Scaling Energy Efficiency for Low and Middle Income Households through Financing: Opportunities, Issues and the Current State of the Market

Greg Leventis for the State and Local Energy Efficiency Action Network

Goal: All cost-effective energy efficiency by 2020

• Network of 200+ leaders and professionals, led by state and local policymakers, bringing EE to scale at state & local levels

• Facilitated by DOE and EPA; successor to the National Action Plan for Energy Efficiency

The SEE Action Network is active in the largest areas of challenge and opportunity to advance energy efficiency
Importance of energy efficiency (EE) in low income households

Challenges to increased EE adoption and challenges to financing in low income households

Financing products available and how they can help

Examples of successful programs
IMPORTANCE OF EE IN LOW INCOME HOUSEHOLDS

◆ Multiple policy goals

◆ Efficiency as a resource

◆ Equity
## Low Income Energy Burden

<table>
<thead>
<tr>
<th>Income Category</th>
<th>Average Annual Household Energy Costs</th>
<th>Dollars Spent on Energy Per Square Foot</th>
<th>Mean Energy Burden (% Income Spent on Energy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Low Income</td>
<td>$2,378</td>
<td>$0.99/sq ft</td>
<td>2.3%</td>
</tr>
<tr>
<td>Low Income</td>
<td>$1,595</td>
<td>$1.10/sq ft</td>
<td>7.8%</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Statistics, Energy Information Administration
## Challenges in Low Income Households

<table>
<thead>
<tr>
<th>Challenge</th>
<th>To Increasing EE</th>
<th>To Using Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Trust</strong></td>
<td>Utilities, contractors; Savings</td>
<td>Lenders</td>
</tr>
<tr>
<td><strong>Insufficient Resources</strong></td>
<td>Capital; Time</td>
<td>Credit</td>
</tr>
<tr>
<td><strong>Lack of Awareness</strong></td>
<td>Benefits of efficiency; Availability of programs</td>
<td>Unfamiliar with using financing; Availability of financing; Eligibility</td>
</tr>
<tr>
<td><strong>Split Incentives/Short Tenancy</strong></td>
<td>Owner-renter split incentives; Long paybacks</td>
<td></td>
</tr>
<tr>
<td><strong>Risks</strong></td>
<td>Performance risk</td>
<td>Default and damaged credit; Aversion to debt</td>
</tr>
</tbody>
</table>
FINANCING TOOLS AVAILABLE

EE Financing for LI Residential

- Traditional
  - Unsecured Loans
  - Secured Loans

- Specialized
  - On-Bill
  - R-PACE
  - Service Agreements (ESA/MESA)
## Financing Product Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Financing Products</th>
<th>Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stretch Up-Front Costs</td>
<td>All financing (Traditional and Specialized)</td>
<td>Insufficient capital</td>
</tr>
<tr>
<td>Alternative Underwriting</td>
<td>On-Bill, PACE</td>
<td>Insufficient credit; Unaware of eligibility</td>
</tr>
<tr>
<td>Pay on Utility or Tax Bill</td>
<td>On-Bill, PACE</td>
<td>Unfamiliar with financing</td>
</tr>
<tr>
<td>Cash Flow Positive Rules</td>
<td>On-Bill, PACE, ESA</td>
<td>Insufficient capital; Risk of default</td>
</tr>
<tr>
<td>Transfers</td>
<td>On-Bill, PACE</td>
<td>Owner-renter split incentives; Long paybacks</td>
</tr>
<tr>
<td>Meter Attachment</td>
<td>On-Bill</td>
<td>Aversion to debt</td>
</tr>
<tr>
<td>Guarantees</td>
<td>On-Bill, ESA</td>
<td>Risk of default; Aversion to debt</td>
</tr>
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</table>
Approximately 75% of participants low income

On-bill tariff: can transfer and is not considered debt of the customer

Project must pencil out as cash-flow positive; Actual household bill savings have exceeded targets.

About 120 projects since starting in 2015; no defaults to date—loan loss reserve set up
POSIGEN

- 75% of participants are <100% AMI
- Works through trusted partners
- Offers low payments and a cash-flow positive guarantee
- Uses alternative underwriting method
- Since 2011, 7,500 loans in LA, NY and CT
- Defaults under 1%

<table>
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<tr>
<th>TRUST</th>
<th>RESOURCES</th>
<th>AWARENESS</th>
<th>TENANCY</th>
<th>RISK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addressed</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
KEY TAKEAWAYS

- Financing is being successfully used by some programs to overcome some challenges to efficiency adoption in low income households.

- *Program* design—particularly how to overcome challenges of trust and awareness—is crucial to reaching low income households.

- Strong consumer protections are needed when steering financing to low income households.
CONTACT INFORMATION

Greg Leventis
(510) 486-5965
Lawrence Berkeley National Laboratory
gleventis@lbl.gov

Johanna Zetterberg
(202) 288-7414
Coordinator for SEE Action Network
Johanna.Zetterberg@ee.doe.gov

Steve Dunn
(720) 356-1527
U.S Department of Energy
Steve.Dunn@ee.doe.gov

Report will be posted at:
Lawrence Berkeley National Laboratory: www.emp.lbl.gov
SEE Action Network: www4.eere.energy.gov