Innovations in Residential Financing Workshop

Thursday, August 23rd, 8:30-10am
Today’s Speakers

- **Kerry O’Neill**, Vice President, Residential Programs
  - *Connecticut Green Bank*

- **Heather Braithwaite**, Vice President – Strategy and Development
  - *National Energy Improvement Fund*
Overview: Why Offer Residential EE Financing?

- **Reach more customers**
  - The majority of residential households do not have funds to complete comprehensive residential EE improvements

- **Leverage limited funds**
  - Financing can use private capital that leverages limited public funds

- **Complement rebates and/or tax credits**
  - Financing offered in conjunction with rebates can reduce first cost barrier and payback time

- **Enable more households to make upgrades**
  - Programs can offer loan products to reach a wider range of households, including low-moderate or credit-challenged
DOE Residential EE Financing Resources

- **Residential Program Solution Center**
  - Financing handbooks: design, implement financing programs using best practices, case studies, and tips for success

- **State and Local Solution Center**
  - Pay for Energy Initiatives section highlights and describes financing mechanisms and strategies, including on-bill, loss reserves, revolving loan funds and PACE

- **Reports**
  - Berkeley Lab:
    - [Energy Efficiency Financing for Low- and Moderate-Income Households](#)
    - [Current Practices in Efficiency Financing: An Overview for State and Local Governments](#)

  - SEE Action:
    - [Energy Efficiency Financing Program Implementation Primer](#)
Kerry O’Neill
Vice President, Residential Programs
Expanding Access to Clean Energy through Affordable Financing

Better Buildings Summit: Innovations in Residential Financing
Connecticut Green Bank
Delivering Results for Connecticut

- **Investment** – mobilized nearly $1.3 billion of investment into Connecticut’s clean energy economy so far, using a 8:1 leverage ratio

- **Energy Burden** – reduced the energy burden on over 30,000 households and organizations, including “beyond parity” for LMI solar

- **Jobs** – created over an estimated 16,000 total job-years – 6,200 direct and 9,700 indirect and induced*

- **Clean Energy** – deployed more than 285 MW of clean renewable energy helping to reduce over 4.6 million tons of greenhouse gas emissions that cause climate change

**Private investment drives economic growth**
Creates jobs, lowers energy costs, and generates tax revenues

**REFERENCES**
CT Green Bank data warehouse report from July 1, 2011 through February 28, 2018
*62,500 private non-farm jobs created in the state over 5 years since Green Bank creation mid-2011. Green Bank statistics are in job-years; “total jobs” include direct, indirect and induced. CT DOL statistics are aggregated from monthly point-in-time estimates. CT Department of Labor - [http://www1.ctdol.state.ct.us/lmi/privatesectoremployment.asp](http://www1.ctdol.state.ct.us/lmi/privatesectoremployment.asp)

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Multifamily Programs

Technical assistance and financing to help owners save money on energy, increase property values, and improve tenants’ safety & comfort.

Pre-Development Resources

Sherpa Loan
- Designated service provider
- Standardized process & fee schedule

Navigator Loan
- Client managed contractor(s)
- Customized technical services

Project Financing

LIME
- Low Income Multifamily Energy
- Affordable
- Unsecured

Solar
- Solar projects only
- Commercial solar lease

Catalyst Fund
- Flexible low-cost financing
- Energy & health/safety

Results: 65 projects for $53 million impacting ~4,400 units
Affordable Multifamily Housing
Unlocking Cash Flows with Unsecured LIME Loan

East Meadow Condo Association, Manchester, CT

<table>
<thead>
<tr>
<th>Description:</th>
<th>Lighting, boilers, roof replacement, insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Project Costs:</td>
<td>$654,000</td>
</tr>
<tr>
<td>Utility Incentives:</td>
<td>$34,000</td>
</tr>
<tr>
<td>Financed:</td>
<td>$620,000</td>
</tr>
<tr>
<td>Estimated Annual Savings:</td>
<td>$79,000</td>
</tr>
<tr>
<td>Annual Debt Service:</td>
<td>$53,000, 1.48 DSCR</td>
</tr>
<tr>
<td>Financing Terms:</td>
<td>20 years, 6.00%</td>
</tr>
<tr>
<td>Payback Period:</td>
<td>7.8 years</td>
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www.ctgreenbank.com/our-stories/#multifamily

Energy improvements yield significant savings, unlocking cashflows that cover debt service – often for additional improvements such as needed structural, health or safety work.
Transformative Naturally Occurring Affordable Housing Project

Success Village Co-Op, Bridgeport

<table>
<thead>
<tr>
<th>Description:</th>
<th>964 units, WWII workers housing</th>
</tr>
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<tbody>
<tr>
<td>Annual Heating Costs:</td>
<td>$1.8M (2015)</td>
</tr>
<tr>
<td>Potential Energy Upgrades:</td>
<td>Central steam boiler system, steam pipe network, unit insulation</td>
</tr>
<tr>
<td>Health &amp; Safety Issue:</td>
<td>Asbestos contamination</td>
</tr>
</tbody>
</table>

Energy improvements yield significant savings, unlocking cashflows that cover debt service – often for additional improvements such as needed structural, health or safety work.
## West Gate Apartments, 515 West Ave., Bridgeport

<table>
<thead>
<tr>
<th>Description:</th>
<th>48 total units with two commercial spaces (58,994 sqft)</th>
</tr>
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<tbody>
<tr>
<td>Energy Efficiency Measures:</td>
<td>Increased insulation in wall, floor, roof; increased window, water heat and heating efficiency;</td>
</tr>
<tr>
<td>Energy Upgrades:</td>
<td>Adding solar through PPA</td>
</tr>
</tbody>
</table>
| Total funds:             | $391,300  
  Green Bank Debt Capital - $250,000, Green Bank Forivable Loan - $37,500 |

Pre-development and term capital enables a strong nonprofit developer to include high performing green features for project supporting very low income families and homeless veterans.
Solar For All with PosiGen
Lease & ESA for Single Family LMI Market

PosiGen Co-investment: $8.5 million in Green Bank capital leveraged to create a $45 million fund

Home
(New Haven – Oil Heat)
$59,250 HHI
High Energy Costs
High Energy Burden

Solar PV
(Lease)
$60 to $110/month Lease
Solar $ Savings
Moderate Energy Burden

Energy Efficiency
(ESA)
$10/month ESA Energy Savings
<<Additional Savings>>
Solar + EE $ savings
Reasonable Energy Burden

Target $500 a year in savings after financing.
Solar for All Campaign Progress

✓ 1,600+ contracts since 2015, ~10 MW of solar PV
✓ ~2/3 of contracts are LMI (getting the LMI tiered incentive)
✓ 75% of projects in census tracts <80% AMI

Energy Efficiency Progress

✓ 99.9 % of households get Direct Install EE measures, 19,500 MMBTUs saved
✓ 69% of households also undertake “deeper” energy efficiency projects through $10 ESA payment/month for 20 years
Smart-E Loan for Homeowners with Network of Local Lenders & Contractors

Quick, Easy, Affordable

- Unsecured personal loan, no application fee, no prepayment penalty
- Low-interest with flexible terms and fixed monthly payments
  - 2nd loss reserve used to achieve below market rates and longer terms
- 40+ energy improvements can be financed
  - Boilers, Furnaces, Heat Pumps, Central Air, Insulation, Solar, EV Chargers and more!
  - Loan amounts from $500-$40,000
- 25% of Loan can be used to address health & safety, appliances, “other”
- Working capital built in for contractors

<table>
<thead>
<tr>
<th>Loan Terms</th>
<th>5-yr</th>
<th>7-yr</th>
<th>10-yr</th>
<th>12-20-yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.49%</td>
<td>4.99%</td>
<td>5.99%</td>
<td>6.99%</td>
<td></td>
</tr>
</tbody>
</table>

- **Standard**: 640+ FICO, 40-45% DTI
- **Credit-Challenged**: 580+ FICO, 50% DTI
Smart-E Marketing Resources for Program, Lenders, Contractors

- Website with lender landing pages
- Smart-E co-branded collateral
  - Counter Displays with take-one/tri-fold
  - Bill stuffers
  - Posters, retractable banners
- Co-branded lender e-blasts and Facebook posts
- Co-branded print opportunities for lenders and contractors
  - Direct mail pieces, print ads
  - Partners would pay for in whole or part
- Social, digital and earned media campaigns with seasonal content
- Video testimonial playlist
  - https://www.youtube.com/watch?v=whte1PSdne0&list=PLEGDnIErUN6VAXIUcLa5iiG6_wcz1z4IV

The Meyer’s expect to save $1,300 annually thanks to Smart-E. Just think how much you can you save!
Contractor Engagement Strategies

Nurture contractors, show them love!

- Contractor matchmaking events and conferences
- Quarterly “Coffee and…” with utilities
- Recognition programs
- “Road shows”
- Be responsive!
Smart-E Results in Connecticut

- **2,900** closed loans totaling **$51 million** of investment
  - 1,500 financed with .99% special offer ($28M)
  - 425 financed with 2.99% special offer ($10M)
- **40,000 MMBTUs** saved, **7.7MW** of solar PV
- **$17,500** average amount financed
- Average FICO is **735**, trending down, DTI 30%
- Approaching **market penetration parity** across income-banded census tracts
- Superior portfolio performance

<table>
<thead>
<tr>
<th>TOP SMART-E MEASURES</th>
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<tbody>
<tr>
<td><strong>Measure Category</strong></td>
</tr>
<tr>
<td>Solar PV</td>
</tr>
<tr>
<td>Boiler</td>
</tr>
<tr>
<td>Insulation</td>
</tr>
<tr>
<td>Other*</td>
</tr>
<tr>
<td>Ductless Heat Pump</td>
</tr>
<tr>
<td>Furnace</td>
</tr>
<tr>
<td>Central AC</td>
</tr>
<tr>
<td>Hot Water Heater</td>
</tr>
<tr>
<td>Windows</td>
</tr>
<tr>
<td>Air Source Heat Pump</td>
</tr>
<tr>
<td>Electric Heat Pump Water Heater</td>
</tr>
<tr>
<td>Geothermal Heat Pump</td>
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*Other may include doors, appliances, or health and safety remediations
Using Special Promotions with Market Transformation in Mind

Goal: Use a 7 month 0.99% interest rate buydown to achieve lasting impacts on the market and

1. **Support state policies** to drive customer awareness of specific technologies/packages
   - Heat pumps, solar +, going deeper, natural gas conversions

2. Create **customer “pull” with contractors** to recruit new companies to Smart-E

3. **Deepen contractor engagement** with Smart-E

<table>
<thead>
<tr>
<th><strong>During Campaign</strong></th>
<th><strong>After Campaign</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• 6x increase in volume</td>
<td>• Volume didn’t collapse!</td>
</tr>
<tr>
<td>• 127 new contractors, bringing total to 400</td>
<td>• Next quarter, did as much volume as the <em>entire year</em> before the campaign</td>
</tr>
<tr>
<td>• 85% of contractors used product during campaign</td>
<td>• Trained 15 new contractors</td>
</tr>
<tr>
<td>• vs. 60% in the year before</td>
<td>• Contractors now funding their own interest rate buydowns with lenders</td>
</tr>
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</table>
**Sophisticated Credit Enhancement**

- Loan Loss Reserve (LLR), structured as 2nd loss after lender first loss of 1.5% of portfolio
- LLR account as a % of each loan issued:
  - Class A (680+ FICO) is 7.5%
  - Class B (<680 FICO) is 15%
- 100% of account for loss mitigation in excess of retained loss

**LLR performance at end of 2016 – too good!**

- Only 1 payout for $20K
- 0.25% charge-offs, 0.62% delinquencies
- Decline rate was high – 28%
- Average FICO 753

“Spent” the good performance on broader underwriting criteria → bring down declines and serve more customers

- Got longer terms too (up to 15/20 years)

**Spring 2017 Credit-Challenged Smart-E Launched**

- 580+ FICO with a 50% DTI, DTI waived for 680+ FICO
- 6 lenders: CDFI, all credit unions, 1 bank

Last 18 months… **22%** decline rate, **733** avg. FICO
Performance is similar (but still early)
Where Next?

A spin-out sparked by the Connecticut Green Bank

• Leveraging the foundation of CT’s success

Bringing suite of products aimed at underserved markets – LMI and unconventional credits – to a broader audience

• Multifamily programs

• Commercial Solar PPA for underserved credits (housing authorities, nonprofits, municipal buildings, small commercial

• Single family LMI solar – PosiGen and more

• Smart-E – partnering with MI Saves to merge best of both programs and develop a new platform
Thank You
www.ctgreenbank.com

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(860) 257-2884

CEO, Inclusive Prosperity Capital, Inc.
Heather Braithwaite
Vice President − Strategy and Development
It’s Been Almost a Decade!

11) Only a few financial institutions have participated in energy efficiency or renewable energy lending programs so far, and these tend to be specialty lenders or investors such as AFC First in Pennsylvania or Renewable Funding in Berkeley, California. It is notable that these specialty lenders or investors either hold on to the loans to maturity or have a specialty secondary market (such as the Pennsylvania Treasury) to which they sell loans. Similarly, relatively few utilities offer financing for energy efficiency measures or projects. Broader participation from banks, utilities, and other lenders will be needed in order to move energy efficiency financing into the mainstream.

Taken from the publication: “Recent Innovations for Financing Clean Energy”, Brown & Conover 2009.
Smarter, Better, Faster
Access to Financing for Energy Efficiency
The #1 Question for Consumers Considering Home Energy & Other Major Upgrades:

“Can we afford it?”
THE ISSUE AND OPPORTUNITY

Homeowners and Businesses need **affordable payment options** for basic home energy improvements.

- **Even Basic Energy Improvements Are Expensive**
  Homeowners need $2,500 up to $25,000 to pay for replacement or upgrade of heating, air conditioning, insulation, roofing etc.

- **Homeowners Have Tight Budgets**
  Homeowners are lucky if they have as much as $3,000-$7,000 in accessible cash to pay for energy efficiency upgrades. So they delay the upgrade or install the cheapest, least efficient model possible.

- **And Limited Financing Options on How to Pay**
  Credit cards and short term “promotional” financing are the lead options currently available but don’t address buyers who are looking for longer term affordability for a major capital purchase - and home equity loans can’t be processed in the short time frame often required.
The National Energy Improvement Fund (NEIF) Solution – The NEIF Effect

Smarter, Better, Faster
Access to Financing for Energy Efficiency
Smarter
Leveraging years of program and contractor-driven energy finance experience to offer the best possible experience for contractors, borrowers, sponsors and partners.

Better
Improved access to lower cost capital to provide better rates and lower costs to contractors and borrowers, with a focus on “true fixed rate” financing versus promotional teaser terms.

Faster
Incorporating best-in-class technology to provide point of purchase decisioning, paperless process and electronic, rapid funding plus a complete suite of origination, reporting & servicing portals for speed and efficiency.
• NEIF is structured as a mission-based, public benefit Limited Liability Corporation

• Certified “B-Corp” Status pending

• NEIF’s mission is to promote energy savings by increasing the affordability of energy efficiency improvements for consumers and businesses
Built on the foundational work of energy efficiency financing pioneers, AFC First Financial Corp and Harcourt Brown and Carey

PETER KRAJSA

Co-Chair

Previously CEO of AFC First, a ground breaking energy efficiency lender founded in 1947 with over 6,000 participating contractors, creators of Pennsylvania’s Keystone HELP, the national EnergyLoan program, and many other market-based and state and utility backed financing programs.

MATTHEW BROWN

Co-Chair

Founder and Principal of Harcourt Brown & Carey and HBC Energy Capital, the nation’s top designer of energy finance programs for states and utilities including California, Michigan and many others.
Laura Nelson  
**COO**
Previously CFO at AFC First, instrumental in national Warehouse for Energy Efficiency Lending, VP at Renew Financial and Deutsche Bank.

Tessa Shin  
**VP Lending and Programs**
Former Director of Lending and Programs at AFC First and Renew Financial.

Teri Stoffey  
**VP Accounting and Servicing**
Former Accounting Manager, Renew Financial and Director of Process and Reporting at AFC First

Heather Braithwaite  
**VP Strategy and Development**
Senior Associate, HBC. Government and utility finance program expert.

Jeremy Epstein  
**VP Commercial Finance**
Senior Associate, HBC. Residential and commercial finance program expert.

Randy Bak  
**Senior Business Development Director**
National sales and contractor management professional.
The NEIF Team Has Been Innovators in Some of the Nation’s Most Successful Energy Financing and Partner Programs

- Pennsylvania Treasury (Keystone HELP)
- West Penn Power Sustainable Fund
- Sustainable Energy Fund
- Building Performance Institute (BPI)
- Efficiency Maine
- Connecticut Green Bank
- Eversource
- United Illuminating
- Michigan Saves
- Energy Kinetics
- P&N Distribution (Rheem)
- PECO
- WHEEL

- FannieMae National EnergyLoan
- HUD PowerSaver
- California Treasurer & Utilities
- Kentucky Home Performance
- Maryland Clean Energy Fund
- Delaware Sustainable Energy Utility
- Illinois Energy Association
- ComEd
- Ameren
- Progress Energy
- Atas International
- Knauf Insulation
- Xcel Energy
- AEP
With a Lending & Servicing Legacy Dating to 1947, the NEIF Team has Been Responsible for over $700 Million in Energy Financing

- 1947: AFC First founded as consumer lender
- 1999: Fannie Mae Approved Energy Lender
- 2000: National EnergyLoan program
- 2005: Keystone HELP with West Penn Power Sustainable Energy Fund
- 2006: PA Keystone HELP with Pennsylvania Treasury
- 2008: Nation’s first state-sponsored solar leasing program with CT Green Bank
- 2010: Michigan Saves with credit union capital
- 2011: National pilot lender HUD PowerSaver, Maryland, Delaware, Ohio Kentucky and Efficiency Maine
- 2011: Commercial lending program for Colorado clean energy manufacturing
- 2012: Connecticut On-Bill financing with two investor owned utilities
- 2012: Illinois On-Bill financing with two investor owned utilities
- 2013: California state-wide residential, commercial and multi-family
- 2015: New York Power Authority municipal finance program
- 2015: Surpasses $500 million in funded loans, over 6000 approved contractors
- 2015: Foundation of WHEEL, world’s first securitization of energy efficiency loans
WHAT NEIF OFFERS
The Highest Standards

Time-tested National Credit Standards promote consistent program design and loan performance.

• Credit available to the broadest possible market at established, historical baseline standards with 15 year proven performance and loan loss of less than 1% annually

National improvement standards for single-measure and enhanced energy improvements

• Established baseline standards, e.g., ENERGY STAR or equivalent
• Expanded programs for enhanced improvements

Contractor and Sponsor standards

• Promote consistent and qualified installations, lending compliance, borrower protections and reinforcing program integrity.
WHAT NEIF OFFERS
Contractor-driven energy lending experience +
Best technology + program support
Leveraging contractor-driven lending experience, NEIF has partnered with GoldPoint Systems to provide the most seamless and compliant user experience for contractors, consumer and sponsors.

• Instant approval
• Contractor portal and point of purchase sales tools
• Paperless process
• Rapid funding
• Full lending compliance
• Complete servicing system
• Full contractor and sponsor reporting
• State-of-the-art contractor search and lead generation features
WHAT NEIF OFFERS
Point-of-Purchase Phone and Tablet Contractor Sales and Application Tools, Contractor and Sponsor Tracking Portals, On-Line Consumer Payments and More
THE NEIF EFFECT

What is it?

• A better, sustainable source of loan capital

• Alliances and integration with state green banks, utilities & others

• State of the Art contractor, consumer and sponsor lending, servicing and reporting technology

• Experienced, best practices in contractor, distributor, manufacturer and program support

• Unparalleled risk management and lending and servicing compliance
NEIF Programs

Energy Efficiency/Renewable Financing for RESIDENTIAL/HOMEOWNER

Energy Efficiency/Renewable Financing for COMMERCIAL/INDUSTRIAL/INSTITUTIONAL

Rebate Advance Funding for GOVERNMENT/MANUFACTURER/DISTRIBUTOR/UTILITY
WHAT NEIF OFFERS

Innovative Home Energy Improvement Financing

• $2,500 to $25,000 unsecured, fixed rate loans for qualifying energy improvements
• Zero percent, low rate and low monthly payment plans and other options available
• Enhanced terms available with NEIF program partners (utilities, green banks & others)
• Instant approval, paperless process, rapid funding
• Contractor portal and point of purchase sales tools
• **Full lending compliance and complete servicing system**
• State-of-the-art contractor search and lead generation features
WHAT NEIF OFFERS

Innovative Business / Commercial financing

• Matching the right finance products to projects and making the process easy
• $2,500 to multi-million-dollar projects
• Commercial leases, service agreements, equipment finance agreements
• On-line application and tracking portal, rapid approvals
• Enhanced terms available with NEIF program partners (utilities, green banks)
WHAT NEIF OFFERS
Innovative Rebate Advance Funding

- Rapid advance payment to contractors on utility, product and program rebates
- Pilot launching Q3 2018 with the NJ HPwES program
- Currently holding conversations with interested partners
July 2017 Formally launched as benefit LCC with legacy roots from AFC First (founded 1947, merged with Renew Financial 2015) and HBC Energy Capital (Harcourt Brown and Carey, founded 2005)

Q3 2018 Launching Rebate Bridge advance program with NJ Clean Energy HPwES program

Q4 2018 Expected re-launch of Keystone HELP with PA Treasury in, potential NY Green Bank program

Q1 2019 Expected launch of market based and other state and utility programs
NEIF ACCOMPLISHMENTS to Date

- Assumed administration of Efficiency Maine financing (unsecured and PACE originations) and $12.5 million servicing book, July 2018
- Integrated with HBC Energy Capital commercial program (AEP, Rocky Mountain Power, Xcel Energy)
- Facilitated takeout of WHEEL facility by Amalgamated Bank, servicing to be assumed by NEIF
- Facilitated assumption of Eversource commercial on-bill program with CT Green Bank, servicing to be assumed by NEIF
Thank you!

Heather Braithwaite
VP – Strategic Development & Rebate Bridge
hbraithwaite@neifund.org