

Energy Efficiency Finance: Residential Policies and Programs in the U.S.

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IMT
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TRANSFORMATION

Residential Finance Overview

- **Benchmarking, codes, and national housing policy** driving demand for residential property improvements
 - **Broad menu of financing options** for single and multifamily housing
 - **Federal government** major player in single family finance
 - Multifamily finance provided by combination of **banks, insurance companies, and other real estate investors**

Single Family Finance - Unsecured Lending

Warehouse for Energy Efficiency Loans (WHEEL)

- Goal to create secondary market for residential clean energy loans

FHA PowerSaver Loans

- Financing for energy efficiency and renewable energy residential upgrades



Mortgage Underwriting

Home Energy Efficiency and Mortgage Risks

- Co-authored by IMT and UNC
- Default risks on average 32% lower for energy efficient homes

Energy Efficient Mortgages

- Finance cost effective energy improvements with mortgage



**ENERGY
EFFICIENT
MORTGAGE**



The SAVE Act

- Under SAVE, mortgage underwriters would include energy in the costs of homeownership, when calculating a borrower's *debt-to-income* ratio
- They would also include the *net present value (NPV) of future energy savings* in the valuation

Principal

+ **Interest**

+ **Taxes**

+ **Insurance**

+ **Energy**

The Complete Cost
of Homeownership

Multifamily Finance



- Average age of U.S. multifamily housing stock is about **40 years**
- Market players, including investors, vary depending on building size
- Affordable housing
 - Public, government-financed, private
- Market-rate housing

Affordable Housing One-Stop Shops

- Recent market development
- All-encompassing programs



- Finance only part of solution
- Technical assistance, project management also critical

GSE Multifamily Finance

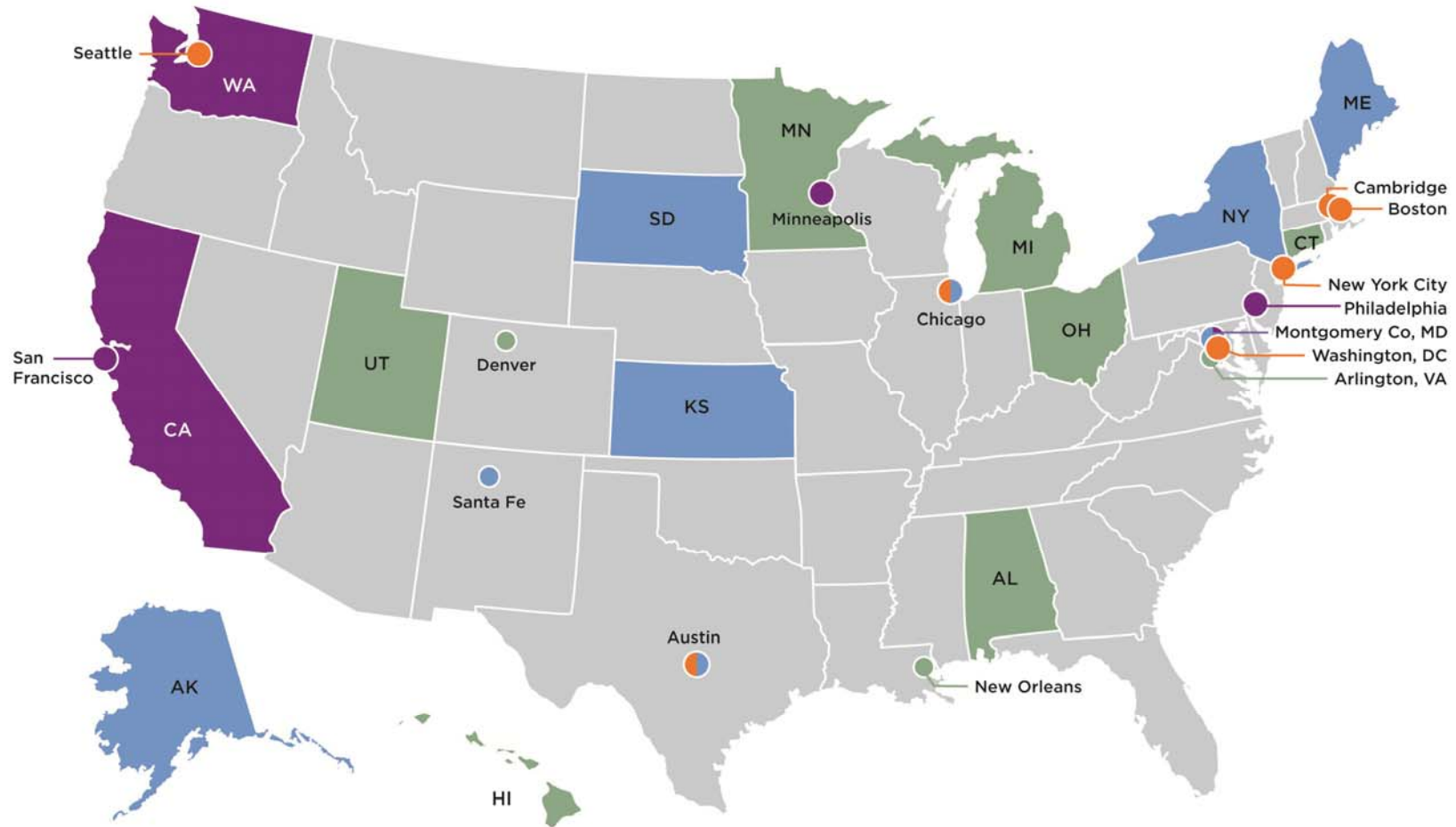


Fannie Mae Green Initiative

- Two green financing loans for owners
 - Green Preservation Plus and M-PIRE
- Multifamily 1-100 ENERGY STAR score
 - In some cities, property owners must report score to receive Fannie Mae Multifamily loan

Benchmarking Informs Decision-Making

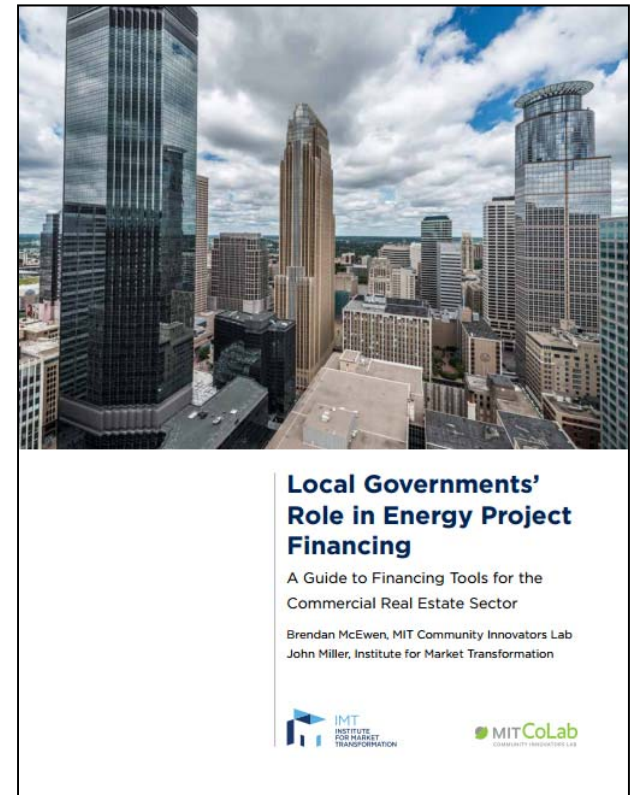
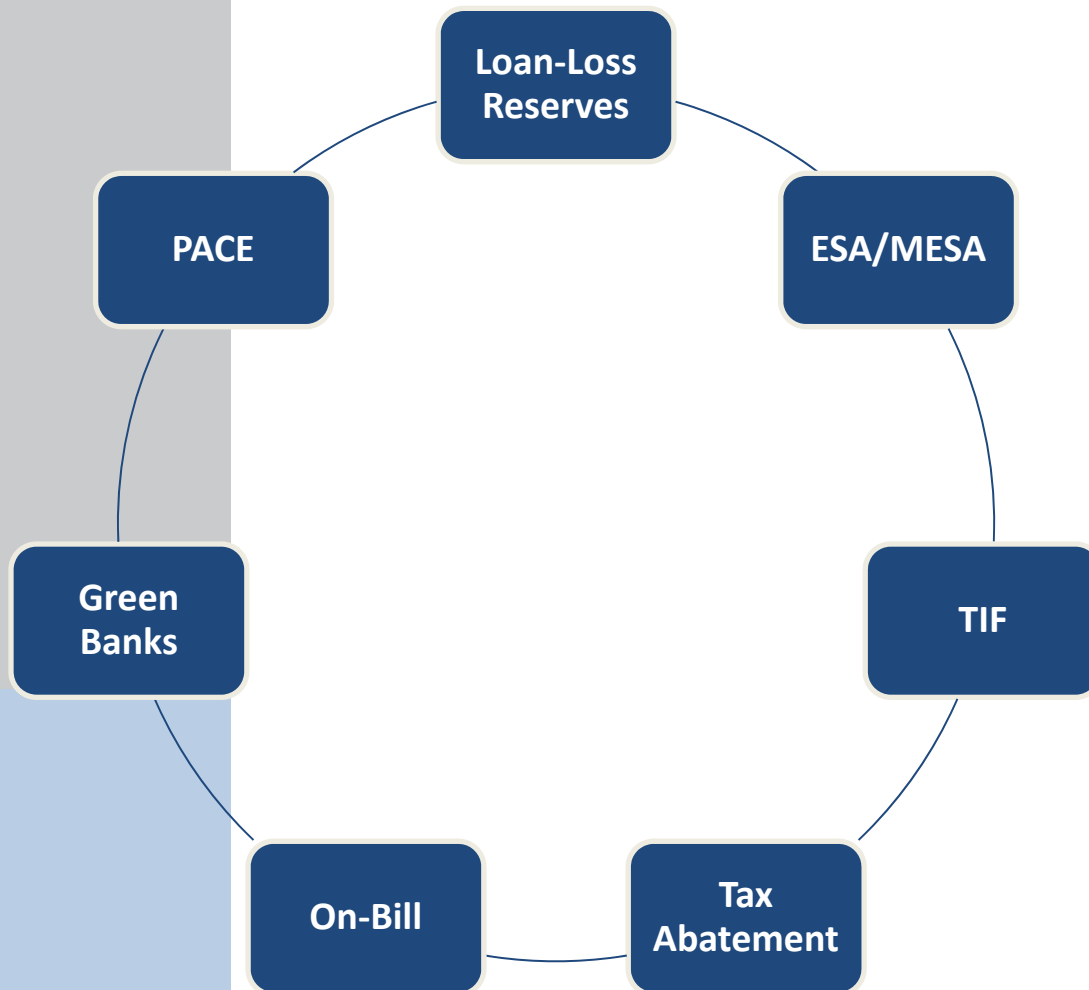
U.S. Building Benchmarking and Transparency Policies



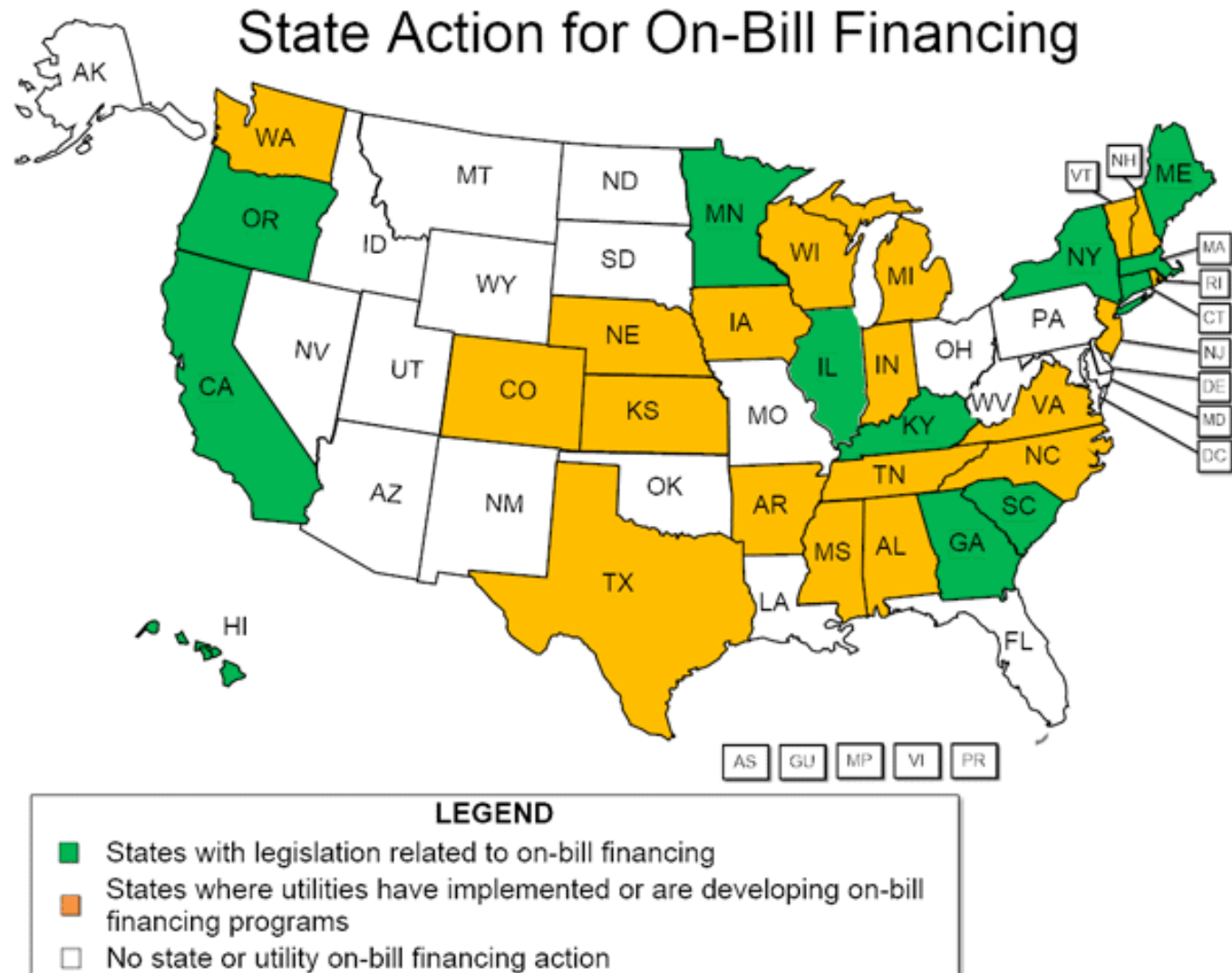
- Commercial policy adopted
- Commercial & multifamily policy adopted
- Public buildings benchmarked
- Single-family transparency adopted

Local Financing Options

- Many available models
- Cities have unique needs and existing capabilities



On-Bill Financing



Green Banks



CLEAN ENERGY
FINANCE AND INVESTMENT AUTHORITY

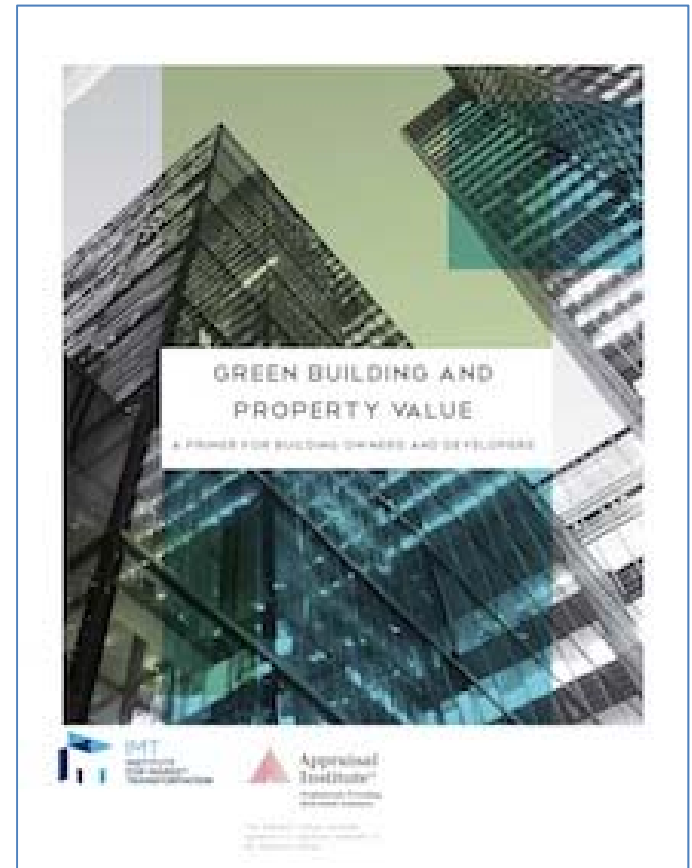
- **Low-interest, long-term** financing for clean energy projects
- Leverage **public funds** to attract **private capital**
- Reduce market inefficiencies


Additional Efforts

Greening the MLS

ENERGY EFFICIENCY + GREEN DESIGN + QUANTIFYING PERFORMANCE =
LOWER OPERATIONAL COSTS
SAVINGS & PREDICTABILITY
IMPROVES RESALE VALUE \$
GREATER RESILIENCY

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 AI Reports™ Form 820.04*	Client File #:		Appraisal File #:	
	Residential Green and Energy Efficient Addendum			
	Client:			
	Subject Property:			
	City:	State:	Zip:	



Community Reinvestment Act



The Big Picture

- Benchmarking policies gaining momentum
 - 10 cities, 2 states, 1 county
- 31 states plus DC have PACE enabling legislation
- On-bill financing implemented by utilities (or soon to be) in 23 states
- Commercial banks starting to grasp opportunity for EE finance