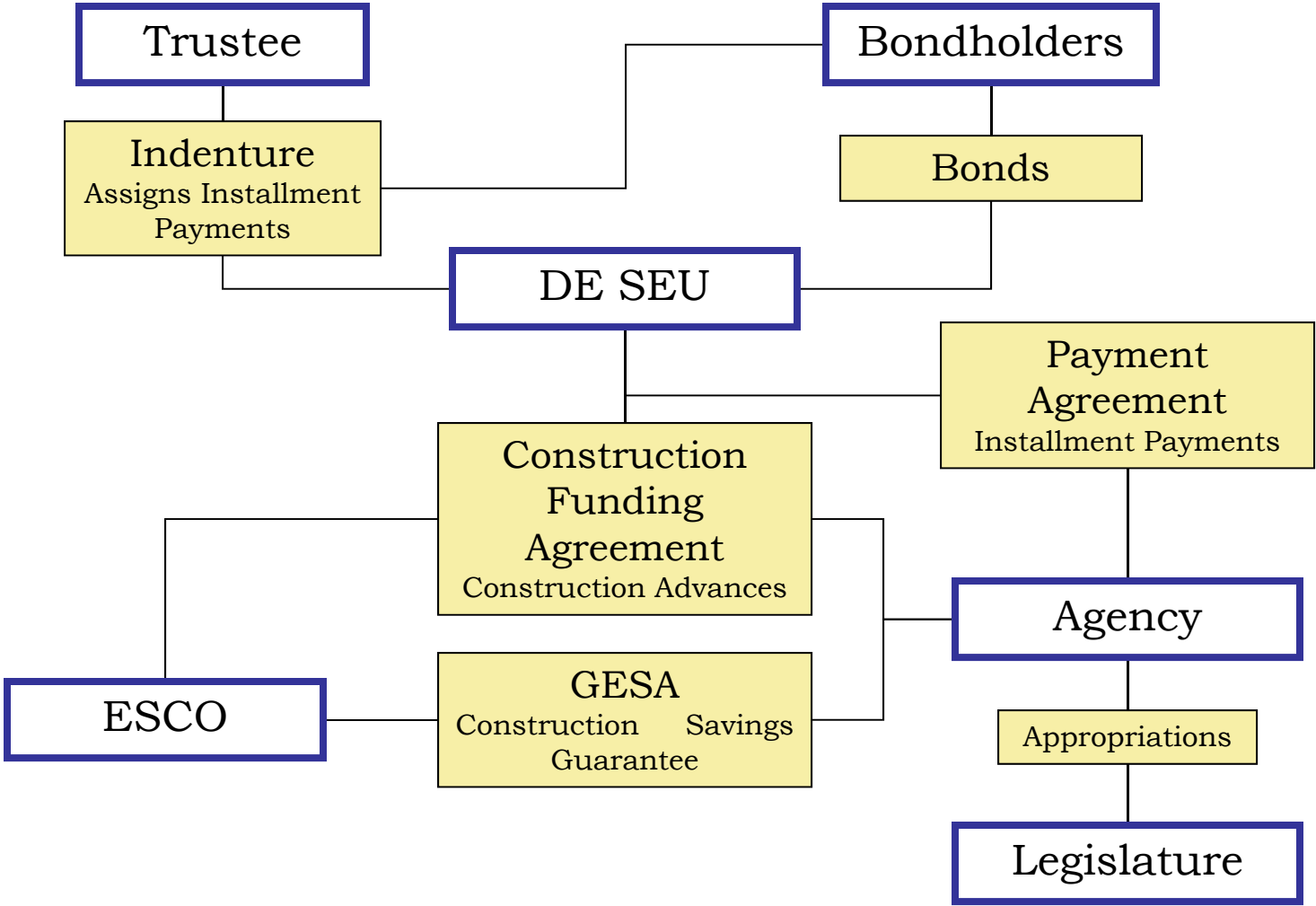
Taking Action on Energy and Climate Change

- Deep energy efficiency retrofits
- Deploy distributed generation
- Manage heating, cooling, and electric load as assets
 - Load shape
 - Load flexibility
 - Fuel arbitrage
- Finance energy investments efficiently

Energy Efficiency Bond Program

- ESCO RFP with standardized documents
- Identify participant pool
- Preliminary Audit
- Investment Grade Audit
- Guaranteed Energy Savings Agreement
 - Design/build contract features
 - Measurement and Verification
 - Guaranteed savings greater than installment payments
- Pooled bond issue with aggregated payment schedules

DE SEU Financing Structure



Applying the Lessons

- Foundation for Renewable Energy and Environment
 - Sonoma County Water Authority
 - California Statewide Community Development Authority
- District of Columbia Commercial PACE Program
 - PACE credit mechanism
 - Private banks as initial lenders
 - Securitization based on common documentation
- Offshore Wind Accelerator Project - CESA
 - Aggregated procurement
 - Pooled bond financing

Pooled Bonds for Energy Projects

Craig Hill

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Clean Fund

San Rafael, CA



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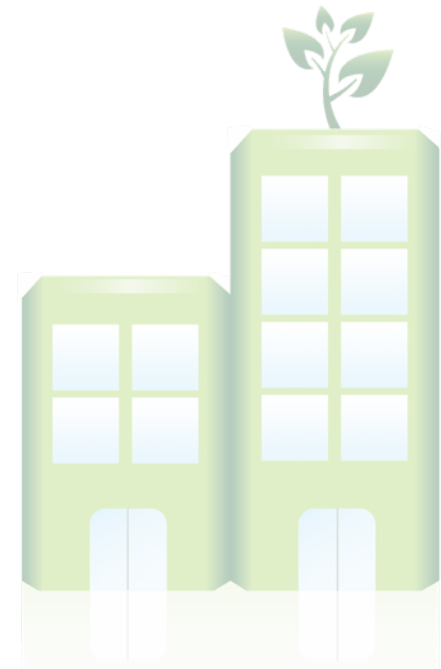
Pooled Bonds for Energy Projects

September 13, 2012 Webinar

CLEAN:FUND

DISCUSSION POINTS FOR POOL BOND PROGRAMS

- PACE Financing
- Funding Alternatives
- Program Constraints



PACE FINANCING

- Financing secured by tax lien on property
 - No tied to equipment or project improvements
- Sponsored by Local Agency, County, State, or Financing Authority
- Tax/Assessment Revenue Stream Leveraged for special tax/assessment bond



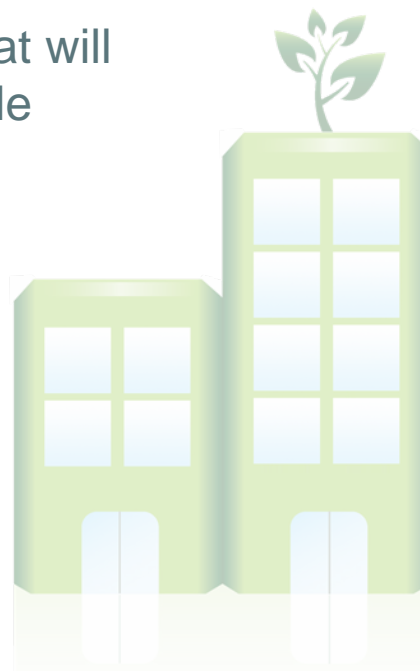
PACE BOND RESTRICTIONS

- Programs Designed Under Traditional Bond Structure (Trustee, Administration, etc.)
- “Bond” Issues Typically Carry Higher Transaction Costs Regardless of Size
- Pool Programs Provide Opportunity to Share Transaction Costs Among Multiple Projects



POOL FINANCING EXAMPLES FOR PACE

- Original PACE Programs – One Project-One Bond
- Bundled Project Programs – Aggregation of Projects-Single Issuance of Bonds
 - Boulder Colorado – Original Program
 - CEDA – Recent Aggregation Program in California
 - CSCDA – California FIRST – Flexible Program that will allow multiple financing options (individual, multiple properties under same ownership, etc.)
- Primary Driver for Pool Concept is Reduction in Transaction Costs
 - Timing Constraint may cause problems
 - Commercial projects tend to be on own timelines





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Audience Questions

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**Intro Tax Credit
Finance WebCourse**



November 6-7, 2012
Daily: 12-5pm (EST)

**Intro Public-Private
Partnership (P3)
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Continue the Conversation #CDFAwebcast



The screenshot shows the Twitter profile for CDFA (@CDFA_Update). The profile header includes the CDFA logo (Council of Development Finance Agencies), the name "CDFA", the handle "@CDFA_Update", and a "Follow" button. Statistics show 1,200 tweets, 37 following, and 184 followers. Below the header is a "Stay in touch with CDFA" sign-up form with fields for "Full name", "Email", and "Password", and a yellow "Sign up" button. To the right is a "Tweets" section with two tweets from CDFA @CDFA_Update, both posted 4 hours ago. The first tweet is about a CDFA-BNYM Webcast on February 21 at 1pm EST, and the second is about the defeat of a Colorado #TIF bill.

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@CDFA_Update

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37 FOLLOWING

184 FOLLOWERS

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Tweets

CDFA @CDFA_Update 4h
CDFA-BNYM Webcast: Will the #Volcker Rule Impact You? Free tomorrow, February 21 @1pm EST bit.ly/lhtHEp

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Defeat of Colorado #TIF bill leaves many questions bit.ly/y0dYFs

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Upcoming Events at CDFA

Intro TIF WebCourse

Daily: 12-5pm (EDT)
September 18-19, 2012

Intro Tax Credit Finance WebCourse

Daily: 12-5pm (EST)
November 6-7, 2012

Intro Public-Private Partnership (P3) WebCourse

Daily: 12-5pm (EST)
December 12-13, 2012

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Upcoming Webcasts

CDFA – BNY Mellon Development Finance Webcast Series
Tuesday, September 25, 2012 @ 1:00pm Eastern

CDFA – Stifel Nicolaus Tax Increment Finance Webcast Series
Thursday, October 11, 2012 @ 1:00pm Eastern

CDFA – Stern Brothers Renewable Energy Finance Webcast Series
Thursday, November 15, 2012 @ 1:00pm Eastern

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