CESA Members Webinar:
Finance 101

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**Agenda**

- Introduction
- Incentives & grants vs. financing
- Why clean energy funds (CEFs) play a financing role
- Key financing credit issues
- Roles CEFs can play to help provide financing
  - Direct lending vs. credit enhancement
  - Revolving loan funds
  - Interest rate buy-downs
  - Credit enhancement
  - Importance of due diligence
- Bond financing (QECBs and CREBs)
- Additional resources
Incentives & grants vs. financing

- **Incentives and grants:**
  - **Advantages –**
    - Easier to administer
    - Reduces the amount of financing necessary
    - Can be targeted to encourage certain CE and social outcomes
  - **Disadvantages –**
    - “One and done”
    - Risk of creating a boom and bust

- **Financing:**
  - **Advantages –**
    - Funds are recycled
    - Generates revenue for the CEF
  - **Disadvantages –**
    - CEF assumes financial risk
    - More complicated to administer
Why CEFs play a financing role

- Large unmet demand for clean energy financing
- Federal funding cliff
  - There is a scheduled expiration of > 70% of all federal clean tech policy incentives by end of 2014
- Banks have pulled back
  - The great recession of 2008 and its aftermath have led to reduced bank financing of clean energy, among both European and American banks.
  - Even when financing is available it’s priced high and for shorter terms than is needed – resulting in higher debt service payments.
  - Credit standards have tightened, limiting financing to strongest borrowers or transactions with credit enhancement
Key credit issues involved in financing

- A number of credit issues affect the ability to obtain/provide project and enterprise financing
  - Repayment from operations (cash flow)
  - Equity investment (money that does not have to be repaid)
  - Collateral (the second way out)
  - Experience and capacity of all of the principals and counterparties
- CEFs are involved in financing in order to address weaknesses in these credit issues, with the possible exception of the last of the issues above.
Direct lending vs. credit enhancement

- Not every state fund manager wants to be a lender – nor should they want to be!
- Creating an in-house financing operation takes a lot of time and resources, and requires building the capacity to do:
  - thorough financial due diligence,
  - credit underwriting and structuring of financing,
  - loan doc preparation and loan closing,
  - booking and servicing the loans,
  - portfolio management and reporting, and
  - having to do collections and workouts.
- Every CEF can provide credit enhancement that mitigates risk for other lenders, enabling “outsourced” financing for clean energy.
- Credit enhancement stretches public dollars, leverages private capital
Revolving loan funds

- CEFs can provide direct lending program or be investor in another RLF
- Advantages: funds are recycled to be used again, creates income for CEF operations (financing fees & net financial income)
  - Funds used for lending can be from grants (no COF) or from borrowed funds (e.g., proceeds from bond issuances that fund programs, which come with COF)
- Investing in another RLF: simpler than direct lending with many of same advantages
- On-bill financing: utilities do not want to use own capital, need investors
- Performance contract financing (ESCOs): same thing
- Possible financial entities to partner with:
  - Local banks, other state agencies, state bonding authorities, community development financial institutions (CDFIs)
Impact of Interest Rate and Loan Term on Rebate Required

<table>
<thead>
<tr>
<th>Term of Loan—15 Years; Cost $4,500/kW</th>
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<tr>
<td>0%</td>
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<td>5%</td>
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<td>8%</td>
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<table>
<thead>
<tr>
<th>Term</th>
<th>Interest Rate-5%; Cost $4,500/kW</th>
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<tbody>
<tr>
<td>15 years</td>
<td>$1,835</td>
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<tr>
<td>20 years</td>
<td>$860</td>
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</tbody>
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Interest rate buy-downs

Advantages:
- Leverage private sector or other available funding
- Less capital than revolving loan fund
- Can involve and familiarize community banks
- Administratively simple
- Simple for customer

Disadvantages:
- No revolving capital or return on investment
- Expensive
Credit Enhancement
Loan Reserve Pools or Loan Guarantees

- Funding pledged to cover loan defaults
  For solar usually 10-20% of loan pool

Advantages:
- Leverage private sector or other available funding (e.g. 10-20:1)
- Less capital than revolving loan fund
- Potentially less funds used than interest rate buy down
- Unused portion of loan pool can be reused
- Can involve and familiarize community banks
- Administratively simple

Disadvantages:
- No return on investment
Subordinated Debt Participation

Subordinated to senior debt (bank debt)—repaid after senior debt repaid

Advantages:
- Return on capital
- Leverage private sector or other available funding
- Less capital than revolving loan fund
- Can involve and familiarize community banks

Disadvantages:
- Negotiated terms
- Complex legal documents
- No standard leverage amount
- Impacts cash flow
Importance of due diligence

- Due diligence for a financial request—can the loan be repaid
  - The thorough evaluation of all relevant information whether provided by the borrower or developed through the credit process
  - “How do you know what you think you know is true?”
- Not only verify, but “stress” the projections and assumptions
- Cash flows, management, collateral, prior experience
- Even when investing in a 3rd party lender, it is better not to be passive
  - Have a seat on the loan committee
  - Frequent and regular portfolio reporting
  - Credit enhancement—management, track record, historical financials
Bond financing (QECBs and CREBs)

- Bond financing vs. bank financing:
  - Term – Bond investors commit capital for longer amortizations than banks
    - Shorter financing term from banks exposes borrower to higher debt service payments & refinancing risk when loan balloon payment is due.
  - Fixed interest rates – Bond proceeds are at a fixed rate for up to 20 years
    - No interest rate risk for the borrower.
- Qualified Energy Conservation Bonds (QECBs)
  - Are tax credit bonds that fund various energy efficiency projects.
    - Capital expenditures for public buildings to increase EE by at least 20%, mass commuting projects, demonstration projects, etc.
    - The bondholder gets a 70% tax credit on bond interest, resulting in low interest rate bond
    - There are a lot of unused QECB allocations remaining at the state level
Bond financing (QECBs and CREBs) – cont.

- **Clean Renewable Energy Bonds (CREBs)**
  - Are tax credit bonds like QECBs, reduce COF for renewable energy projects
  - Principal is repaid on a regular schedule but not interest
    - Instead, bondholder receives a federal tax credit in lieu of interest
  - Are available to governmental entities, cooperatives & public utilities investing in CE projects
  - Projects include: (1) wind facilities, (2) closed-loop biomass facilities, (3) open-loop biomass facilities, (4) geothermal or solar energy facilities, (5) small irrigation power facilities, (6) landfill gas facilities, (7) trash combustion facilities, (8) refined coal production facilities and (9) certain hydropower facilities.
  - However, no new CREB allocations are currently available.