

# Financing Clean Energy

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# ConoverBrown LLC

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- Consulting firm with a specialty in financing for clean energy.
- Domestic and International government, non-profit and private clients.
- Published numerous papers on clean energy finance; working with clients to set up new clean energy financing programs.

# Outline

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- Focus is on several new ways to finance clean energy projects. Emphasis today is more on residential sector.
  - Property-tax based finance
  - On-bill financing
  - State treasury-capitalized financing
  - Energy efficient mortgages

# Themes

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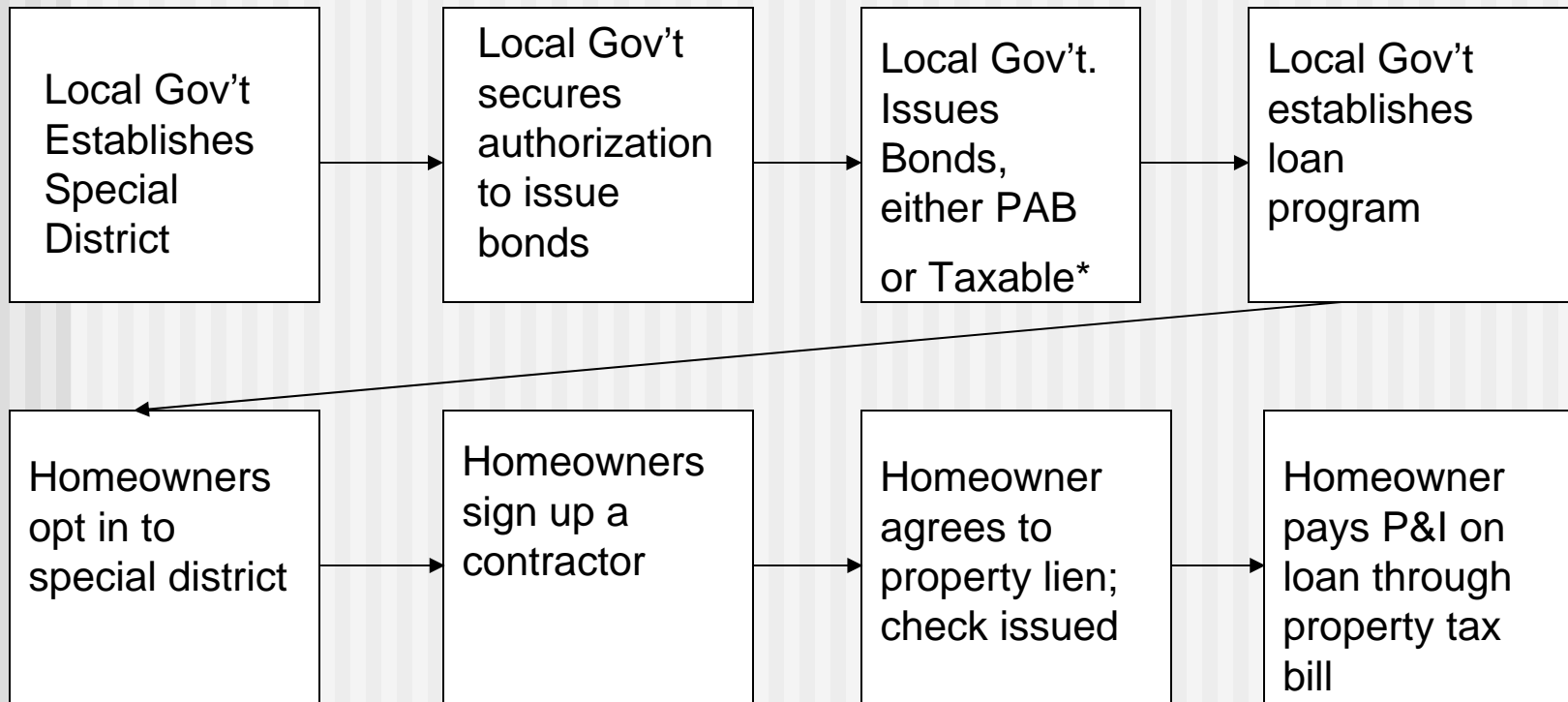
- New sources of capital to finance clean energy are beginning to become available.
- New ways to access capital through new types of bonding/lending programs are becoming available.
- Public/Private financial partnerships offer a great deal of potential.

# Property tax based finance

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- Local government program, may require state enabling legislation.
- Designed to finance residential solar and energy efficiency.
- Focused on use of property tax as a means to pay for energy improvements.

# The Generic Model



\*Note that use of PABs is not required for his program.  
CA programs are not raising capital in this way.

# Why does this have potential?

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- Possibility of access to low cost (non-taxable bond) financing.
- Secure revenue stream through property tax = lower risk/lower cost. Property tax payments are high priority in case of default. (This may cause some concern among mortgage lenders).
- Can be combined with grant and rebate programs.

# Current Status

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- Boulder County seeking ballot authorization to issue \$40 million in bonds
- Establishing opt-in special district
- Using Private Activity Bonds
- Looking to combine PAB allocations of several jurisdictions in the county
- Other local governments in CO looking at this as an option

# Current Status

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- Berkeley, CA is pursuing this option and is running a pilot program.
- Total investment is \$1.5 million for pilot.
- Sold out in first 9 minutes.
- A green investment fund is providing capital to lenders.
- 20 year loans at approximately 7%, adjusted monthly.
- City of Palm Desert running a similar program.

# On-Bill Financing: Tariffs and Loans

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- Utility acts as finance program administrator, collection agent.
- Designed for either renewable energy or energy efficiency.
- Collections are through the utility bill.
  - A single bill for all energy/efficiency program payments.

# Two Variants on On Bill Finance

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- Tariff-based systems: PUC allows the utility to put an “energy service charge” on the bill.
  - One specific program is known as PAYS (Pay As You Save)
- The charge is actually a rate approved by the PUC.
- Energy savings will always exceed P&I payments.
- Failure to pay could result in disconnection in extreme circumstances.
- Obligation to pay passes to the next owner -- it stays with the meter.

# Two Variants on On Bill Finance

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- Loan based systems: Utility sets up a loan that is usually offered at a subsidized rate and at a term of up to 5 years.
- Customer pays for the loan through the utility bill.
- Energy savings typically exceed P&I.
- Obligation typically stays with the customer.

# Where is On-Bill Financing Taking Place?

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- Connecticut
- Massachusetts
- California
- New Hampshire
- Other states, and under consideration in numerous jurisdictions.

# Why Not On-Bill Financing?

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- Needs the utility to truly want to participate.
- Utilities can have legitimate concerns
  - Billing and collections systems may not be set up for a loan program.
  - Concerns about bad debt
- These issues can be resolved.

# Why Is On-Bill Financing Attractive?

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- Can provide a secure payment stream.
- Leads to lower cost of capital and lowers cost of borrowing.
- Can be combined with a rebate program.
- Utilities can have a vested interest in making this work, if they have strong incentives to make energy efficiency programs work.

# State Treasury Funding

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- Secures a new source of capital for energy efficiency: Treasurer Funds
- IL and PA have programs up and running
- CO secured authorization to operate such a program in SB 184 of 2008.
- Provides a way to *invest* state funds in energy efficiency.
- Leverages different types of state funding with private capital and private delivery services.

# Treasury Funds

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- Provide a potentially lower cost source of capital than otherwise available.
- Can be leveraged with other funds (Clean Energy Funds) that do not need to be repaid.
- A successful model is the PA Keystone Help program that was capitalized with \$20 million over a three year period, and is being re-established with new funding.

# Colorado S.B. 184

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- Focuses on retrofits of existing homes.
- Loans are capped at \$12,500.
- Two types of loans contemplated:
  - Home Performance with Energy Star (whole house)
  - Loans for replacement of equipment such as a furnace
- Program official announcement very soon.

# Energy Efficient Mortgages

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- These mortgages have existed since the late 1980s/early 1990s.
- Despite a great deal of initial interest, have never really taken off
  - Fewer than 1,000 originated last year.
- Perception has been that they offered little benefit for significant extra time and effort.

# A New Energy Efficient Mortgage Product

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- New energy efficient mortgage product soon to be offered in Colorado, New York, Maine elsewhere.
  - The idea is to offer a discount on prepaids or the annual interest rate in order to provide an enticement to consumers.
  - This discount provides a financial incentive that did not exist in prior EEM products. Can provide immediate positive cash flow after efficiency -- or solar -- installation.
  - As one homebuilder said “this is the product I’ve been for years to see.

# QECBs

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- Tax credit bonds
  - Theoretically mean a 0% interest bond, but in practice means a very low interest bond
  - Bondholder is paid in principal plus a federal tax credit -- so very low cost for the issuer.
  - Designed to finance renewable energy projects and energy efficiency projects within state government.