



Free Money and Where to Find It: Today's Hottest Sources for Multifamily Retrofits

Tuesday

3:45-5pm

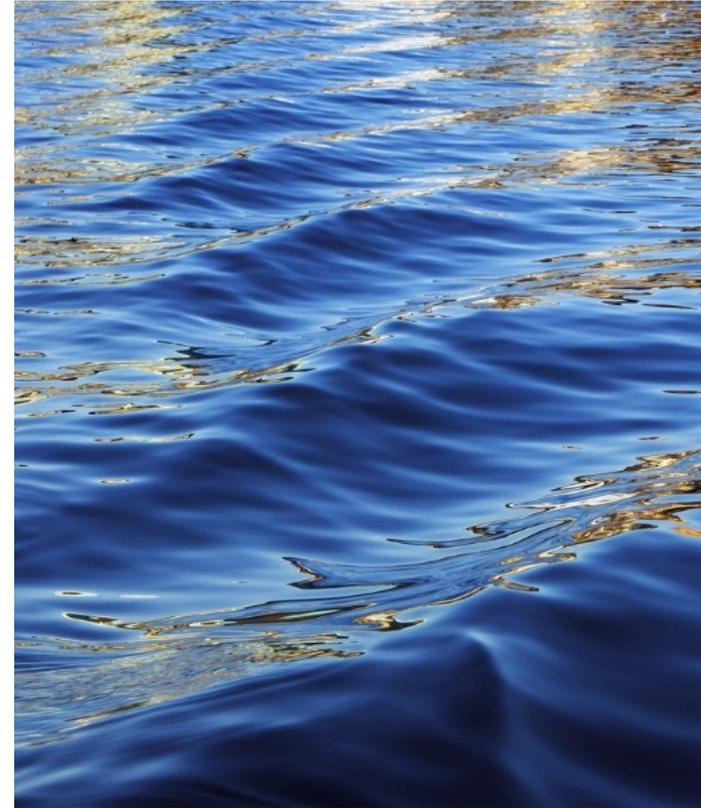


U.S. DEPARTMENT OF
ENERGY



Free Money and Where to Find It:

Today's Hottest Sources
for Multifamily Retrofits



Panelists

■ Speakers

- Becky Schaaf, Stewards of Affordable Housing for the Future
- Dick Santangelo, Apollo Engineering Solutions
- Stefen Samarripas, American Council for an Energy Efficient Economy

■ Moderators

- Julia Hustwit, U.S. Department of Housing and Urban Development
- Neil Paradise, U.S. Department of Housing and Urban Development – Philadelphia Regional Office



Today's Topics

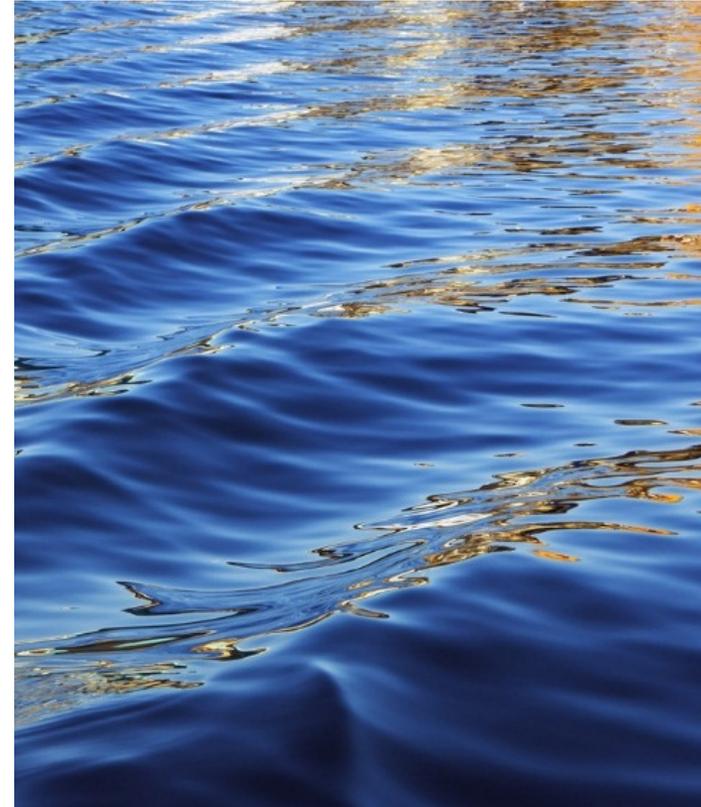
- Definitions – Common Understanding of Terms
- Utility Multifamily Program Models
- Privately Owned Assisted Housing – Barriers and Solutions
- Public Housing – Barriers and Solutions
- Cross-Cutting Solutions

Today's Objective

- Provide a rundown of ACEEE's nationwide study of utility provider incentives for the multifamily buildings sector
- Broad overview of other sources of funds for energy and water conservation
 - State Energy Programs,
 - Energy Performance Contracting,
 - Pay-for-Success,
 - Service Model Contract, etc.

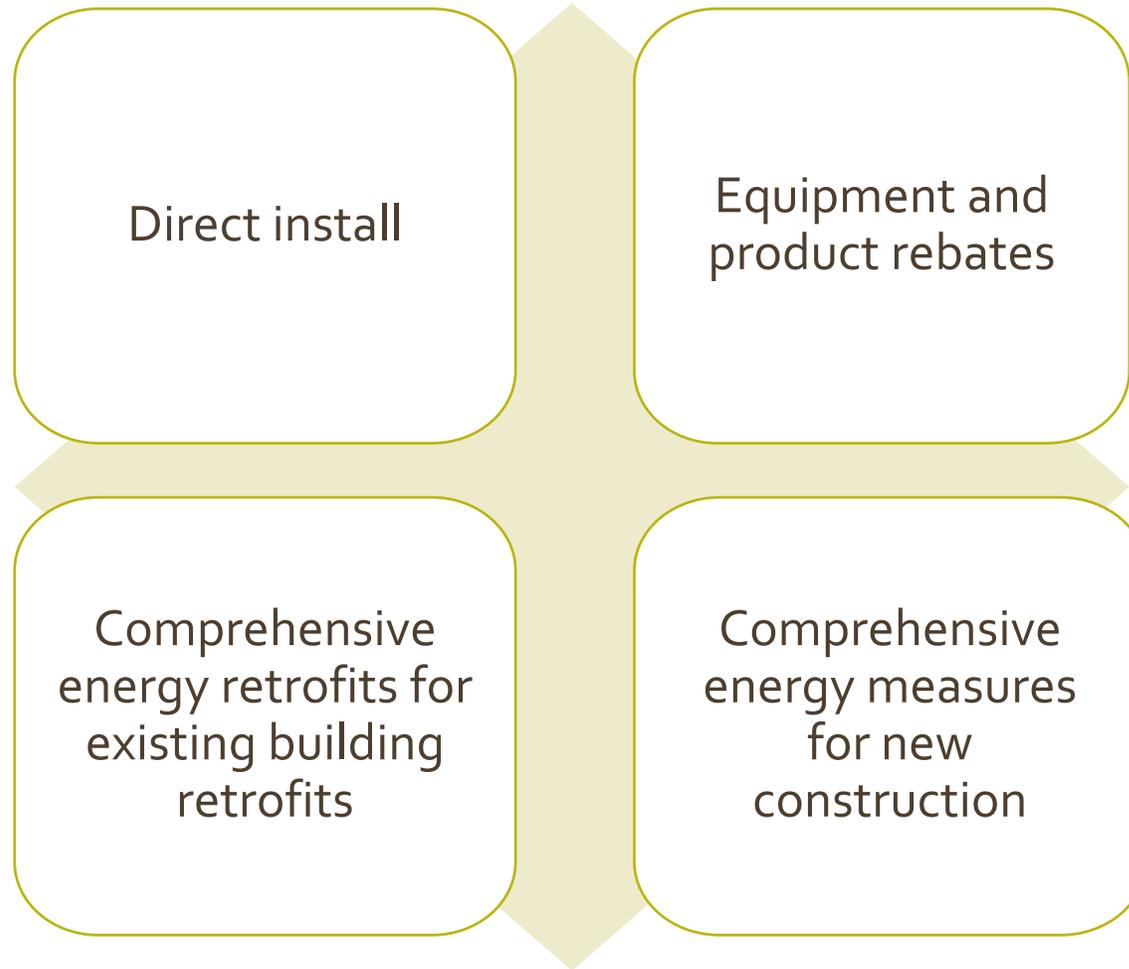
Definitions

- **Privately Owned Assisted Housing** – Housing that is government subsidized (e.g. Project Based Section 8 or 202/811 PRAC) but not government owned.
- **Public Housing** – Local Government-administered, federally subsidized (HUD).
- **Affordable Housing** – Housing is considered affordable if a household pays $\leq 30\%$ of income on rent + utilities. Affordable Housing frequently refers to housing that is subsidized to achieve affordability.
- **ECMs** – Energy Conservation Measures (plus water conservation and renewable energy).
- **Energy Performance Contracting** – A method for financing ECMs that relies on leveraging the long-term savings generated by the ECMs to repay the cost of installing energy and water conservation measures.
- **Service Contracts** – Contracts involving no purchases or installation; materials, installation, maintenance & upgrades are paid for SP; client pays a small fee for usage.



Utility Multifamily Program Models

Utility Multifamily Program Models



State Policy Drivers

- Energy efficiency resource standards (EERS)
- Energy efficiency spending
- Performance incentives
- Fixed cost recovery mechanisms
- Proscriptions against opt-out provisions for large customers



Image Source: Ben Gray, AJC 2016

Local Policy Drivers

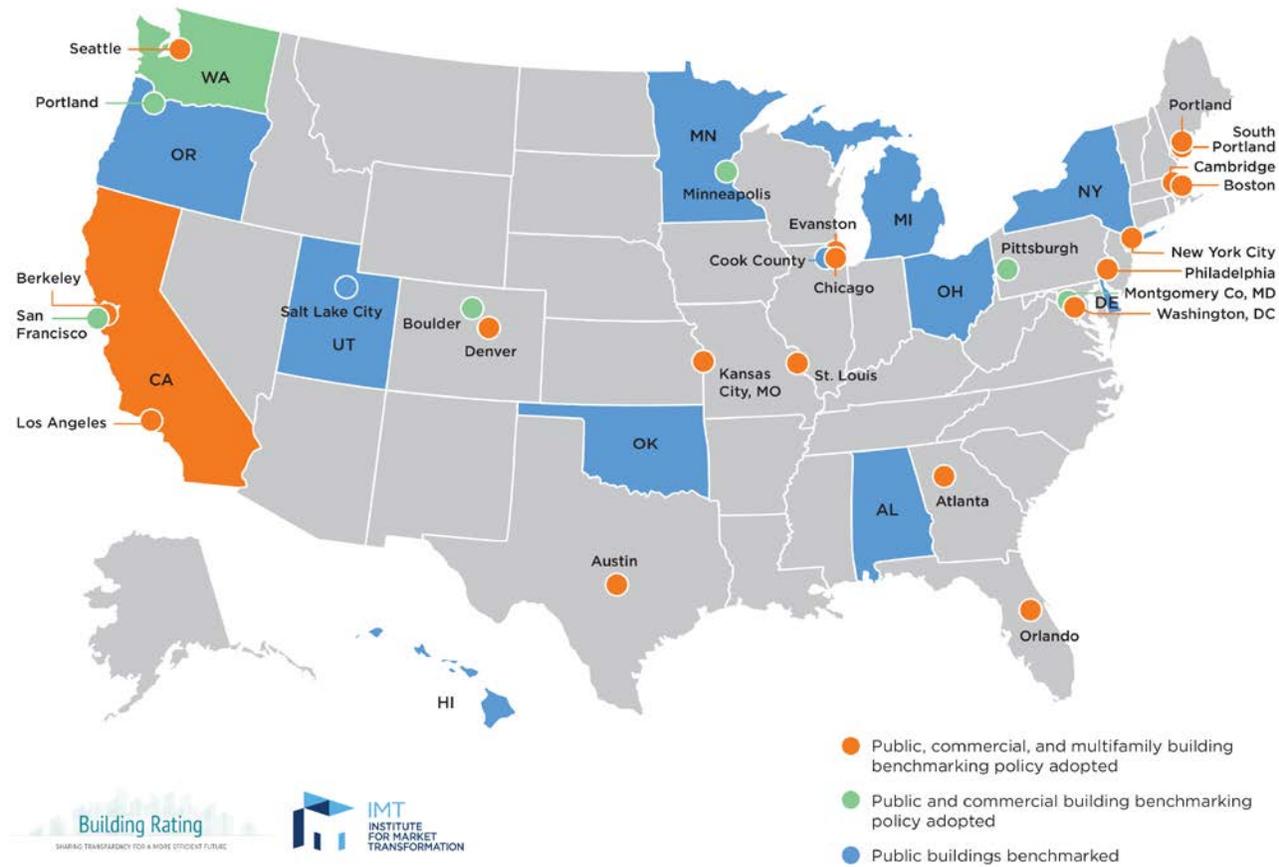
- Over the last several years, many cities have begun to adopt benchmarking ordinances for multifamily buildings
- These can encourage multifamily owners to seek out energy efficiency programs
- Many utilities have been encouraged to offer whole-building data to owners in these places



Image Source: Green Per Square Foot 2017

Local Policy: Cities with Adopted Benchmarking Ordinances

U.S. Building Benchmarking and Transparency Policies

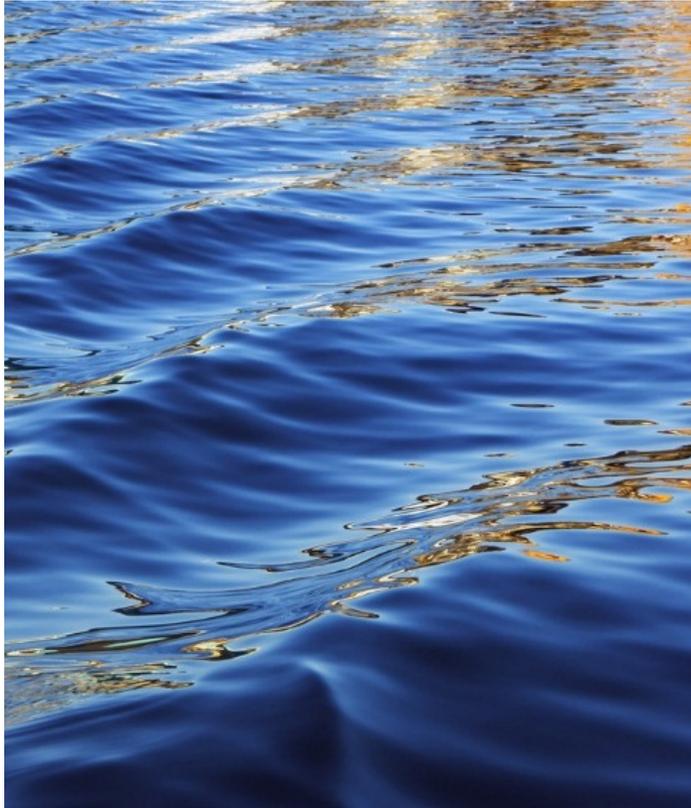


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Multifamily Program Characteristics

- 38 of the 51 largest multifamily markets have a multifamily program
- Half of these markets have access to either comprehensive retrofits and/or a combination of direct install measures and incentives.
- 15 markets have multifamily programs that specifically target buildings that serve low-income tenants.

Number of MSAs with:	
One or more multifamily programs	38
No multifamily programs	13
Substantially changed programs	12
Only direct installation services	6
Only rebates or incentives	5
Direct install and incentives	27
Comprehensive retrofits	25
Financing opportunities	12



Privately Owned Assisted Housing

Barriers and Solutions

The Opportunity

Financing that uses savings as the basis of payment unlocks a new source of capital



Internal Barriers

Capital

- Thin operating margins and reserves
- Highly leveraged properties
- Complicated Capital Stacks



Capacity

- Bandwidth - staffs are stretched thin
- Lack of expertise in efficiency



Structural Barriers

Split Incentives

- Classic split incentive between owners and tenants
- Double split incentive between owners and HUD
 - Tenant savings flow to HUD through UA reductions
 - Owner savings flow to HUD through rent reductions *in properties with budget-based rents*

Regulatory Restrictions

- Need for approvals
- Prohibitions on taking on debt (202s/811s)



Solutions – Past Experience

Energy Performance Contracts:

- Financing addresses the capital issue
 - Small loan amounts, high transaction costs
- ESCOs address the capacity issue
 - High cost, capacity limited to technical side, not structural barriers

On-Bill Finance/Repayment:

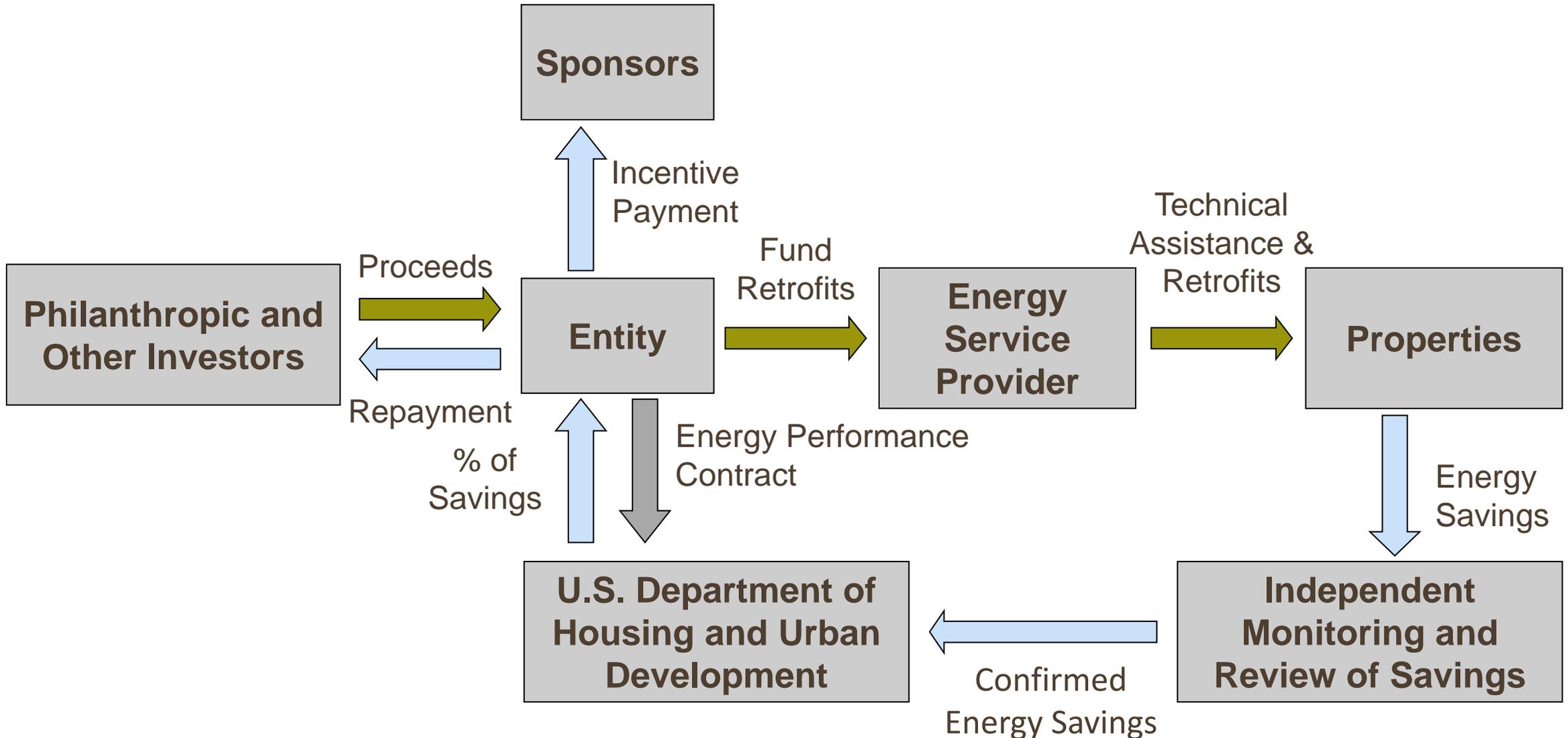
- Higher potential for unsecured debt
- Potential applicability to split incentive

New Solution – Pay for Success

- H.R.22 - FAST Act of 2015
 - TITLE LXXXI—Private Investment in Housing
- The Model: An intermediary / entity...
 - Raises capital to pay for retrofits
 - Hires companies to retrofit properties
 - Is paid by HUD on a performance contract basis
- Innovations
 - Addresses the split incentive!
 - Risk is spread across a portfolio of properties
 - Capital provider takes on risk



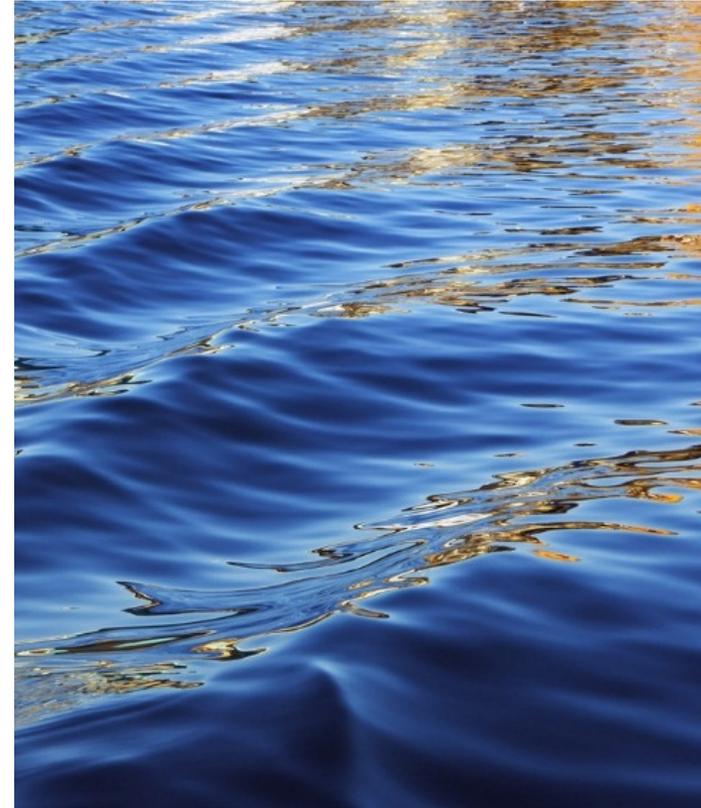
Pay for Success Flow Chart





Public Housing

Barriers and Solutions



Public Housing Solutions – Energy Performance Contracting - *HUD's Hidden Grant Program*

- New/repaired energy & water systems = reduced O&M Costs
- Lower utility costs = higher operating income
 - Freeing scarce funds for other needs
 - Higher Asset Value
- Improved resident health and comfort
- Reduced greenhouse effect
- Jobs for the local economy
- U.S. energy independence

HUD Energy Performance Contract Incentives



Frozen Rolling Base Subsidy

Pre-construction utility consumption level is frozen for term of contract. Up to 100% usage savings + increases as utility rates rise.



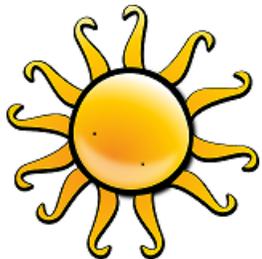
Add-on Subsidy

PHA receives annual subsidy from HUD for utility costs + EPC contract costs.



Tenant Paid Utility Incentive

Total Tenant Payment remains the same; utility allowance savings pay contract service costs for energy project.



HUD RRI Incentive – PIH Notice 2014-18

Under EPC, 100 percent is awarded for utility cost savings
No EPC, benefit is equivalent to 50 percent of utility cost savings

Key Challenges: Public Housing Barriers

- **Resources:** “Process is too complicated; 12-18 months installation; RAD option”
- **Expertise:** “Energy not core mission; lack of experience; where do I begin?”
- **Capital:** “PHAs risk averse; closed community of lenders; guaranteed savings
 - What collateral is available to secure the loan?
 - What impact will proration of funding have on debt service?
 - What is the impact to debt service if the PHA transitions to RAD?
 - Where is the guarantee in savings if my project is self-managed versus an ESCo-managed project?



What Do We Need to Consider?

- What Do We Need to Know?
 - Recent utility consumption
 - Condition of systems; recent replacements or repairs
 - Resident comfort, health and safety
 - Evidence of need for repairs or replacement, inefficient operations
- What Are Our Goals/Limitations?
 - Short-term vs. greater total benefits
 - Ability to self-fund from savings, some or all of the costs
 - Risk tolerance
 - Value to our institution of environmental goals

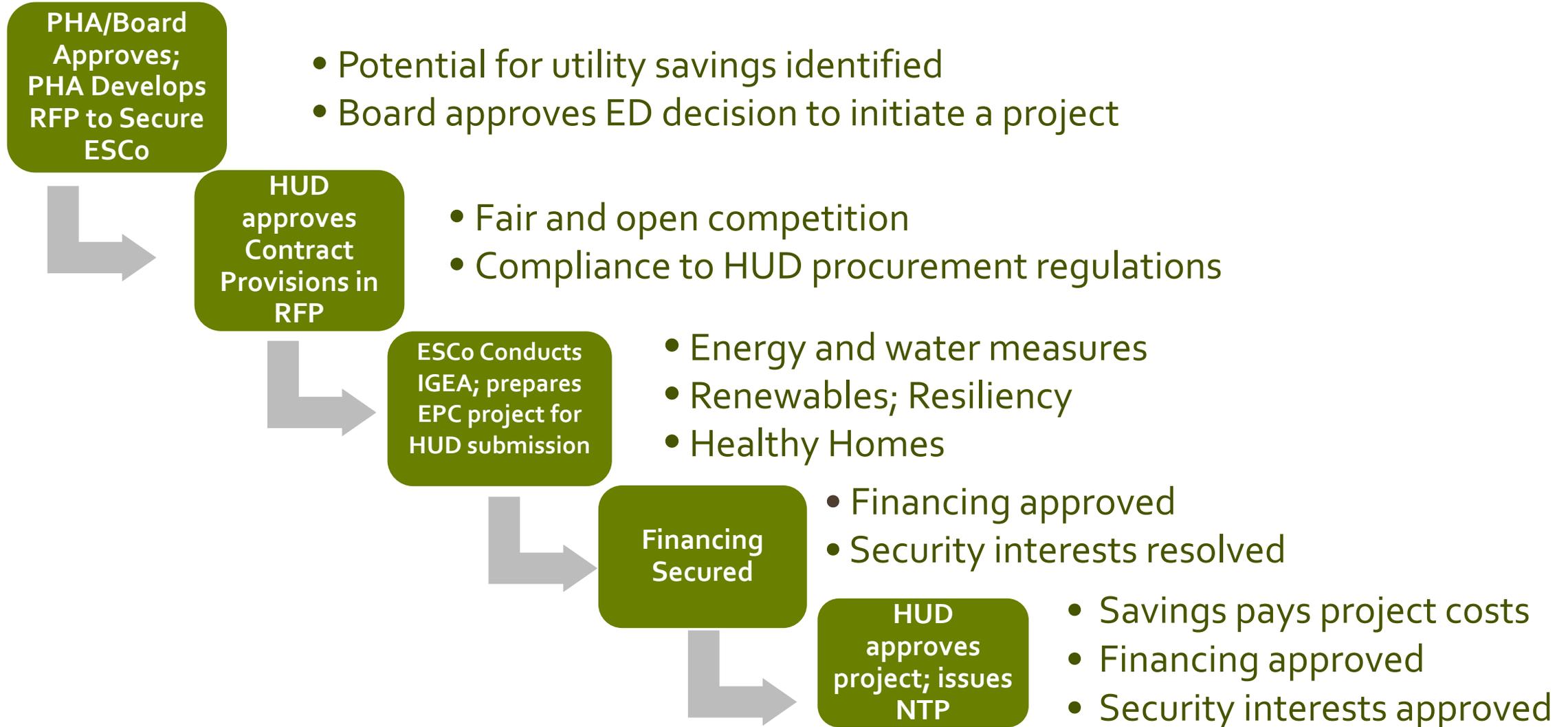


What Financing Options Do I Need to Consider?

- Energy Performance Contracts - Lease purchase agreements or long-term debt by third-party institutions
 - HUD incentives
 - Established and well capitalized market for EPCs
- Capital Fund or Capital Fund financing (limited incentives)
- Service Model Contract
- Power Purchase Agreements (PPA)
- Tax credit financing
- Grants (state, etc.); utility rebates

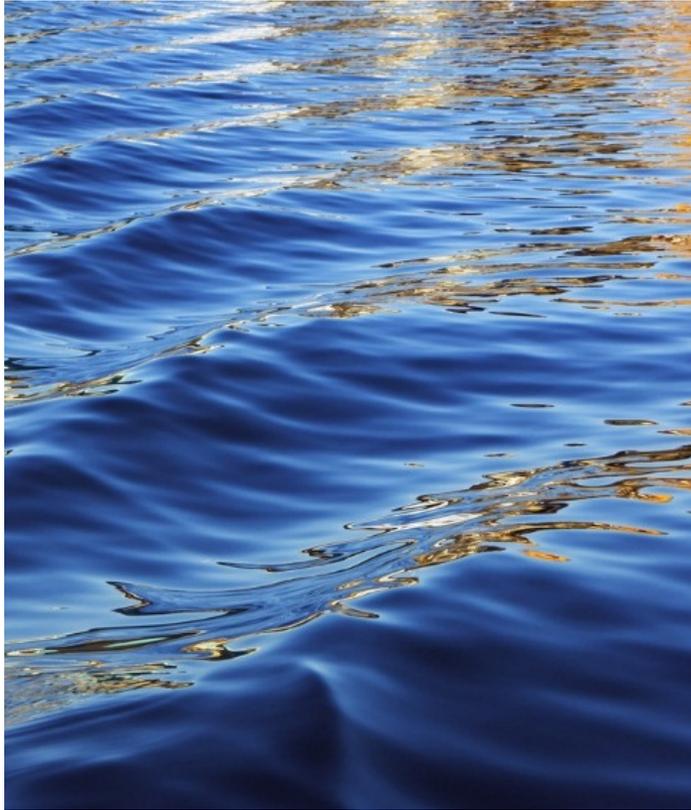


You've Gotten to "Yes," What Happens Now?





Cross-Cutting Solutions



MF-PHA Cross-Cutting Service Model Contracts



Replace Old with
New for Zero Cost



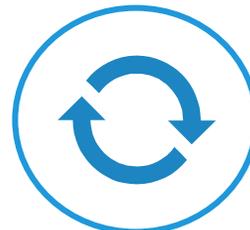
Choose Projects Where
Benefits Are
Greatest: Lighting, HVAC,
Water, Motors and Drives,
Building Envelope, etc.



Once Replaced, SP Keeps
These Items Performing
Reliably and Efficiently



No Required
Guarantees, Minimums
or Multi-year contracts



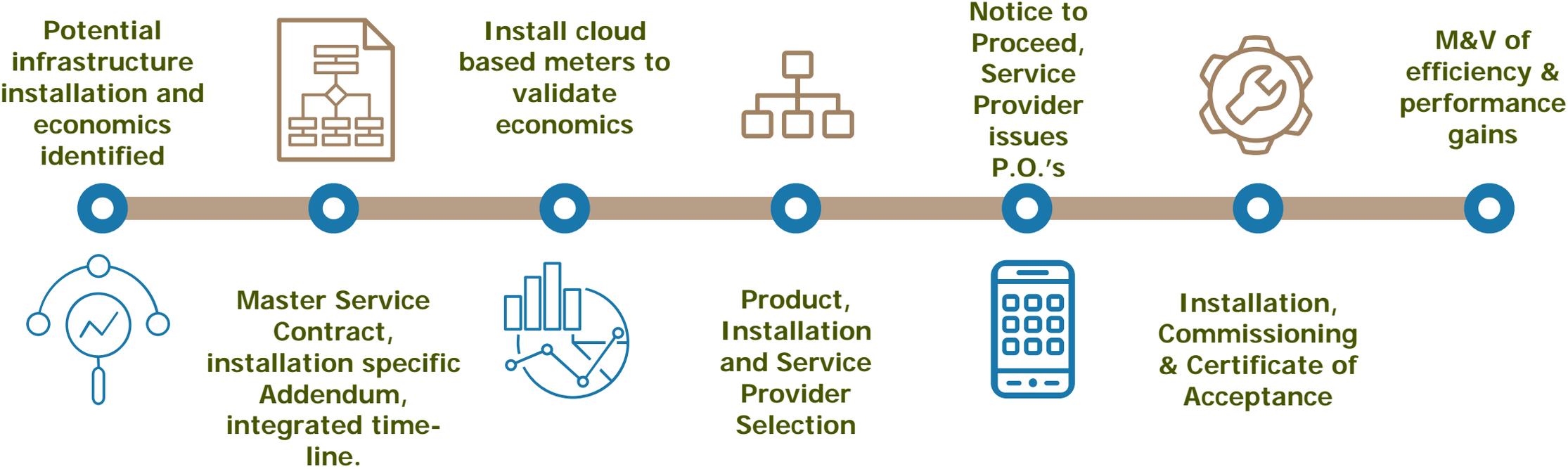
SP Pays to Keep New Infrastructure
Forever Young Thru Maintenance,
Upgrades and Eventual Replacement



Infrastructure Upgrades
Paid For Through Usage
Fees or Savings

SERVICE MODEL PROCESS

Dramatically Collapse Project/Procurement Cycle Times



25+ step process, down to 7 – measures get installed quicker, savings realized sooner

HOW DO WE PAY FOR IT?

Financially Self-Sufficient

We have our own capital (just like any other utility company).

Monitor and verify our upgrades

We meter all of the upgrades by installing our own usage meters on each major device.

Direct meter billing

We are repaid by invoicing you directly from the new product meters.

	Cost/KwH	KwH Usage	Billing	Total		
Old Lighting	\$0.09	71,964	\$6,476.76	\$6,476.76		
New Lighting Utility	\$0.09	30,000	\$2,700.00		58%	Energy Savings
SP Service Model Contract	\$0.03	30,000	\$900.00	\$3,600.00		
			Total Savings	\$2,876.76	44%	Utility Cost Savings

You keep the benefits from reductions in utility bills, maintenance costs, disruption to operations and improved systems!

Leveraging EPCs with Utility Incentives

- Utility incentives can be provided to either ESCOs or directly to building owners
- If provided to the ESCO...
 - ESCO reduces rate charged per kWh
 - ESCO bears the risk of additional savings
- If provided to building owners...
 - Owners agree to pay incentive to ESCO later
 - Owners bears the risk of additional savings

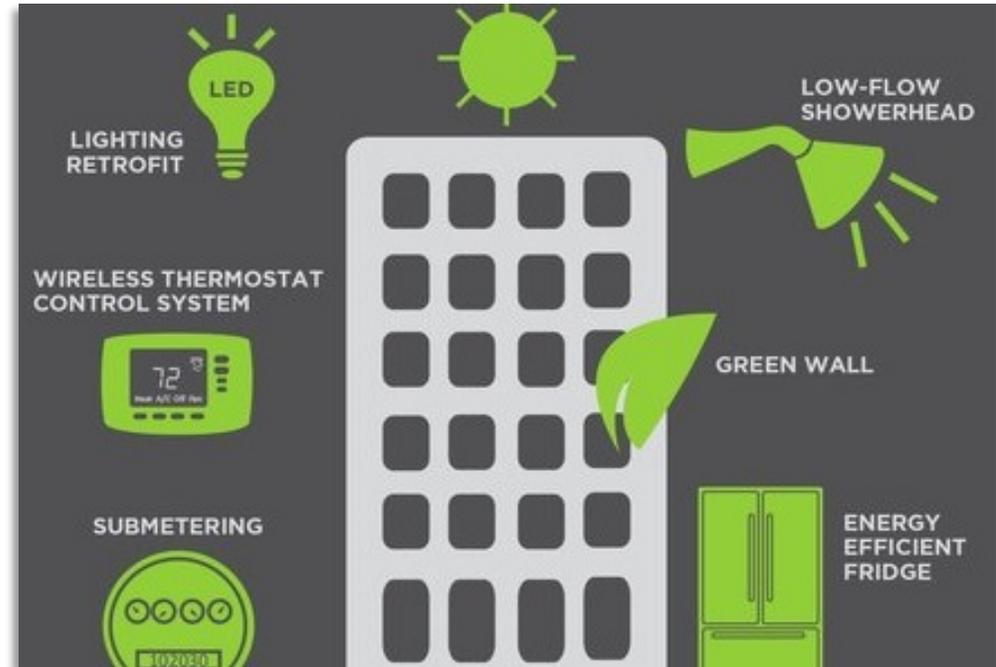
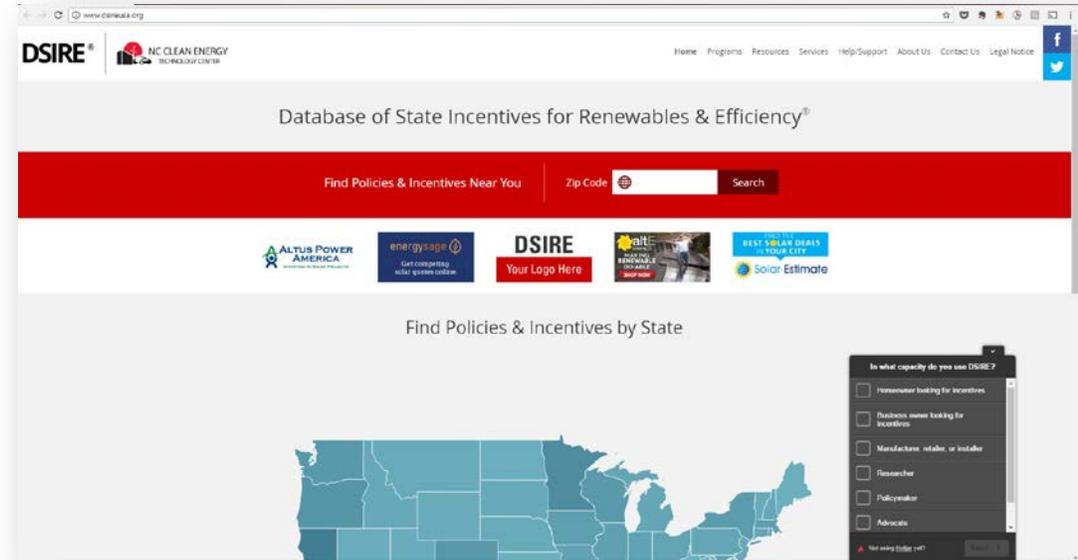


Image Source: Wyse Meter Solutions 2017

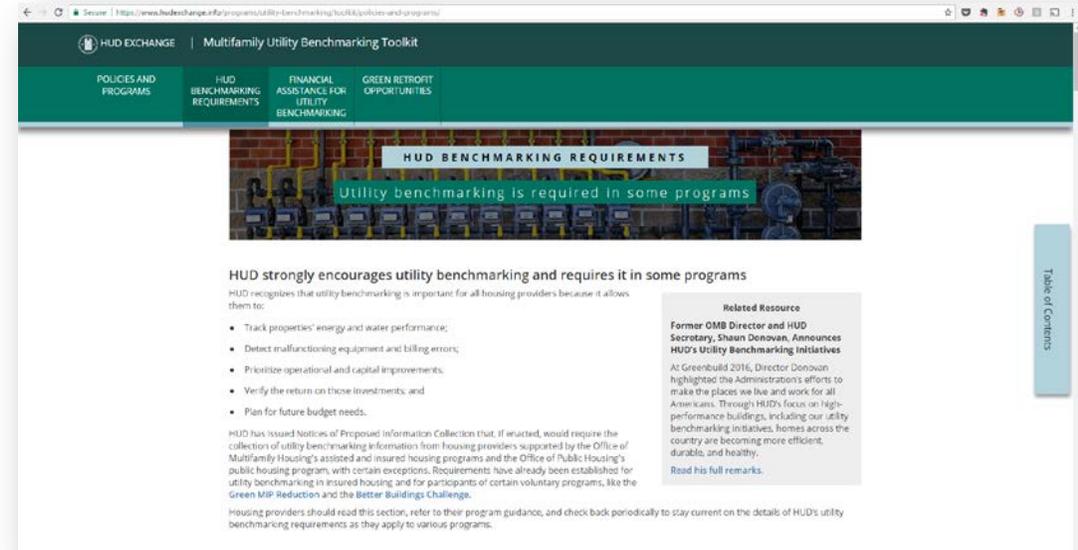
Additional Financing Resources to Consider

- Project-Assessed Clean Energy (PACE) may be an option
- DOE weatherization program
- State and local programs vary (green banks, etc)
- DSIRE website lists incentives and policies by state - <http://www.dsireusa.org/>



Resources -HUD Exchange Benchmarking Page

- Utility benchmarking uses utility data to establish and monitor building performance
- HUD strongly encourages benchmarking and requires it in some programs
- Page includes links to many different programs and resources-
<https://www.hudexchange.info/programs/utility-benchmarking/toolkit/policies-and-programs/>



Thank you! Any Questions?

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