U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

The American Recovery and Reinvestment Act (ARRA) of 2009

Innovative Energy Efficiency Financing Approaches

Speakers

U.S. Department of Energy
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Guest Speakers
John Rhow and Chris Moriarty, Barclays
Cisco DeVries, Renewable Funding
Dale Hahs, Energy Services Coalition
Ted Atwood, City of Baltimore

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Agenda

Welcome and Introduction – Charlie Hemmeline

Municipal Energy Financing

- Municipal Energy Financing Overview - Claire Johnson
- Capital Markets Considerations - John Rhow and Chris Moriarty
- Renewable Funding Experience - Cisco DeVries
- *Municipal Financing Q&A*

Energy Saving Performance Contracting

- Performance Contracting Overview - Dale Hahs
- City of Baltimore ESPC Experience - Ted Atwood
- *ESPC Q&A*

Municipal Energy Financing

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Energy Efficiency Conundrums

- How will we create jobs and promote both energy efficiency and renewable energy long after American Recovery and Reinvestment Act money is gone?

- Existing Energy Efficiency Programs:
  - Limited Applicability to Households Most in Need
  - Low Participation Rates
  - Limited Support for Deep Energy Retrofits
  - Programs Do Not Always Cover Their Costs
  - Potential Issues with On-bill Financing Programs

What is Municipal Energy Financing?

- Definition: Property Owners (commercial, industrial, residential) borrow money to finance energy retrofits and repay over time through line item on property tax bill
  - Borrow money either via municipal bond or from financers
  - Energy Retrofits = energy efficiency measures (EE) and renewable energy (RE)

- Impact: Property tax lien oriented financing dramatically improves economics of energy retrofits
  - Loan is secured by a lien on the property that takes precedence over any mortgage claims to the property

- Solves key problems of EE financing right now:
  - Credit (i.e. Property Owner (PO) credit is poor)
    - Municipal energy financing: loan linked to property ownership
  - Collateral (i.e. financer has no recourse in the event of nonpayment as EE retrofits are considered fixtures)
    - Municipal energy financing: EE/RE payments are senior to mortgage; collateral is easier to grasp using property taxes
    - EE harder than solar; EE is considered a fixture, solar is considered personal property. In the event of non-payment, solar panels can be removed

Steps

1. Identify Team of Champions – City Manager, legal counsel, finance staffer, sustainability program staff people

2. Decide who will manage administrative and financial aspects of program - do you need additional software, administrative, financial partners?

3. Create structure that treats EE/RE as senior "property tax lien" repaid by property owner through time, either:
   - Municipalities pass ordinances that enable citizens to add a line item to their property tax bill for EE/RE loans (i.e. Annapolis)
   - Special tax district (i.e. AB 811 – assessment district or Mello Roos)

4. Launch Program - Education and Outreach
   - PO's "opt-in" to add line item to property tax bill for EE/RE loan
   - PO's apply for funds to install hyper energy efficiency measures and renewable energy production (e.g. solar)

Use EECBG Money to Jump Start a Program – and Get Economies of Scale

EECBG financing can be used:

- For Software Development – middle/back office
- To Create and Fund Aggregator
- For Pilot Program
- To Create Legislation and Contracts Between Entities
- To Buy Down Interest Rates

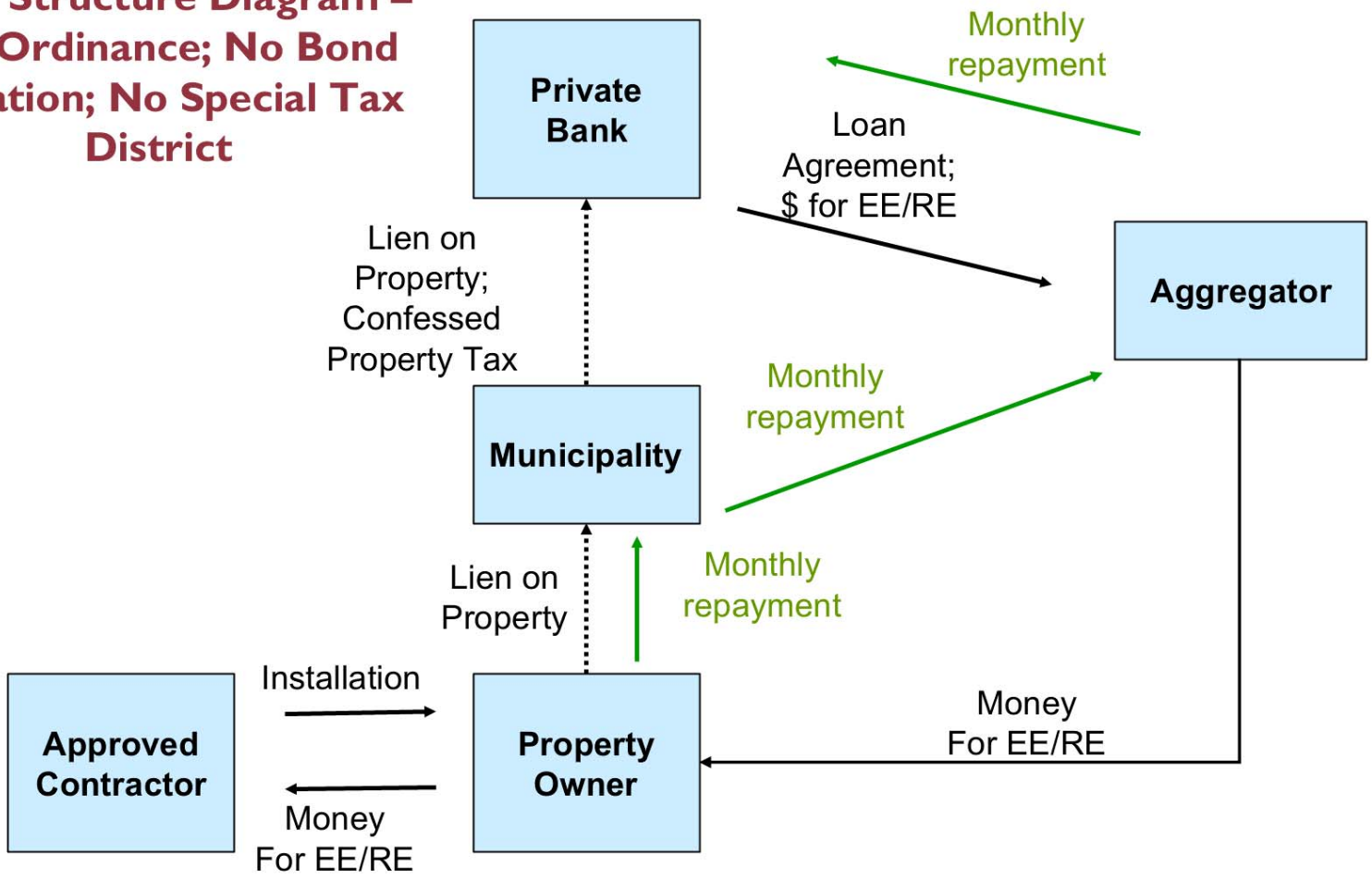
Create Economies of Scale!

- Working at the county level or state level allows municipalities to pool resources and minimize transaction costs

Where does potential aggregator fit in?

- Aggregates financers, municipalities, property owners, and contractors who can all make or save money by financing and installing EE/RE
- Acts as a trusted agent for municipalities to quickly implement this structure
- Creates software, administration, and contracts
- Verifies contractors
- Implements program so that municipalities can be provided with full “program in a box” offer

Deal Structure Diagram – Via Ordinance; No Bond Creation; No Special Tax District



Capital Markets Financing Considerations – Property Assessed Clean Energy Bond ("PACE" Model)

- Property Tax Assessment Bond programs are common in municipal bond markets
  - With enabling state legislation, ability for municipalities to create "clean energy" districts which can issue taxable bonds secured by project tax assessments
  - In May, Boulder County Clean Options Energy District issued $7.6 million bonds
- Structural Considerations
  - Not qualify for tax-exempt status as end-user are voluntary participants in private sector
  - Amortization of bonds over an extended period (i.e. 20 years) in order for program participants to realize energy efficiency savings
  - Will require credit ratings from one or more rating agencies (preferably two or more)
- Issuance and credit rating challenges
  - Unlike general ad valorum property tax-backed bonds, not a broad diversification of taxpayers as program participation is voluntary – rating agencies likely to "notch" down from municipality ratings
  - Small issuers disadvantaged as investors/underwriters prefer secondary market liquidity – not big enough to dedicate internal resources to evaluate credit
- Risk mitigants
  - Sponsoring municipality may consider providing general obligation or moral obligation guarantee
  - Potential mechanisms to "pool" different programs to create credit diversification and issuance scale

Benefits

Property Owner

- Substantially reduced up front costs for energy retrofits
- Improved return on investment/positive cash flow on retrofits (annual savings>cost)

Municipality

- No credit or general obligation risk: Obligation is liability of PO
- Job creation
- Greenhouse gas reductions/energy independence
- Opt in: Only those real estate owners who opt in pay for it

Lender

- Super senior loan with low risk of capital impairment
  - Property tax liens are senior to first mortgage debt
  - Historical loss rates on property tax liens are low
    - 97% of property taxes are current; Property tax losses are <u>less than</u> 1%

Clean Energy Municipal Financing Bills (enacted)

State	Description
California: AB 811	Municipal financing for cities (& California – SB 279)
Colorado – HB 08-1350	Finances EE & RE improvements through assessments on real property
Maryland – HB 1567 (awaiting Governor signature)	Authorizing political subdivisions to create a Clean Energy Loan Program
New Mexico – HB 572	Allows counties to establish special assessment districts for solar-energy improvements
Virginia – SB 1212	Financing clean energy programs through the use of real property assessments

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Clean Energy Municipal Financing Bills (in committee)

State	Description
Federal –$ 10 billion National Home Energy Savings Revolving Fund Act – HR 1573 (Van Hollen, MD)	In House Energy and Commerce Committee
New York – A05998	Finances EE & RE on Long Island (Local committee)
Oregon – HB 2181 (EE & RE Local Improvements Districts)	In committee: Sustainability and Economic Development
Texas - HB 1391 (Clean energy bond authority)	In committee: Energy Efficiency & Renewable Energy Subcommittee
Vermont – H.161 (Debt financing for EE & RE)	In committee – Commerce and Economic Development
Active consultations in committees Kammen – http://rael.berkeley.edu	Massachusetts , Nevada, New Jersey , Washington

Statistics on Existing Programs

	Berkeley, CA –FIRST	Annapolis EZ	Sonoma County	Boulder, CO – ClimateSmart Loan Program	Palm Desert, CA - Energy Independence Program	Long Island Green Homes Program, Babylon, NY
Program Launch Date	Nov-08	Nov-08	Apr-09	Apr-09	Oct-08	Aug-08
Current Status	38 projects financed; only $1.5 MM avail	Pilot - working on contracts	Approved - for energy and water improvements	517 projects committed	End of Phase 2; 206 applications; maxed out financing	108 projects in queue; $1.6 MM still available
eligible (non-rental) units	21436	8647	111896	81180	23430	59200
participation rate	0.177%			0.637%	0.879%	0.182%
Funding source	Municipal revenue bonds; microbonds	local banks	County Treasury Notes at 5% above UST	Tax-exempt + private activity bond repaid through special fee on HH property tax bills	Phase I: City's General Fund ($2.5 million); Phase 2: $5 MM in Bond Issuance	municipal solid waste revolving fund
$ committed to program	$1.5 MM pilot Phase II will be larger (75 residential, 25 commercial)	$1.5 MM	$5 MM	approved to sell up to $40 MM bonds, including $14 MM in Tax Exempt bonds	$7.5 MM	$2 MM from solid waste reserve fund acts as revolving fund; $.5M for solar
interest rate	7.75%	5.50%	8.50%	6.75%	7%	3%
term	20 yrs	20 yrs	10-20 yrs (if over $5000), 5 yrs if < $5000	15-20 years	up to 20 years	based on matching savings with payments
Admin Fee paid by PO	1-2% total loan value	$250	5%	$75	$200	3% interest rate covers admin costs
Other expenses			$150 onsite inspection fee; title check of $65-$215	1-2% total loan value for loan processing fee	$360 title insurance policy	$250 audit cost

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How Quickly $ is committed	received all avail applications in first day - committed 6 mo later	TBD	TBD		$2.5 MM committed in 3 weeks; $5 MM of Phase II committed in 3 weeks	$400K in queue for retrofit in 5 months ($1.6 MM still avail)
% to residential property owners	100%	100%	avail to res, commercial & industrial	70.0%	98.5%	100%
Loan Amt	max $37,500	TBD	$2500 up to $500 K (requires approval after $60 K)	min $3000; $15000 max for T-E bonds, $50000 max or 20% property value for non T-E bonds	$5000 or greater	up to $12000
Enabling Legislation	CA – AB811+City Council Program approval	City Resolution and Ordinance	CA – AB811+City Council Program approval;	CO House Bill 08-1350 + City Ballot Issue 1A: Nov 08	CA – AB811 + City Council Program approval	City Council Resolution Approval – Aug. 08 to expand Solid Waste Code
Owner Repayment Mechanism	Property Taxes; Special Tax	Loan through community bank		Property Tax Assessment	Property Tax Assessment	assessment fee for removing solid waste
Administration Provided by	1.25 FTE from City Planning Dept; $227 K total in admin	Chamber of Commerce Foundation		1 FTE Finance Division	1.5 FTE - Office of Energy Mgmt;have $90 K budget	3 FTE from City