



**Building Decarbonization Coalition  
presents:**

# **Towards an Accessible Financing Solution**

**Sponsored by the Building Decarbonization Coalition**  
in advancement of the BDC's *Roadmap to Decarbonize California's Buildings*

**July 2020**

# Logistics

- Webinar: All participants are on mute.
- We are recording.
- During Discussion:
  - If you are on the web app, you can unmute by toggling the audio/microphone button.
  - If you are only on the phone, you can press \*6 to unmute/mute.
- If you are not speaking, please remain on mute.
- Please introduce yourself ahead of your comment or question.



# Agenda

- About the Accessible Financing Project
- Overview of Accessible Financing: What and Why
- Introduction to Tariffed On-Bill Investment options
- Policy Road Map Recommendations: near-term path to get started, plus actions to achieve scale



# About the Accessible Financing Project

**Objective:** Develop a policy roadmap and thought-leader consensus for deploying a financing mechanism that puts decarbonization investments within reach of most Californians, regardless of income, liquidity, or home ownership status.



# White Paper Overview

- Executive Summary
- Introduction
- Intro to Site-Specific Investments and Cost Recovery
- Combining Multiple Value Streams
- General Provisions
- Sourcing Capital and Managing Portfolio Risk
- Other Implementation Topics
- Scalability and Market Potential
- Implementation Metrics
- Conclusions and Recommendations
- Appendix A. Model Tariff Language



<https://tinyurl.com/BDC-AccessibleFinancing>

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# Why Accessible Financing?

# Policy Mandate for Equitable Clean Energy Investments

CEC *SB 350 Low Income Barriers Study* (2016)

Executive Order B-55-18: **carbon-neutral economy by 2045** (2018)

SB1477: **low-emissions buildings** (2018)

Building Decarbonization Coalition: *Roadmap to Decarbonize CA's Buildings* (2019)

CPUC *Environmental & Social Justice Action Plan* (2019)

Greenlining Institute, *Equitable Building Electrification* (2019)



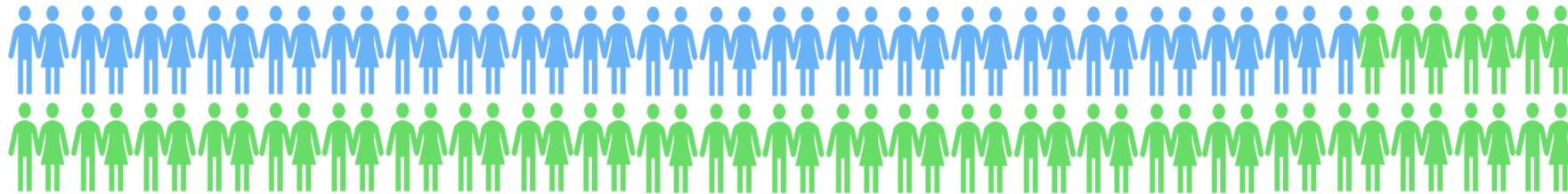
# Why Financing? Why Accessible?

- 1. Everyone needs to be able to participate:** 43% of California households are LMI and/or renters. Under-served by conventional incentive financing programs.
- 2. Public funds are not enough:** Accessible financing is needed because public funding is insufficient to scale decarbonization to achieve our climate policy goals.
- 3. Don't wait, start with equitable solutions:** Low & moderate income (LMI) households and renters should not have to wait for the health and economic benefits. Start *now* to build a market transformation solution that is able to serve everyone.



# Why focus on low- & moderate-income households & renters?

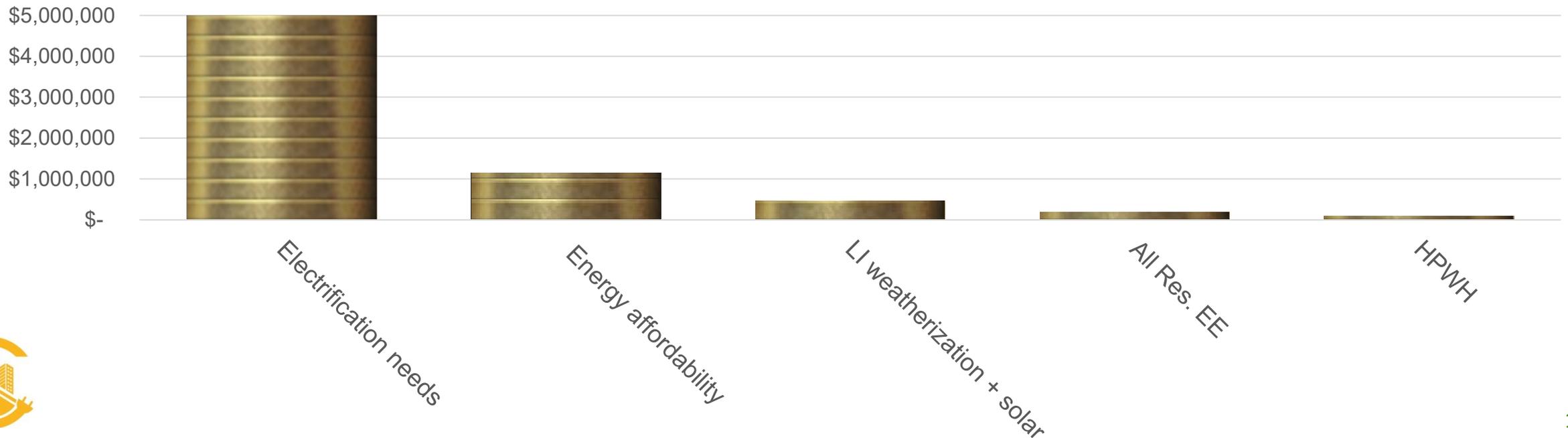
- >40% of California households. CA can't hit climate goals without everyone.
- Market mechanisms alone under-serve LMI households and renters. Policy interventions are required.
- Success means higher volume, more deal flow, more interest from capital providers, innovation in delivery (as seen with solar PV).



# Financing or incentives? Yes!

- Need both/and. Public funds are insufficient for the level of investment needed, yet bill savings alone may not justify sufficient private investment.
- Need to scale and accelerate the pace of deployment

Estimated Annual Investment Needs in California for LMI Decarbonization 2020-2050  
Compared to Current Expenditures (\$000)

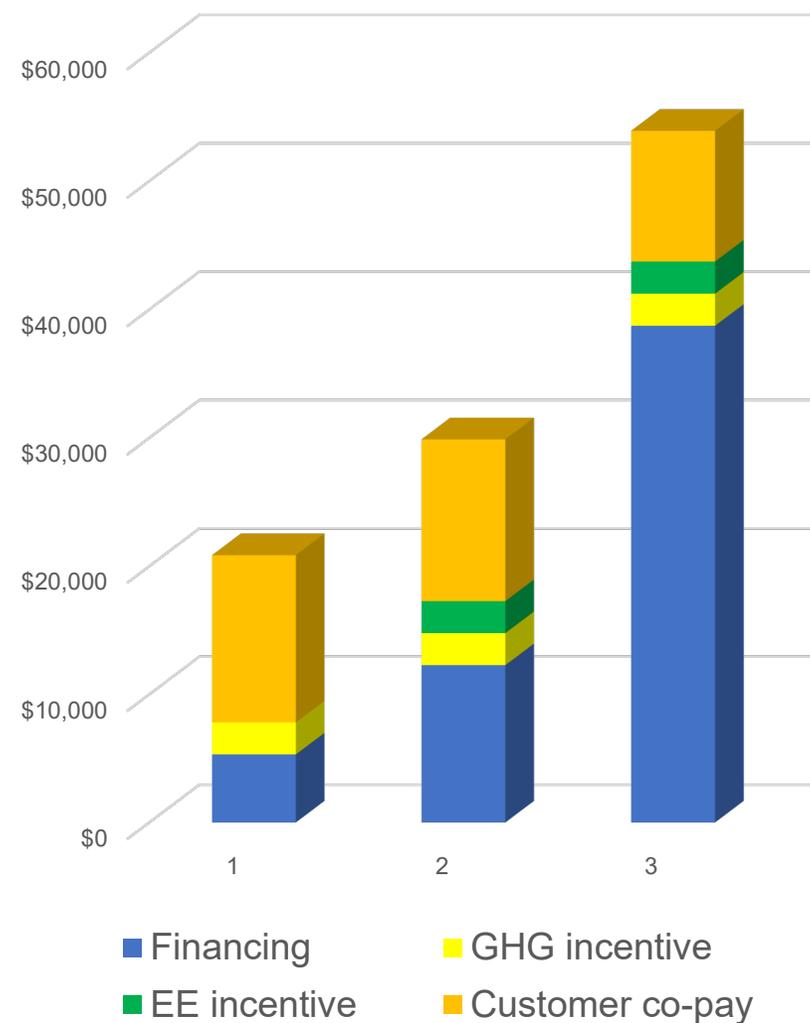


# Value Stack of Incentives and Financing is Essential

Hypothetical transactions: Rancho Cucamonga

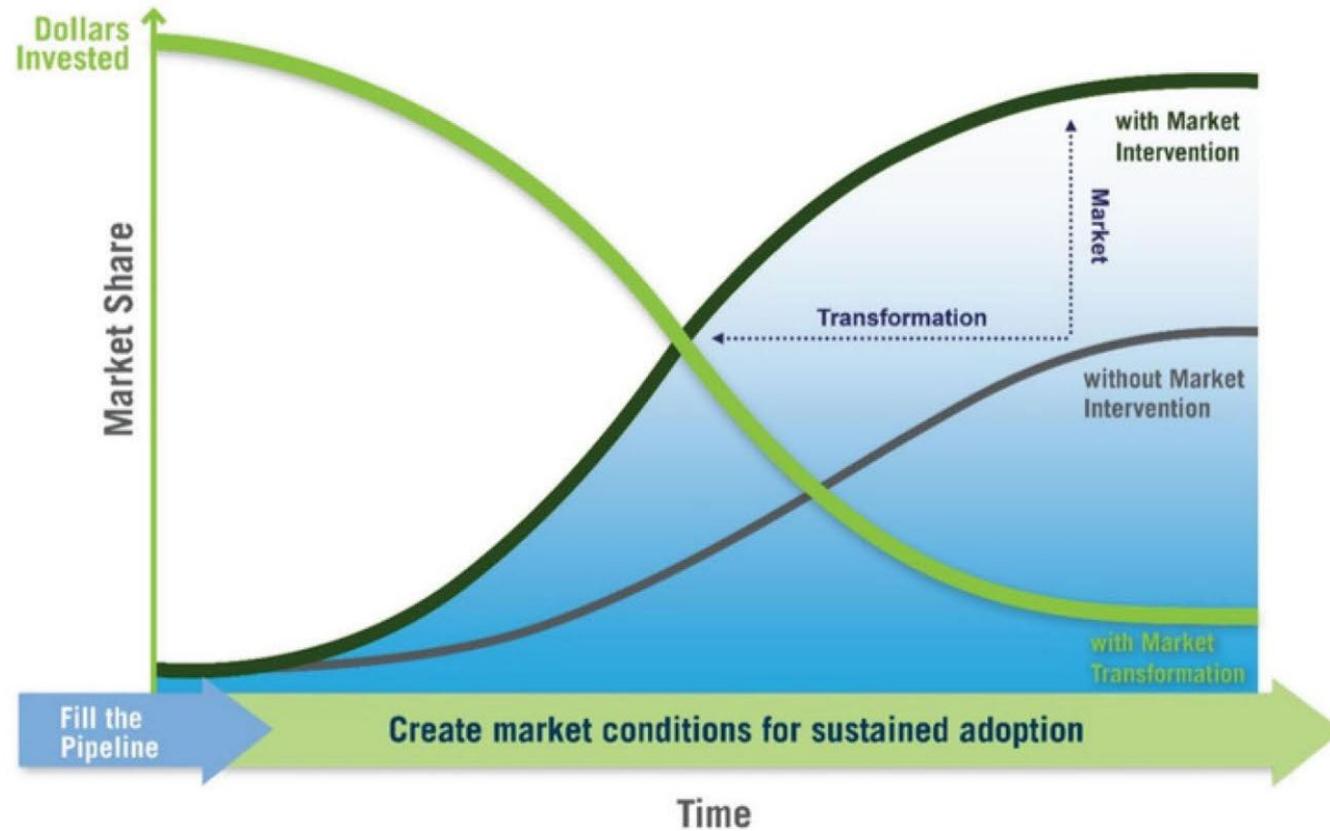
- 1700 sq. ft. home, 1970s vintage
- High energy user: 11,107 kWh, 779 Therms, \$3,610 / yr @ 22 cents/kWh, \$1.50 / Therm

| Annual operations           | Basic electrification, space conditioning & domestic hot wtr | Electrification + Efficiency | Electrification + Efficiency + 7.5 kW PV |
|-----------------------------|--|------------------------------|--|
| Installation cost           | \$17,112   | \$24,804                     | \$43,929                                 |
| Annual change in kWh        | 2,889  | 249                          | (9,770)                                  |
| Annual change in Therms     | (719)  | (719)                        | (719)                                    |
| Annual GHG savings, Mt CO2e | (3.23)   | (3.76)                       | (5.76)                                   |
| Total annual bill savings   | \$443  | \$1,023                      | \$3,228                                  |
| Annual finance charge       | \$354  | \$819                        | \$2,582                                  |
| Net annual bill savings     | \$89   | \$205                        | \$646                                    |



# Why now?

- Start NOW to build a robust market transformation solution able to serve EVERYONE.



# Accessible Financing: Design Criteria

The white paper sets forth 4 design criteria to define an accessible financing solution:

1. Ability to finance over long periods (10-15 years)
2. Ability to leverage utility bill savings to expand investment opportunities
3. Cash-positive outcomes for occupants
4. Ability to scale to serve millions of California households



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# What is Tariffed On-Bill Investment?

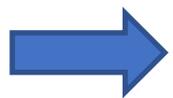
# Barriers to financing in the clean energy economy

Traditional financing products are poorly suited for low- and moderate-income households as well as renters:

“Are you a renter?”

“Do you have a good credit score?”

“Do you have solid income?”

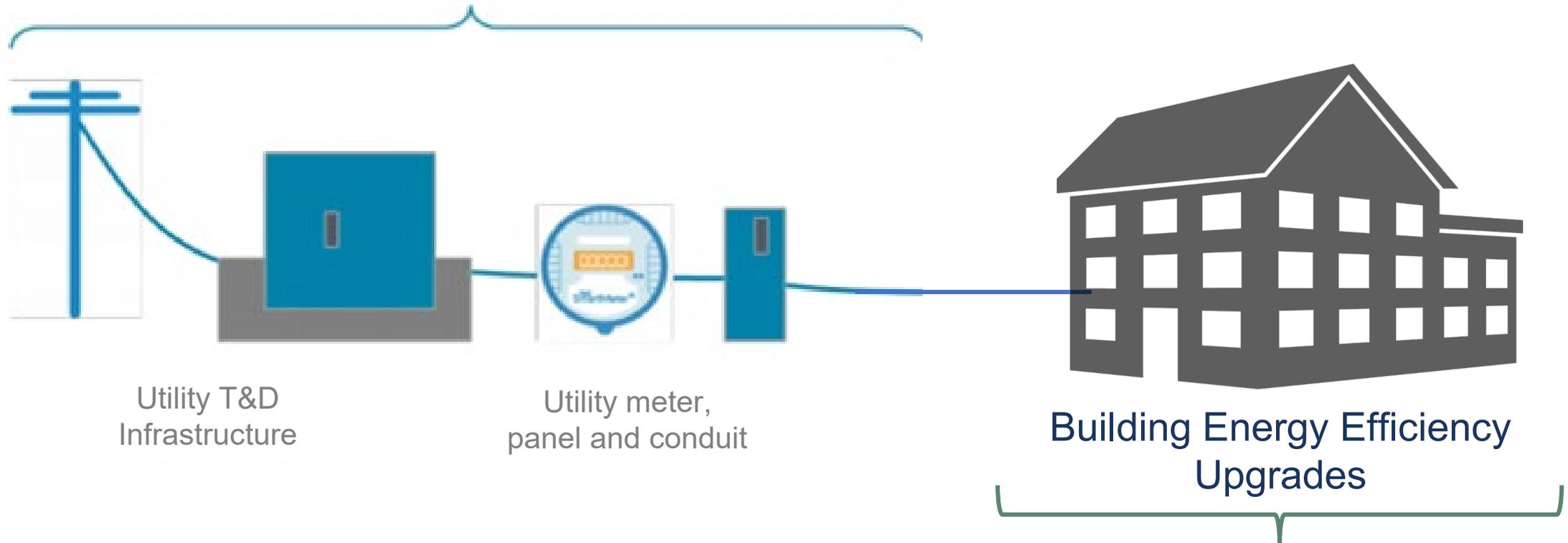


Focus attention on Tariffed On-Bill Investment experience



# Site specific investments on tariffed terms with on-bill cost recovery is a solution demonstrated for building efficiency upgrades

Typical utility rate-based investments



Utility T&D  
Infrastructure

Utility meter,  
panel and conduit

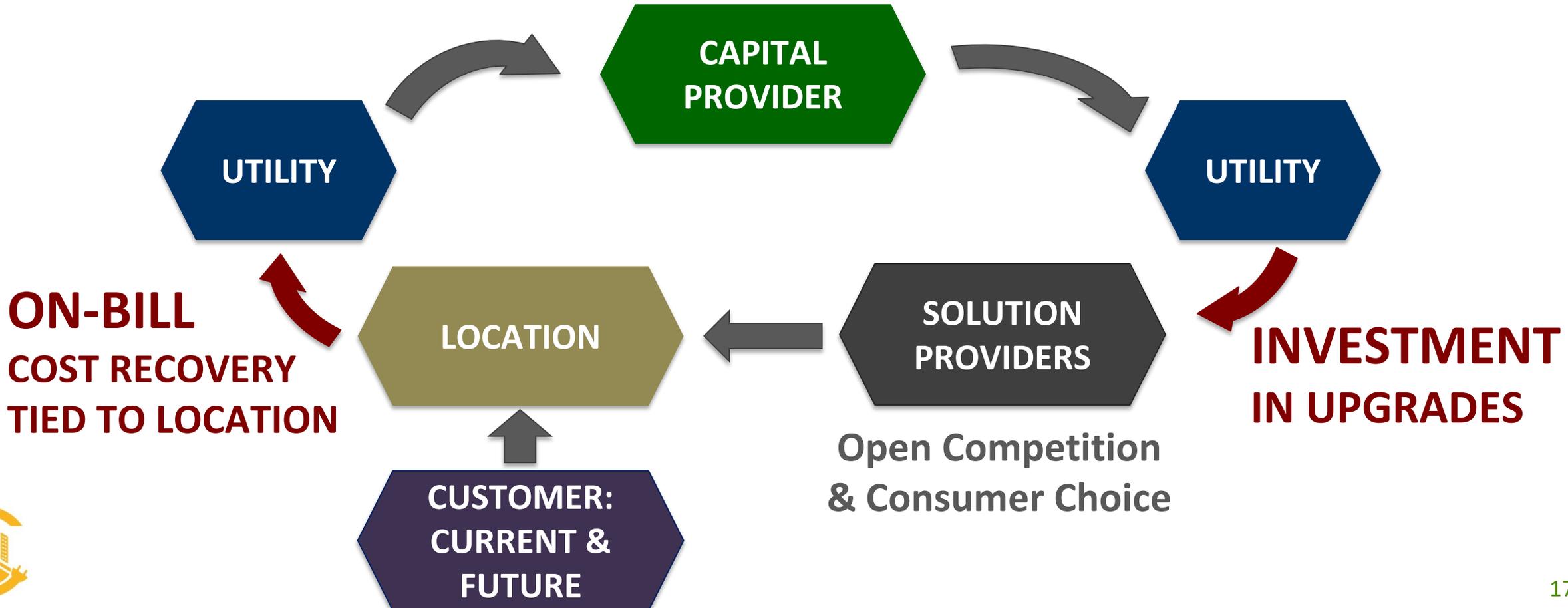
Building Energy Efficiency  
Upgrades

Site-specific investments with site-specific cost recovery create an inclusive option for overcoming upfront cost barriers for all



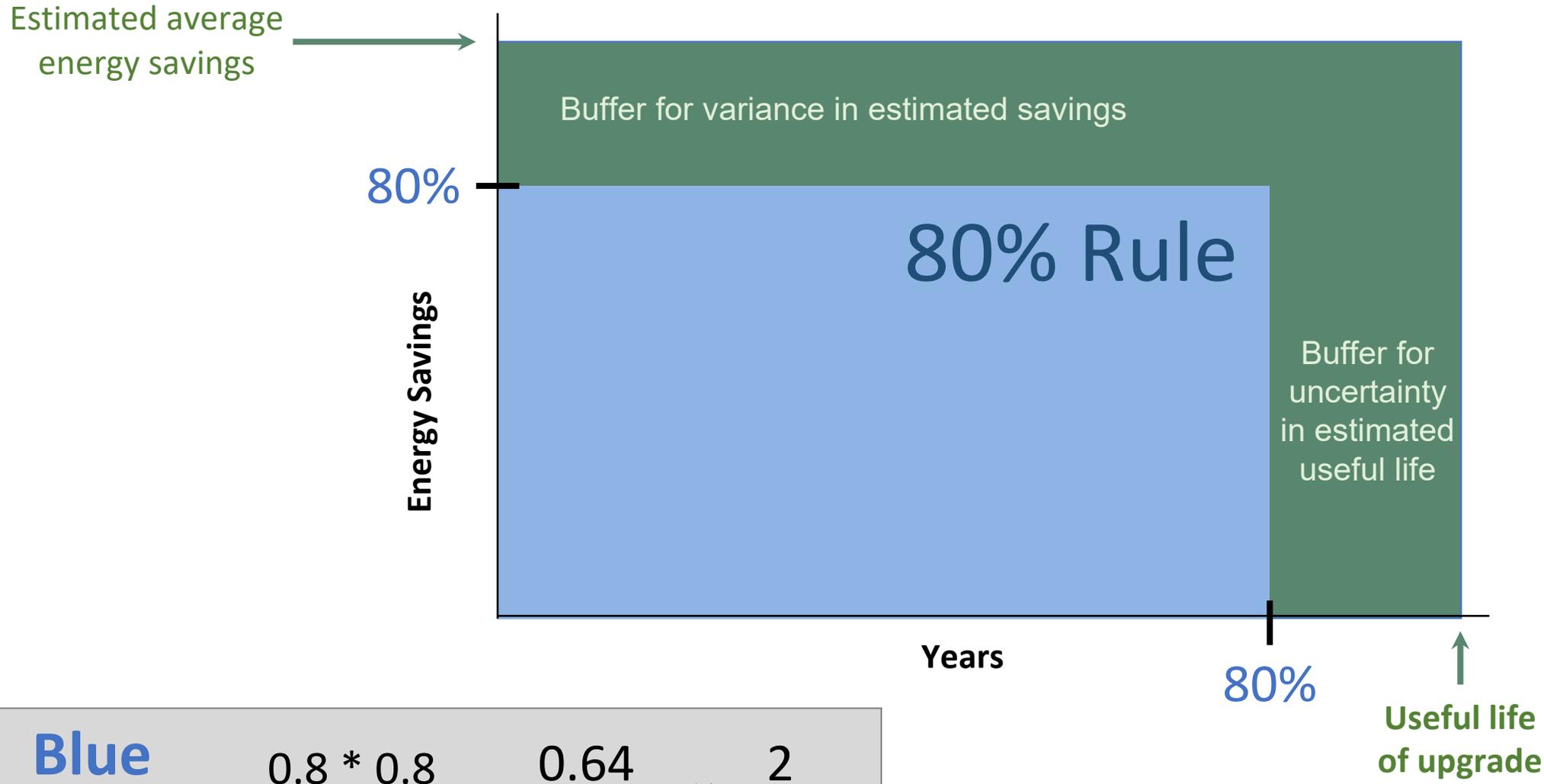
# Tariffed on-bill investments deploy and recover capital

Tariffed on-bill programs offer all utility customers the option to access cost effective energy upgrades using a proven investment and cost recovery model that benefits both the customer and utility.



| Attributes   | On-Bill<br>Loan | PAYS <sup>®</sup><br>Tariff |
|--|-----------------|-----------------------------|
| <ul style="list-style-type: none"> <li>No upfront participant cost for cost effective upgrades</li> </ul>  | ✓               | ✓                           |
| <ul style="list-style-type: none"> <li>No credit or income qualification required</li> </ul>   |                 | ✓                           |
| <ul style="list-style-type: none"> <li>Renters are eligible</li> </ul>   |                 | ✓                           |
| <ul style="list-style-type: none"> <li>Estimated savings <u>must exceed</u> cost recovery charges</li> </ul>   |                 | ✓                           |
| <ul style="list-style-type: none"> <li>Participant accepts an opt-in utility tariff <u>tied to the location</u></li> </ul>   |                 | ✓                           |
| <ul style="list-style-type: none"> <li>Cost recovery is through a fixed charge on the utility bill</li> </ul>  | ✓               | ✓                           |
| <ul style="list-style-type: none"> <li>Participant agrees to disconnection for not paying utility bills</li> </ul>   |                 | ✓                           |
| <ul style="list-style-type: none"> <li>Payments end if upgrade fails and is not repaired</li> </ul>  |                 | ✓                           |
| <ul style="list-style-type: none"> <li>Cost recovery runs with the location and remains in effect for subsequent customers at that site until cost recovery is complete</li> </ul> |                 | ✓                           |

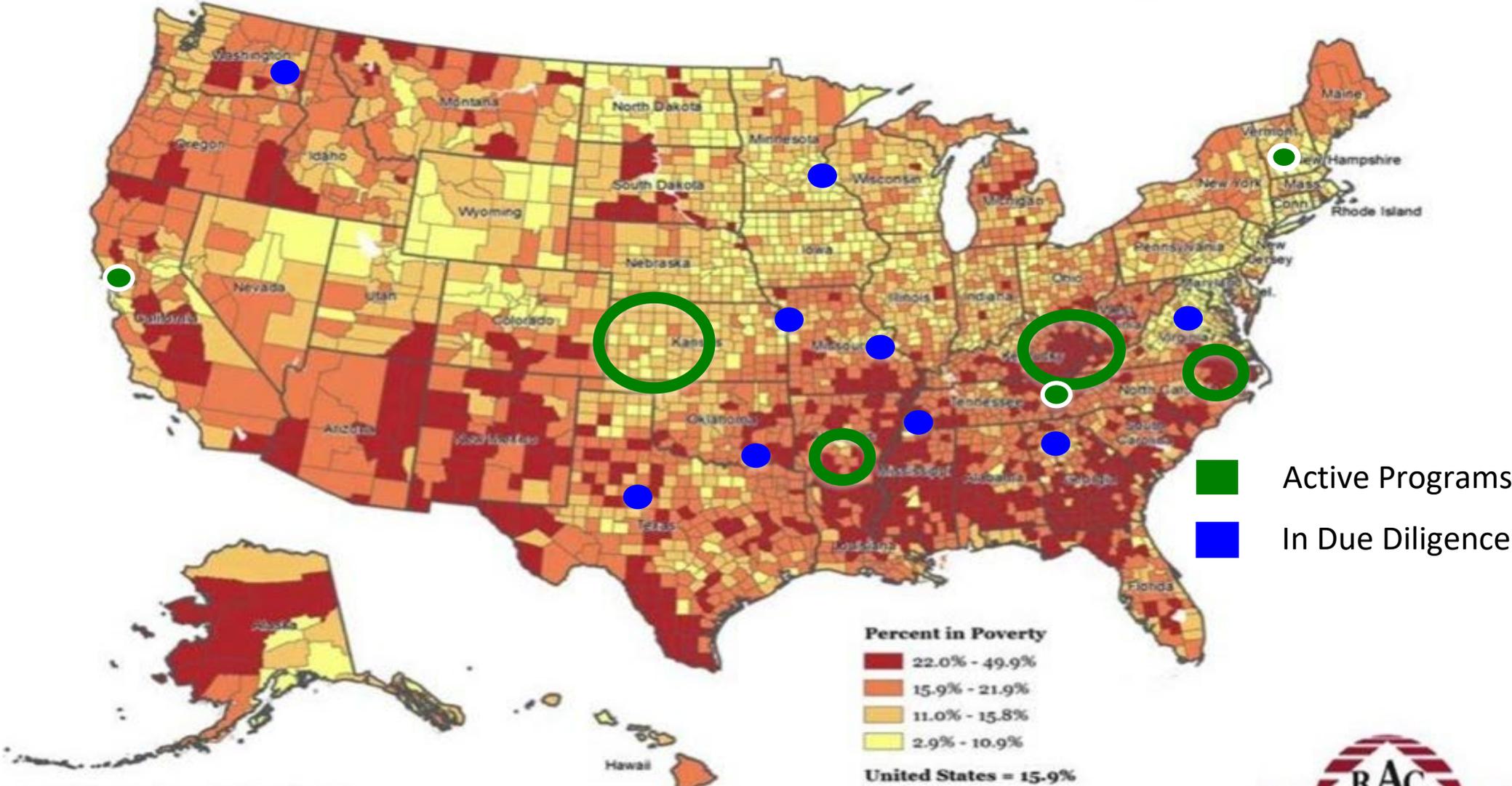
# Assurance of net savings via tariffed on-bill investment\*



$$\frac{\text{Blue}}{\text{Green}} = \frac{0.8 * 0.8}{1.0} = \frac{0.64}{1.00} \approx \frac{2}{3}$$

\*Based on the characteristics of a PAYS® program

# Inclusive financing for energy efficiency is reaching underserved market segments in the U.S.



Source: U.S. Census Bureau, Small Area Income & Poverty Estimates (SAIPE), 2011.

Note: Alaska and Hawaii not shown to scale.

# Field experience shows this is an offer that works

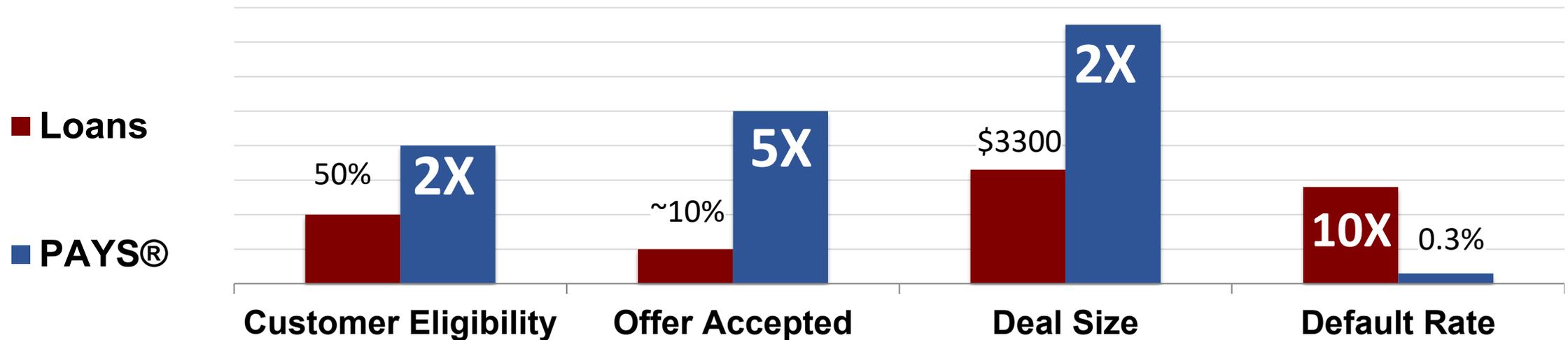
- “Energy saving upgrades are installed in your building and you pay nothing upfront.
- Your utility pays for the installation. A charge that is significantly less than the estimated savings is added to your bill.
- You have no loan, no lien, and no debt with this transaction; just lower bills.
- If an upgrade fails and is not repaired or if you move, the program charges end if you have maintained the upgrades.”

**Among customers who receive this offer,  
the vast majority say “Yes.”**



# Impact of inclusion on market response

Comparison for building efficiency upgrades



Investment acceleration is a product of these multiples.

- ✓ No consumer loan, lien, or debt
- ✓ Reaches renters and low-income

- ✓ Higher uptake rates
- ✓ Deeper energy & carbon savings



# Inclusive financing is for all.

A utility service offering with site-specific investment and cost recovery opens the benefits of cost effective building energy upgrades to all customers *without* having to prove that they:

- Qualify for financial credit products, or
- Qualify for subsidy assistance.

Inclusive financing is not only for low income customers. We need to expand financial access and accelerate deployment of decarbonization upgrades to 100% of households.



# Tariffed On-Bill Programs Satisfy Design Requirements

- **Tariff** defines terms for site-specific investment and cost recovery
- **Broad eligibility**; not a consumer debt instrument.
- Assigns capital commitment to a **site**, rather than a person
- Enables cost recovery over **long period**, with successive customers.
- Costs recovered as a line item for an energy service on the **energy utility bill**.
- Cost recovery charge is less than 80% of estimated energy cost savings.
- Can be combined with **multiple value streams**
- Funding & financing are **complementary**.
- Charge-off rates on utility bill payments in energy efficiency programs are **low**.



# Tariffed On-Bill Investments Offer What California Needs

| California needs...   | Tariffed On-Bill Investments Offer... |
|---|---------------------------------------|
| Ability to finance over long periods (10-15 years)                          | ✓                                     |
| Ability to leverage utility bill savings to expand investment opportunities | ✓                                     |
| Cash-positive outcomes for occupants  | ✓                                     |
| Ability to scale to serve millions of California households                 | ✓                                     |
| Can be combined with incentives, multiple value streams                     | ✓                                     |



# Policy Road Map Recommendations



# Phase 1 Recommendations: Let's Get Started!

POUs & IOUs have broad discretion now to implement tariffed on-bill programs, subject to governing board / CPUC approval.

- 1a. Establish policy framework. Address capital sources, terms of cost recovery, public purposes, etc.
- 1b. Conduct due diligence, develop investment plans, conduct pilots
- 1c. Launch full-scale programs



# Recommendation 1a: Establish Policy Framework

1. Authorize site-specific tariffed investment and on-bill cost recovery for decarbonization.
2. Direct tariffed on-bill program charges be treated as a regular element of utility tariffs & bill payment, subject to customary procedures & notices of payment arrears.
3. Authorize mechanisms to eliminate risk to ratepayers.
4. Address ownership of equipment behind the meter during cost recovery, and path to ownership for building owners thereafter.
5. Establish guidelines for source capital and authorize IOU capital return at parity with other options.



# Recommendation 1b: Conduct Deeper Due Diligence for Program Design Approval

- Further due diligence is needed on critical design issues:
  - Retrofit Economics and Cost Allocations
  - Financial and Legal Risk and Mitigation
  - Roles and Responsibilities for Program Offerings
- Then regulators authorize program design and implementation



# Phase 2 Recommendations: Let's Go Big!

2a. Align & integrate funds from multiple value streams

2b. Move towards statewide administration and implementation



# Discussion

Comments?  
Questions?  
Suggestions?  
Concerns?



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# Thank you!

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