

TECH Clean California Tariffed On-Bill Investment Pilot

Presented by the TECH Innovative Finance Team

September 16, 2021



TECH CLEAN
CALIFORNIA



TECH Clean California Innovative Finance Team



Lead responsibility, program design
& policy expertise



Contributor, program design &
implementation, PAYS® & other
Project Finance

RECURVE

Meter data analysis, M&V

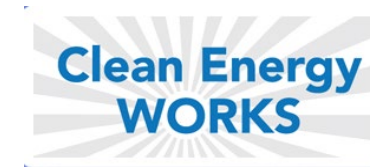


Oversight of all TECH Pilots



TECH Prime & overall lead on
market transformation strategy

In collaboration with:



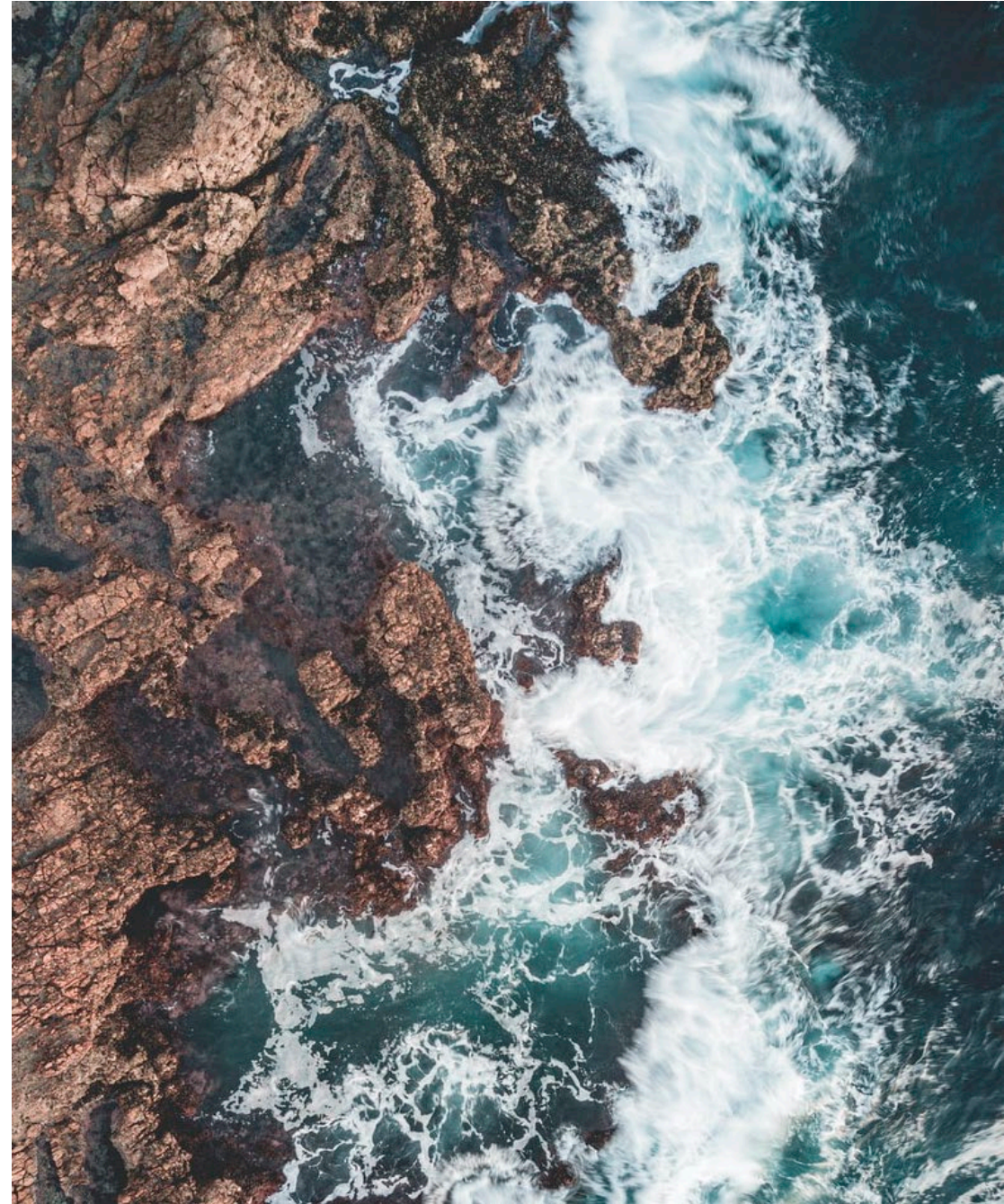
Agenda

- 1 TECH Overview & TOB Pilot

- 2 Tariffed On-Bill Investments 101

- 3 TOB Pilot Approach & Timeline

- 4 Appendix: Clean Energy Finance Proceeding



1

TECH Overview & TOB Pilot



Introducing the Technology and Equipment for Clean Heating (TECH) Initiative

“...a statewide market development initiative, to...advance the state’s market for low-emission space and water heating equipment for new and existing residential buildings through upstream market development, consumer education, contractor and vendor training, and the provision of upstream and midstream incentives to install low-emission space and water heating equipment...”

-SB 1477 (2018)



TECH Program Overview

Funding Source and Allocation

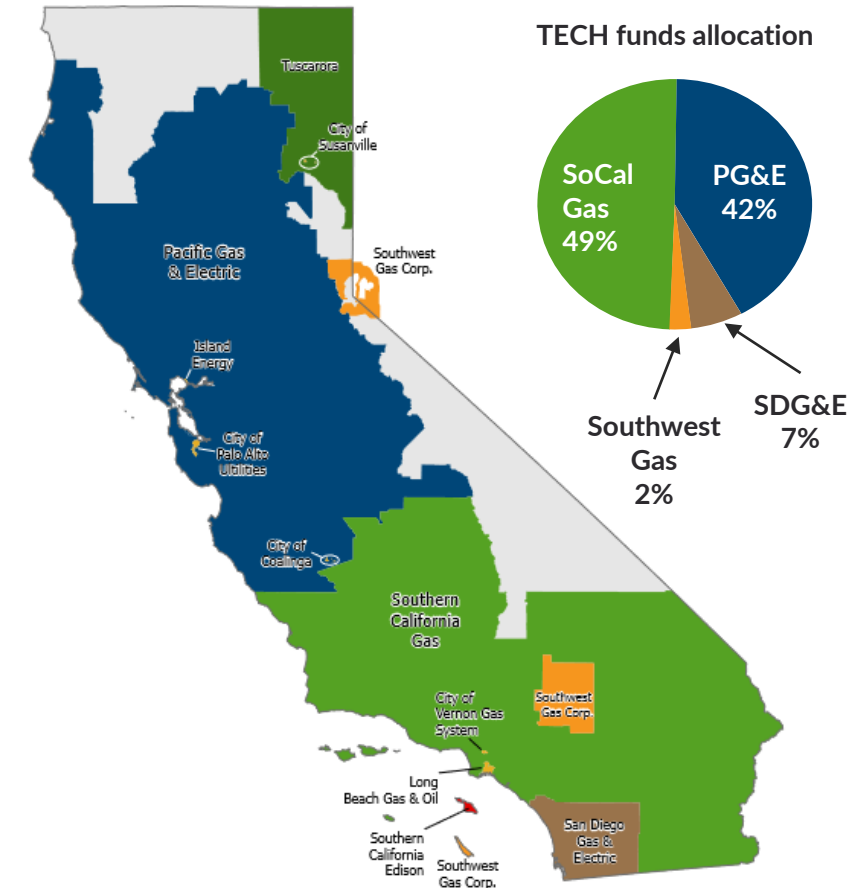
- Source: Gas utility cap and trade allowances (authorized by SB 1477)
- Amount: \$116 million for midstream incentives and market transformation activities (HP HVAC and HPWH)

Eligibility

- Eligible customers: SF and MF residences in gas IOU territory
- Midstream incentives (no downstream consumer incentives)
- Funds allocated proportional to gas-IOU share of Cap-and-Trade allowances

Additional Requirements

- Strive for equity, cost-effectiveness, regulatory simplicity, and market transformation
- Employ outreach strategies that target hard-to-reach customers, and those in low-income and disadvantaged communities
- Consider ways to reduce reliance on Aliso Canyon gas storage facility



Map source: <https://cecgis-caenergy.opendata.arcgis.com/pages/pdf-maps>

The 3 Pillars of TECH Clean California

1

Spur the clean heating market and motivating the supply chain by making heat pump installations profitable and easy.

Simultaneously, drive consumer demand through a Consumer Inspiration campaign.

2

Demonstrate scalable solutions to key market barriers via regional pilot projects.

TOB Pilot is part of this broader effort to identify solutions to finance and scale decarbonization

3

Inform CA's long-term building decarbonization framework by leveraging sales and meter data from TECH installations and activities.

Tariffed On-Bill Investment Pilot



PILOT PARTNERS



RECURVE



PROBLEM

Over 40% of California households cannot access the capital that could make the electrification of their home financially possible -- either because of their credit score, income, or because they rent.



PROPOSED SOLUTION

Partner with a utility or CCA to offer tariffed on-bill investments to expand customer access to capital.

2

Tariffed On-Bill Investments 101



Barriers to financing in the clean energy economy

Traditional financing products are poorly suited for LMI households as well as renters:

“Are you a renter?”

“Do you have a good credit score?”

“Do you have solid income?”

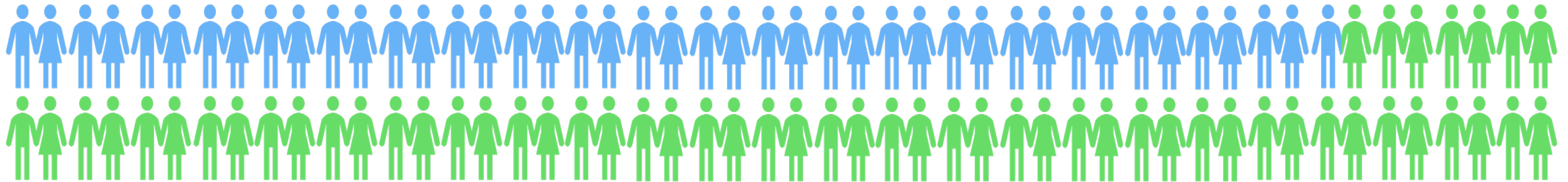


Focus attention on Tariffed On-Bill Investment experience

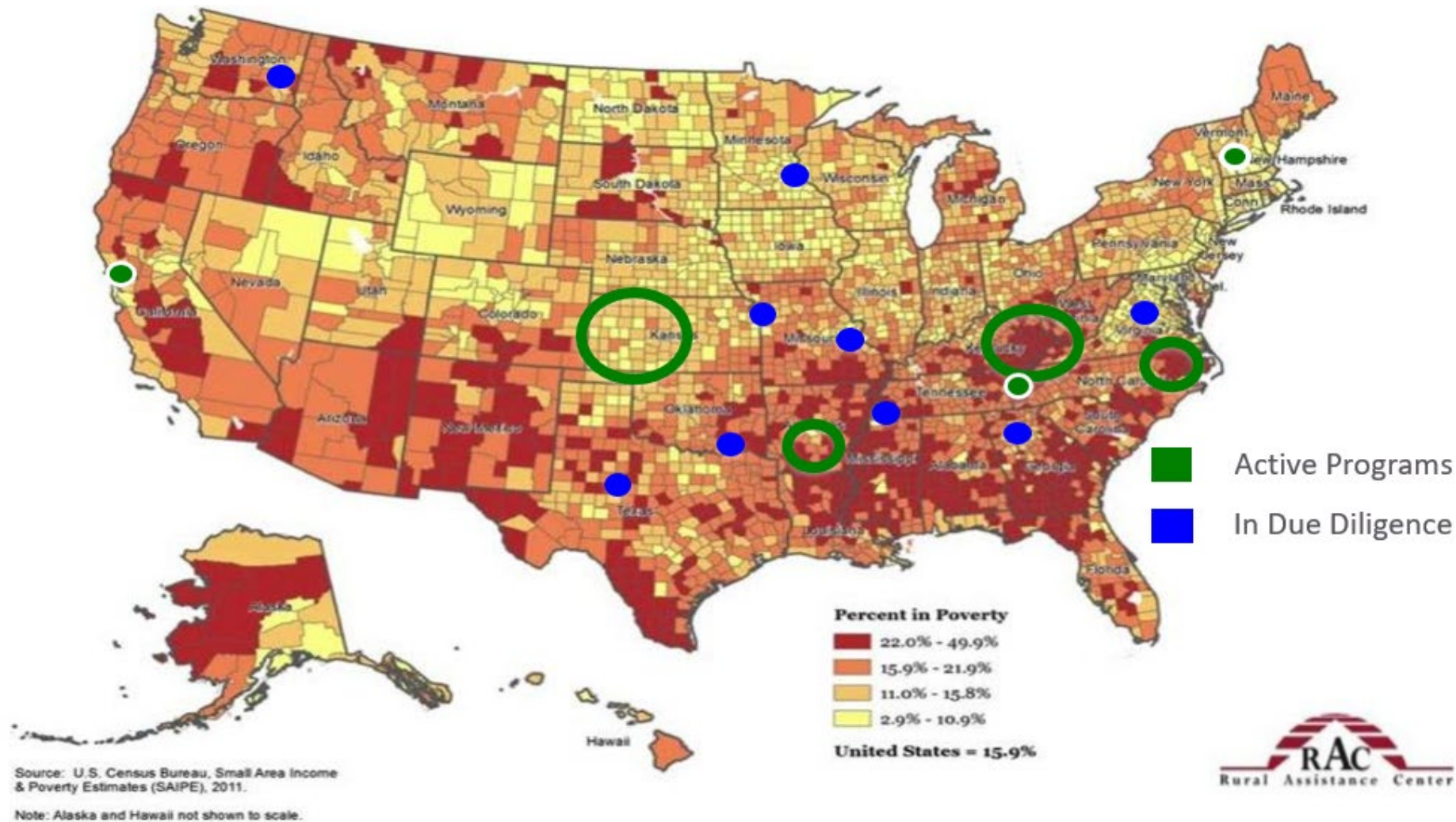


Decarbonization must include low- & moderate-income households & renters

- >40% of California households are low- & moderate-income (LMI). CA can't reach its 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).



Tariffed On-Bill Investments for energy efficiency have a track record of reaching underserved market segments



TOB programs for energy efficiency have accelerated investments

Comparison for building efficiency upgrades

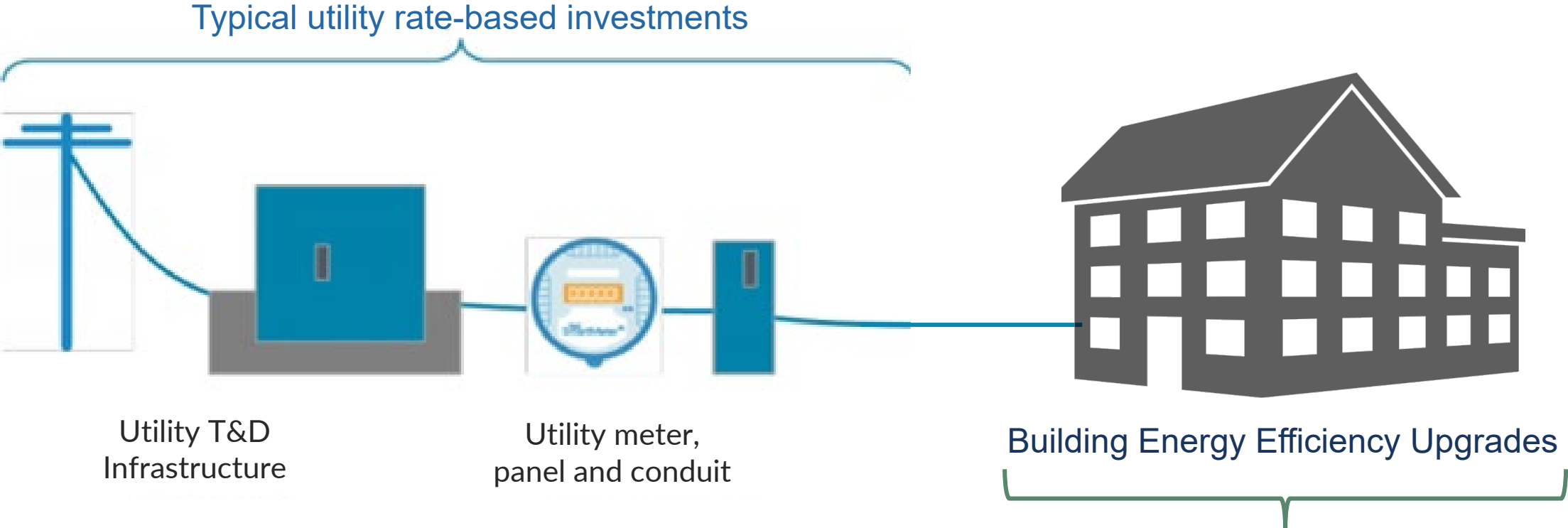


Investment acceleration is a product of these multiples.

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

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

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

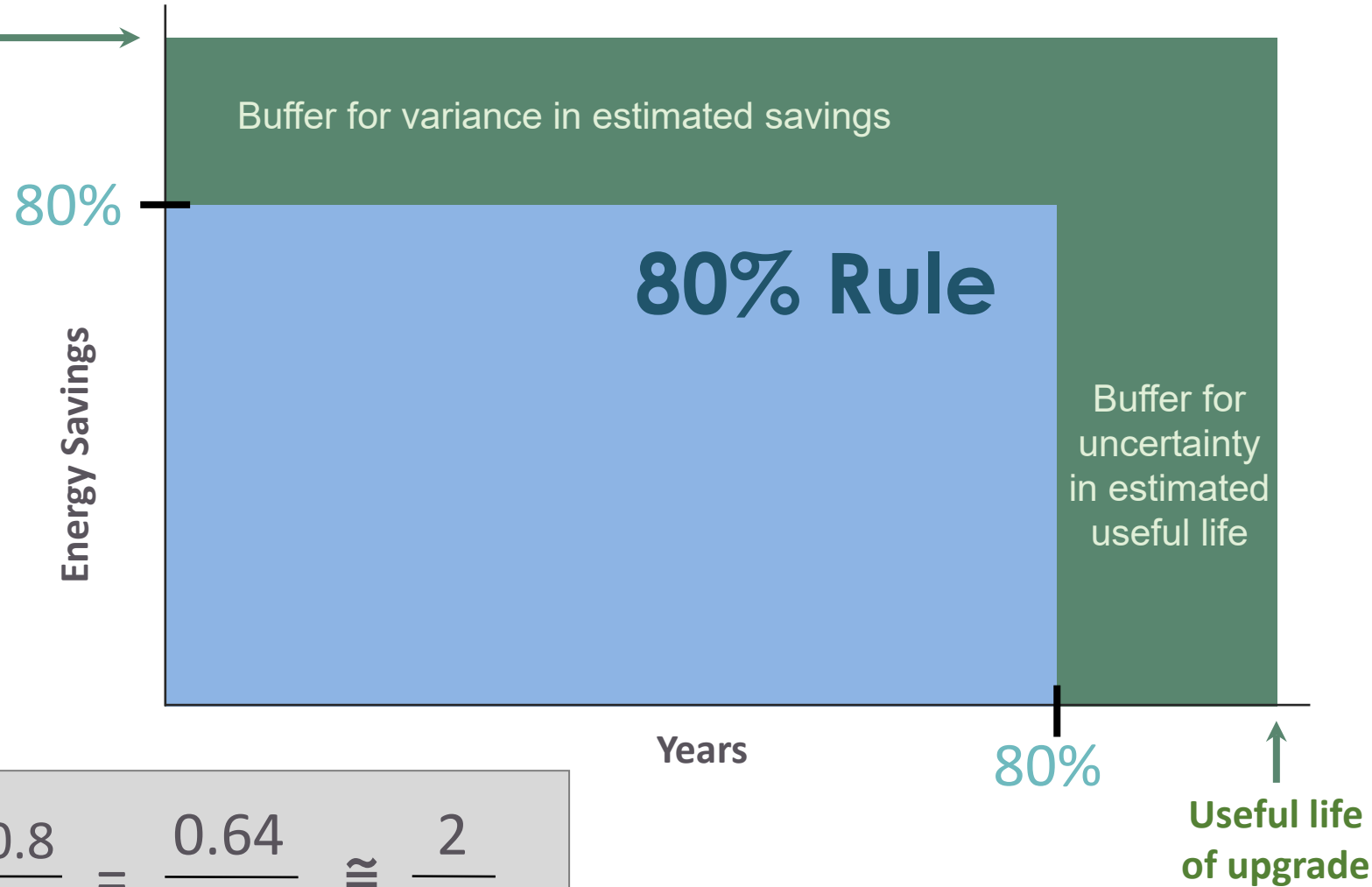


Site-specific investments with site-specific cost recovery create an inclusive option for overcoming upfront cost barriers for all



Assurance of net savings via tariffed on-bill investment

Estimated average
energy savings



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

**Based on the characteristics of a PAYS® program*

Attributes	On-Bill Loan	PAYS® Tariff
• No upfront participant cost for cost effective upgrades	✓	✓
• No credit or income qualification required		✓
• Renters are eligible		✓
• Estimated savings <u>must exceed</u> cost recovery charges		✓
• Participant accepts an opt-in utility tariff <u>tied to the location</u>		✓
• Cost recovery is through a fixed charge on the utility bill	✓	✓
• Cost recovery subject to same repayment obligation as the rest of the bill		✓
• Payments end if upgrade fails and is not repaired		✓
• Cost recovery runs with the location and remains in effect for subsequent customers at that site until cost recovery is complete		✓

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TECH's TOB Pilot Addresses Policy Mandates 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)

Building Decarbonization Coalition: ***Towards an Accessible Financing Solution*** (2020)

CPUC Clean Energy Finance proceeding (R.20-08-022)



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



Our working hypotheses

The scale required to address climate change is possible.

1. Shared savings mechanism can unlock ~ \$6,000 per project in private capital investment, achieve 6.7:1 leverage in private v. ratepayer funding.
2. Within 4 years, TOB can capitalize 50% of annual gas equipment replacements

We can address climate change equitably.

1. Shared savings mechanism plus strong consumer protections will facilitate investments benefiting low- & moderate-income households
2. Site-specific investments can facilitate investments benefiting renters

Risks are real but manageable.

1. Consumer protections can offer participants a 99% probability of cash-positive outcomes based on metered results
2. Consumer protections can incorporate safeguards to minimize energy insecurity
3. Risk mitigation strategies can open access to capital at below the market rate

3

TOB Pilot Approach & Timeline

Program Design Intent

Expand customer access to clean energy investments

- Include those customers that are typically disqualified from traditional financing
- Address high debt-to-income ratios, poor credit, low home equity, or renter status

Demonstrate and expand the **Tariffed On-Bill (TOB) investment model**

- Pilot in partnership with a willing and able utility or CCA partner

Show a **pathway to scale** to address climate challenge by investigating:

- Customer electrification economics and cost allocations
- Alternatives for managing financial and legal risks
- Options for assigning program roles and responsibilities

Tariffed On-Bill Pilot Work Plan

Pre-planning. Model Program Design, Sept-Dec. 2021

- Open-source planning template that any LSE can adapt
- Basis for program proposal to the CPUC's Clean Energy Finance Proceeding
- Basis for TECH to provide program design & implementation support to pilot partner (Phases 2 & 3)

Phase 1. Enlist a Utility / CCA Partner, Sept-Dec. 2021

- Signed MOU or contract between Energy Solutions (on behalf of TECH) and Partner

Phase 2. Pilot Planning, Jan-Dec. 2022 (or sooner)

- TECH + Partner joint planning exercise
- Program Implementation Plan, Policies & Procedures, Investment Plan, Tariff terms, etc.

Phase 3. Pilot Launch & Implementation, 2023 (or sooner)

Pre-planning: Model Program Design Process

Opportunity for interested utilities & CCAs to contribute to design with no upfront commitment

Workshops every two weeks to address specific design topics, starting Sept. 23:

Session #1 (9/23): Goals and metrics, workplan and timeline

2 (10/7): Tariff terms, authority to adopt, ownership of assets

3 (10/21): Customer economics

4 (11/4): Consumer protections

5 (11/18): Information system requirements

6 (12/2): Supply chain, Quality Assurance, Risk Mitigation

7 (12/16): Implementation Plan, Timeline, Budget

Output is program prototype to inform proposal to CPUC Clean Energy Finance Proceeding

Expected Workshop Format

Hosted: via Zoom, 2:30-4 pm Pacific (90 minutes)

Workshop objective: Information sharing and feedback on opportunities and challenges, pros and cons of program design alternatives. Not a joint decision-making process.

Sample Agenda

- TECH Team or guest presentation(s) on topic (60 min):
 1. Critical Issues: Background and investigation opportunities
 2. Program Design Alternatives
 3. Pros & Cons, Recommended Best Practices
- Q&A and Discussion (30 min)

All meetings will be recorded and shared with workshop stakeholders

Resources: to be posted on Sharepoint site for workshop attendees

- Recordings and presentation slides
- Supporting documents
- Information on TECH TOB Pilot partnership opportunity

Sample Critical Issues: Consumer Protections

Cash-positive assurances must be able to address program-specific risks such as:

- Variable baseline consumption
- Over-predictions of future energy savings
- Take-back effects and new cooling loads
- Variable gas and electricity prices & changing rate structures
- Equipment performance degradation
- Successor customers with very different usage habits

Consumer protections should consider other issues, not necessarily tied to TOB, such as:

- Other post-retrofit increases in customers' annual energy consumption
- Unforeseen events that negatively impact customers' future ability to pay their bills (e.g., job loss, medical bills, divorce)

TECH Seeks a Utility / CCA Partner to Collaborate on Design and Implementation of a Tariffed On-Bill Pilot

TECH's TOB Pilot offers partnering opportunity to:

1. Increase access to clean energy investments for residential customers
2. Accelerate deployment of efficient electric technologies through shared benefit incentives
3. Reduce GHG emissions in alignment with Gov. Newsom's climate emergency proclamation
4. Access up to \$3 million for soft costs, risk mitigation, and credit enhancement

TECH program to provide:

In-kind technical assistance for program design & pilot launch

- TECH expertise with multiple financing and TOB initiatives in CA and nationwide
- Deep understanding of and experience: utility rates and tariffs; disclosure processes and customer notifications; billing and financial accounting and data flow
- Program design informed by analysis of customer gas & electric data

Implementation support, as needed

- Contractor recruitment & training
- Meter-based customer targeting
- Project feasibility analysis, cost recovery calculations, QA/QC practices

Risk management

- Up to \$3M for risk mitigations (assuming \$5M capital investment)
- Program M&V & supporting risk management analytics

TECH needs pilot partner phased commitment to:

1. Commit to investigate TOB in good faith

- Confirm alignment on Pilot goals & objectives
- Seek Board / Commission approval for site-specific investment with site-specific cost recovery

2. Investigate and plan for implementation

- Perform / review due diligence regarding feasibility of tariffed on-bill investments
- Conduct legal review of draft and final participant agreement terms and conditions
- Tailor TECH Program Plan to partner needs
- Secure competitively priced source of capital
- Modify utility billing system as needed to add cost recovery line item to customer bills

3. Implement a viable TOB pilot, with intent to scale

- Provide access to customer electricity consumption data
- Lead TOB pilot launch
- Cooperate on pilot reporting to the CPUC, assist with knowledge transfer to other utilities

Call to Action

Join our Program Planning Workshops!

Is your organization a candidate utility / CCA partner? Let us know!

Contact us at **TECH.pilots@energy-solution.com**

Thank You

For more information, contact:

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Tre'Laine



www.energy-solution.com/tech

Appendix: Clean Energy Finance Proceeding

A large, faint, stylized leaf graphic is positioned on the right side of the slide, partially behind the title text. The leaf has a central vein and several side veins, creating a symmetrical, fan-like shape. It is rendered in a light blue-grey color that blends with the background.

CPUC Clean Energy Finance Proceeding

- In August 2020, the Commission launched Rulemaking **(R.) 20-08-022**, to evaluate the potential efficiencies of providing financing strategies that allow for larger or broader investments in multiple types of clean energy improvements through a single program.
- Rulemaking aims to ensure that the financing programs backed by ratepayer funding are targeted to attract investment by third-party partners to increase their efficacy and scope.



6 Topics to be investigated

1. New Financing Programs Must Broadly Support Clean Energy Resources
2. Programmatic goals and implementation
3. Marketing, Education, Outreach, and Evaluation
4. Designing Scalable Financing Options
5. Alignment With Other Programs Already Offered
6. Rate Impacts of New Financing Programs



Proceeding Follows 3 Tracks

- Track 1. Near-term issues related to CAEATFA's existing CHEEF programs (completed in Aug. 2021)
- Track 2. Opportunities to expand or modify existing financing structures to scale clean energy investments
- **Track 3. Proposals for clean energy financing programs from utilities and other parties**



Track 3 Schedule for Finance Program Proposals

Ruling seeking new financing proposals	Q3/Q4 2021
Proposals due	Q4 2021
IOU-hosted community meetings on proposed options	Q1 2022
IOU reports on community meeting feedback due	April, 2022
Workshop(s) on proposed options, if needed	Q1 2022
Opening comments on proposals due	Q2 2022
Deadline to request evidentiary hearing	Q2 2022
Reply comments due	Q2 2022
Proposed decision	Q3 2022
Commission decision	30 days after PD

