Strategies in Residential Energy Efficiency Financing

Leveraging Secondary Markets

Presentation to NASEO Financing Committee
May 21st, 2014
Leveraging Secondary Markets
Presentation Topics

- Kilowatt Financial Overview and Primary Strategy
- Secondary Market Overview
- Whole Loans and Securitization
- Risk Elements in a Secondary Market
- Collaboration Opportunities with State Energy Offices
Overview of Kilowatt Financial
Clean Energy Consumer Finance

Leading consumer lender focused exclusively on clean energy and energy efficiency

- **LOW COST** consumer products
- **FAST** approval cycle
- **FLEXIBLE** pricing options
- **EASY** funding processes

### Solar Financing Business

#### Solar System Leases and PPAs
- 20 year lease or PPA contracts
- Monthly and prepaid alternatives
- No money down; consumer saves money day 1
- 0.0%, 1.5% or 2.9% escalators

#### Solar System Purchase Finance
- 15 year term
- APRs as low as 2.99%
- Dealer rate buy-down ability
- Flexible promotional options
- Use REEPC to reduce monthly payments in years 2-15
Overview of Kilowatt Financial
Clean Energy Consumer Finance

Leading consumer lender focused exclusively on clean energy and energy efficiency

- **LOW COST** consumer products
- **FAST** approval cycle
- **FLEXIBLE** pricing options
- **EASY** funding processes

**Energy Efficiency Financing Business**

- Up to 12 year terms
- APRs as low as 0.0%
- Dealer rate buy-down ability
- Custom Dealer pricing options
- Down to 600 FICO
- Broad range of eligible improvements

**Electric**
- Solar PV systems
- Battery storage devices
- Fuel cells and other power generators
- Major energy consuming appliances
- Lighting and fans
- Electric car chargers

**HVAC**
- Repair or removal and replacement of all HVAC equipment
- Installation of gas service
- Thermostats, wood-heating appliances, fireplace modifications, coolers, exhaust fans, dehumidifiers, etc.
- Doors, windows, shutters, screening
- Insulation and siding
- Roofing
- Sunrooms
- Disaster prevention improvements

**Building**
- Plumbing
- Repair or removal and replacement of water heaters
- Solar thermal water heaters
- Water conservation measures

**Water**
Overview of Kilowatt Financial
Clean Energy Consumer Finance

Leading consumer lender focused exclusively on clean energy and energy efficiency

- **LOW COST** consumer products
- **FAST** approval cycle
- **FLEXIBLE** pricing options
- **EASY** funding processes

Eligible states for Retail Credit Finance

- Green: Eligible states for Retail Credit Finance
- Blue: License application made
- White: Not offered
Overview of Kilowatt Financial
Why Clean Energy and Energy Efficiency?

Residential energy waste
= More than one third of total energy generated
= More than 19X residential solar energy generated

Estimated U.S. Energy Use in 2012: ~95.1 Quads

Source: LLNL 2013. Data is based on DOE/EIA-0035(2013-05). May, 2013. If this information or a reproduction of it is used, credit must be given to the Lawrence Livermore National Laboratory and the Department of Energy, under whose auspices the work was performed. Distributed electricity represents only retail electricity sales and does not include self-generation. EIA reports consumption of renewable resources (i.e., hydro, wind, geothermal and solar) for electricity in BTU-equivalent values by assuming a typical fossil fuel plant “heat rate.” The efficiency of electricity production is calculated as the total retail electricity delivered divided by the primary energy input into electricity generation. End use efficiency is estimated as 65% for the residential and commercial sectors 80% for the industrial sector, and 21% for the transportation sector. Totals may not equal sum of components due to independent rounding. LLNL-MI-410527
Kilowatt’s Strategy
Drive Down Cost of Financing for End Consumers

Primary Strategy:

Create clean energy and energy efficiency financing products:

1. With low APRs to compete with bank loan products
2. Without the use of public funds (utility, state, ratepayer, taxpayer)

When public funds are available as subsidized capital or structural enhancement:

Incorporate such public capital into our financing products to further drive down the cost of financing for consumers
### Banks vs. Finance Companies

**Competing in the Private (Unsubsidized) Market**

<table>
<thead>
<tr>
<th>Banks</th>
<th>Finance Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Access to cheap deposit funding</td>
<td>✓ Flexibility and operational capabilities to enhance the sales process</td>
</tr>
<tr>
<td>❌ Typical bank challenges with respect to the sales process:</td>
<td>? How do you compete with bank deposit funding??</td>
</tr>
<tr>
<td>— Lack of flexibility (credit spectrum, loan size, product types)</td>
<td>Securitization (AAA/AA/A Rated)</td>
</tr>
<tr>
<td>— “One size fits all” approach</td>
<td></td>
</tr>
<tr>
<td>— Limited real time credit/e-doc capabilities</td>
<td></td>
</tr>
<tr>
<td>— Limited ability to “private label” solutions</td>
<td></td>
</tr>
<tr>
<td>— Regulatory constraints on size/growth</td>
<td></td>
</tr>
</tbody>
</table>
Two Types of Secondary Market

Whole Loans and Securitization

- **Whole Loans**
  - Buyer purchases the whole loan
  - Seller typically “out” of the transaction economically

- **Securitization**
  - Buyer purchases bonds that have different levels of risk and return
  - Seller usually retains most junior (i.e. riskiest) interest in loans

Typical Investors:
- Banks
- Credit Unions
- Asset Managers
- Insurance Companies
- Pension Funds
- Hedge Funds
Whole Loans vs. Securitization
Economics: Base Case Net Losses

**Whole Loans**
Purchase of $10,000 loan at par

**Securitization**
Securitization into two “tranches” of securitization debt

<table>
<thead>
<tr>
<th>$10,000 Loan</th>
<th>$2,000 Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9% Interest rate</td>
<td>15% return Repaid last</td>
</tr>
<tr>
<td>(1)% Net loss rate (bad debt)</td>
<td>5% return Repaid second</td>
</tr>
<tr>
<td>(2)% Servicing expense rate</td>
<td>3% return Repaid first</td>
</tr>
<tr>
<td>6% Pre-tax return on capital</td>
<td>$5,000 Class A</td>
</tr>
<tr>
<td>$10,000 Loan</td>
<td>$3,000 Class B</td>
</tr>
<tr>
<td>$10,000 Loan</td>
<td>$5,000 Class A</td>
</tr>
</tbody>
</table>
Whole Loans vs. Securitization

Economics: Stress Case - 3x Net Losses

**Whole Loans**
- Purchase of $10,000 loan at par

**Securitization**
- Securitization into two “tranches” of securitization debt

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Loans</td>
<td>Purchase of $10,000 loan at par</td>
</tr>
<tr>
<td>Securitization</td>
<td>Securitization into two “tranches” of securitization debt</td>
</tr>
<tr>
<td>$10,000 Loan</td>
<td>$10,000 Loan</td>
</tr>
<tr>
<td>$2,000 Equity</td>
<td>$2,000 Equity</td>
</tr>
<tr>
<td>$10,000 Class A</td>
<td>$10,000 Class A</td>
</tr>
<tr>
<td>$3,000 Class B</td>
<td>$3,000 Class B</td>
</tr>
<tr>
<td>$5,000 Class A</td>
<td>$5,000 Class A</td>
</tr>
</tbody>
</table>

- **9%** Interest rate
- **(3)%** Net loss rate (bad debt)
- **(2)%** Servicing expense rate
- **4%** Pre-tax return on capital

- **5% return**
- **3% return**
- **2% return**

Significantly reduced returns

Returns protected by structural seniority
Risk Elements
What are secondary market buyers principally worried about?

- **Macro-economic Risk**
  - What is likely to happen with unemployment rates, economic growth, housing prices, and supply of credit?
- **Credit Underwriting**
  - How competent is the originator at evaluating consumer credit? Will losses perform in line with expectations?
- **Contractor and Equipment Risk**
  - Is the consumer likely to have any issues with workmanship or equipment quality?
- **Prepayment Speed**
  - If prepayments are higher than expected, premiums paid may be at risk. If lower, cash flows may be extended.
- **Servicer Capability**
  - Does the servicer have the experience and ability to maximize cash flow while maintaining compliance levels? Acceptable infrastructure and technology?
- **Servicer Credit-worthiness**
  - What is the probability that the primary services provider is not around for the full life of the loan? What redundancy is in place?
- **Compliance and Consumer Protection**
  - Are all origination and servicing policies, procedures, and practices in compliance with all applicable laws and regulations? Are consumers being treated fairly?
Kilowatt Financial Path to Securitization
Plan to Reach Secondary Market: Citibank Warehouse Facility

- Our Citibank facility will allow us to reach securitization:
  - Does not require utilization of subsidized funds
  - Can be utilized with subsidized programs to reduce end interest cost to consumer

$100 million+

Proceeds from securitization will pay off Citibank

Sufficient Scale to Securitize: 2015

2014
## Collaboration Opportunities with State Energy Offices

### Overview

<table>
<thead>
<tr>
<th>State Energy Office Role</th>
<th>Marketing, Education &amp; Outreach</th>
<th>Incentives</th>
<th>Credit Enhancements</th>
<th>Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mobilize resources to raise contractor and / or consumers awareness about access to energy efficiency financing</td>
<td>Allocate capital toward grants, rebates, or buydowns for clean energy projects</td>
<td>Establish loan loss reserve fund to cover portfolio losses up to a pre-determined cap; typically utilized for energy efficiency programs</td>
<td>Provide subordinated, mezzanine, or senior debt to put public capital to work at larger scale</td>
</tr>
</tbody>
</table>

### Impact

<table>
<thead>
<tr>
<th>State Energy Office Role</th>
<th>Marketing, Education &amp; Outreach</th>
<th>Incentives</th>
<th>Credit Enhancements</th>
<th>Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Equips contractors with an effective tool to reach more consumers and close more loans</td>
<td>Generates attractive consumer economics which helps to drive program volume</td>
<td>Enables lenders to slightly lower interest rates and potentially expand access to broader range of consumers</td>
<td>Provides significant amount of capital at more flexible / attractive terms than existing alternatives</td>
</tr>
</tbody>
</table>

### Tradeoffs

<table>
<thead>
<tr>
<th>State Energy Office Role</th>
<th>Marketing, Education &amp; Outreach</th>
<th>Incentives</th>
<th>Credit Enhancements</th>
<th>Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Generates volume</td>
<td>Attractive consumer economics</td>
<td>High capital efficiency</td>
<td>Good capital efficiency</td>
</tr>
<tr>
<td></td>
<td>Low complexity</td>
<td>Low complexity</td>
<td>Potential to expand program access</td>
<td>Adequate returns</td>
</tr>
<tr>
<td></td>
<td>Low (or no) capital requirements</td>
<td>High flexibility</td>
<td>Structural and operational complexity</td>
<td>Lower risk profile than Credit Enhancement</td>
</tr>
<tr>
<td></td>
<td>High flexibility</td>
<td>No return on capital</td>
<td>Below-market returns</td>
<td>Structural and operational complexity</td>
</tr>
<tr>
<td></td>
<td>× No return on capital</td>
<td></td>
<td>× Below-market returns</td>
<td>Requires significant amount of capital</td>
</tr>
</tbody>
</table>
Thank You

- Kilowatt welcomes the opportunity to build residential clean energy financing programs with state and local energy offices

- Factors to consider:
  - Consumer protection is of paramount importance
  - If return of capital is important: alignment of incentives is critical
  - Remember: there is no substitute for hard work and operational expertise

- Kilowatt can provide more detailed information on products and pricing upon request

- Please do not hesitate to contact us with any questions or comments:

  Emeline (Em) Minor  
  Director of Business Development  
  eminor@kilowattfinancial.com  
  (615) 403-6601