



Energy Technologies Area

Lawrence Berkeley National Laboratory

# 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

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# ABOUT SEE ACTION

**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*

# AGENDA

- ◆ 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

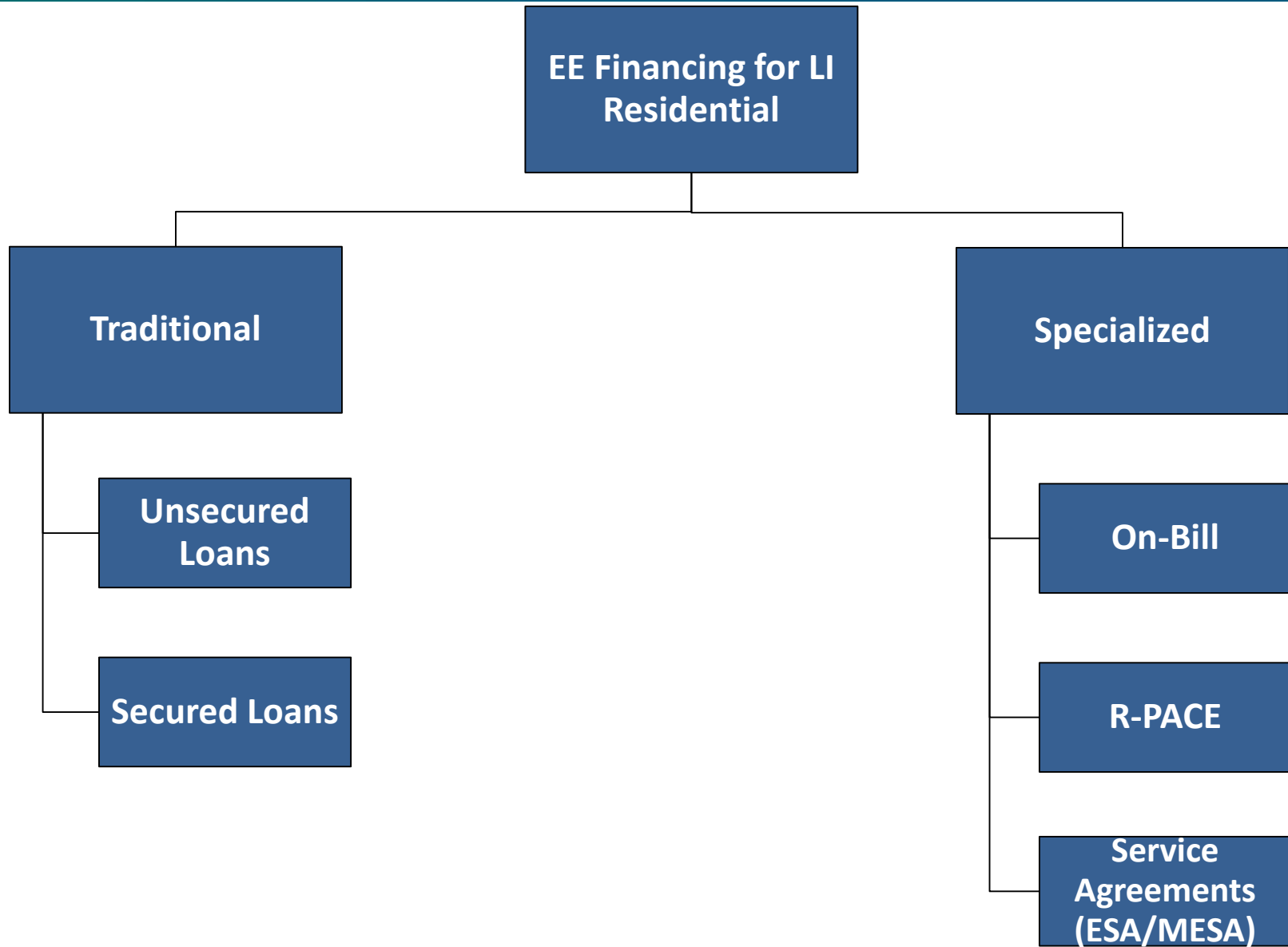
# LOW INCOME ENERGY BURDEN

INCOME CATEGORY	AVERAGE ANNUAL HOUSEHOLD ENERGY COSTS	DOLLARS SPENT ON ENERGY PER SQUARE FOOT	MEAN ENERGY BURDEN (% INCOME SPENT ON ENERGY)
NON-LOW INCOME	\$2,378	\$0.99/sq ft	2.3%
LOW INCOME	\$1,595	\$1.10/sq ft	7.8%

# CHALLENGES IN LOW INCOME HOUSEHOLDS

CHALLENGE	TO INCREASING EE	TO USING FINANCING
<b>LOW TRUST</b>	Utilities, contractors; Savings	Lenders
<b>INSUFFICIENT RESOURCES</b>	Capital; Time	Credit
<b>LACK OF AWARENESS</b>	Benefits of efficiency; Availability of programs	Unfamiliar with using financing; Availability of financing; Eligibility
<b>SPLIT INCENTIVES/ SHORT TENANCY</b>	Owner-renter split incentives; Long paybacks	
<b>RISKS</b>	Performance risk	Default and damaged credit; Aversion to debt

# FINANCING TOOLS AVAILABLE



# FINANCING PRODUCT FEATURES

FEATURE	FINANCING PRODUCTS	CHALLENGE
<b>STRETCH UP-FRONT COSTS</b>	All financing (Traditional and Specialized)	Insufficient capital
<b>ALTERNATIVE UNDERWRITING</b>	On-Bill, PACE	Insufficient credit; Unaware of eligibility
<b>PAY ON UTILITY OR TAX BILL</b>	On-Bill, PACE	Unfamiliar with financing
<b>CASH FLOW POSITIVE RULES</b>	On-Bill, PACE, ESA	Insufficient capital; Risk of default
<b>TRANSFERS</b>	On-Bill, PACE	Owner-renter split incentives; Long paybacks
<b>METER ATTACHMENT</b>	On-Bill	Aversion to debt
<b>GUARANTEES</b>	On-Bill, ESA	Risk of default; Aversion to debt




# ROANOKE ELECTRIC, UPGRADE TO SAVE

- ◆ 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



Roanoke Electric Cooperative

Your Touchstone Energy® Partner 

TRUST

RESOURCES

AWARENESS

TENANCY

RISK

Addressed



# 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%



	TRUST	RESOURCES	AWARENESS	TENANCY	RISK
Addressed	●	●	●		●

# 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



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