

Clean Energy Financing Proceeding R.20-08-022

Track 2: Proposals from Stakeholders for New Financing
Programs

June 28, 2022



California Public
Utilities Commission

Clean Energy Financing

Goals of the Proceeding:

- Bring greater equity to energy financing
- Protect customers who engage in energy financing
- Attract the private capital needed to reach the State's goals such as for 100 percent decarbonization by 2045 or sooner
- Expand existing energy financing programs beyond energy efficiency to include electric vehicle infrastructure, energy storage, and a full set of integrated offerings
- Develop innovative programs including new on-bill programs
- Reach a broader set of customers and market segments
- Encourage customers to invest in projects that will achieve deeper benefits in the form of energy savings or energy production

Clean Energy Financing: Tracks 1 and 2

- **Track 1** (D. 21-08-006) addressed programs administered by the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA).
 - Granted a five-year extension for the existing financing programs administered by CAEATFA
 - Authorized up to \$75.2 million in additional ratepayer funding to support the extended programs
- **Track 2**
 - Directed the California utilities to propose new financing programs that meet the goals of equity, scalable energy finance, customer protection, and more
 - Invited non-utility stakeholders to propose new financing programs that do the same

These proposals will be presented today

Dates: R.20-08-022 Finance Proceeding

- A workshop was held on March 25 with presentations of the upcoming proposals, following on an earlier general/overview workshop
- Seven proposals were submitted on April 15
- Another workshop was held on May 12 with more detailed presentations of the proposals and metrics
- Revised proposals were submitted on June 15
- Filed comments are due on June 29 (tomorrow)
- Reply comments are due on July 22
- A decision may come toward the end of the year

SCE Clean Energy Financing Proposals

Delia Williams

June 2022

Key Design Principles

- 1) Emphasize affordability
- 2) Encourage maximum impact and uptake
- 3) Reduce complexity
- 4) Minimize customer and utility risk
- 5) Maximize equity and inclusion



Overview of SCE's Proposals

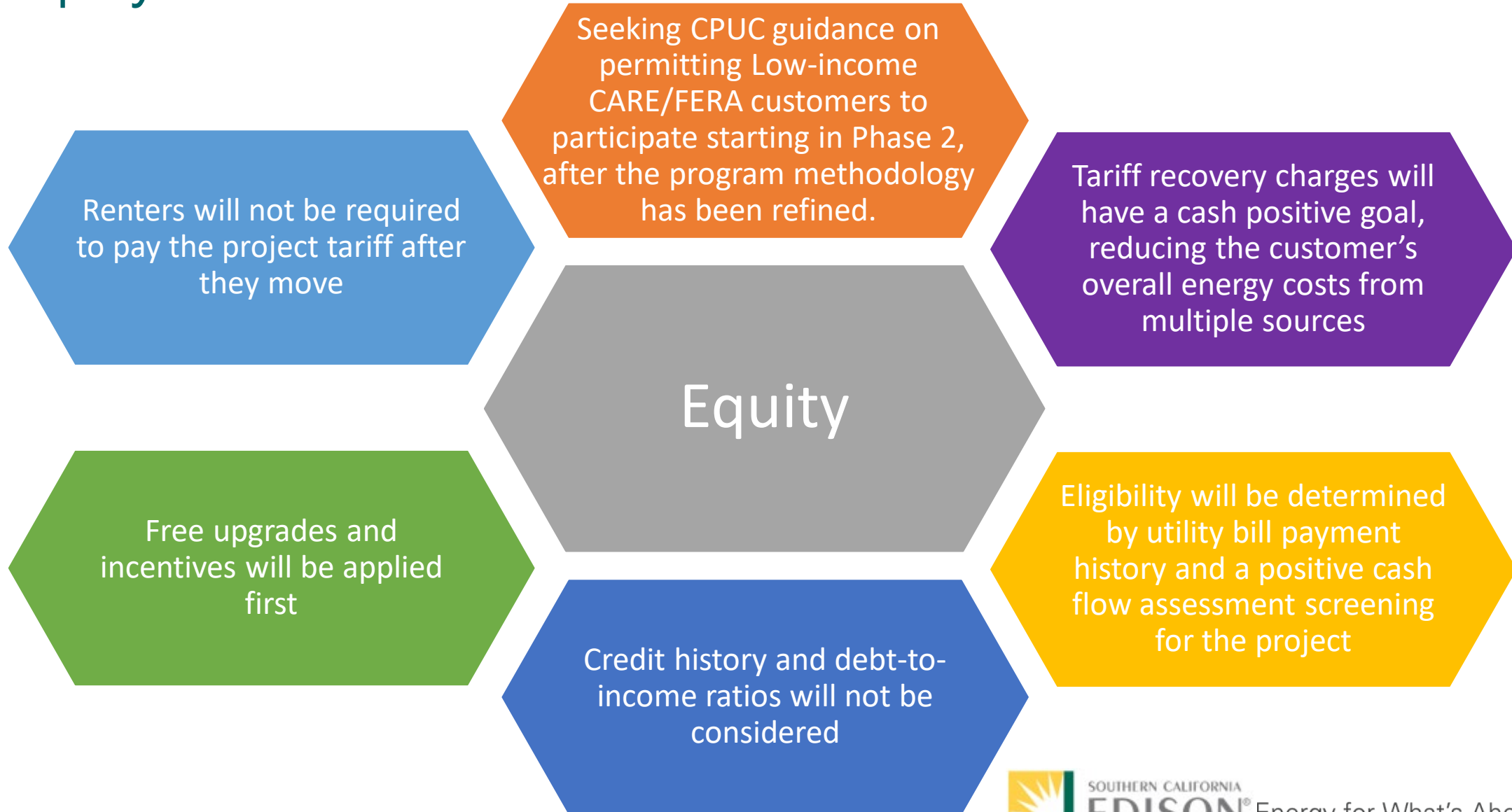
Expansion of Existing Non-Residential On-Bill Financing (OBF)

- Expand current OBF program to allow loans for clean energy technologies outside of energy efficiency (e.g., electrification) to allow for deeper retrofits and additional customer benefit and GHG savings.
- Projects could include EV charging, energy efficiency or building electrification
- Continue to use ratepayer funds to pay financing costs.

Establish New Residential-Only Tariffed On-Bill Program (TOB)

- Residential customers, owners, or tenants with owner consent, can finance a broad range of clean energy technologies (e.g., electrification), where costs are recovered via a utility tariff attached to the site meter.
- Projects could include energy efficiency or building electrification
- SCE proposes a phased approach, with plans to scale, to allow for modest initial investment to ensure viability before undertaking large scale risk and incorporate lessons learned into future designs.

Equity Features - TOB



Other Proposed Consumer Protections – TOB Program

Robust notice requirements will apply to subsequent occupants of sites with a tariff-on-bill charge

A capable and proven program operator with high standards and quality assurance process for vendors and contractors will be selected

All program contractors and vendors will be fully trained to explain program terms, conditions, and obligations to residential customers

The Program Operator will ensure that products are appropriate and functioning according to equipment and labor warranties throughout the tariff recovery

Other Proposed Consumer Protections – TOB Program

A bill savings analysis will be conducted to estimate cash flow is likely positive prior to program enrollment

A customer dispute resolution process will be developed

Landlords will be required to pay for necessary maintenance of equipment via co-pay or warranty, not the tenant. Both landlord and tenant must consent to the project

Customers must file their own application to ensure understanding of terms. Implementers will not be allowed to submit applications on behalf of customers

ESJ Community Outreach - TOB

SCE

Coordination with existing programs to leverage outreach and design elements that target ESJ communities

Program Operator

Development of a community outreach plan with special attention to ESJ communities

Community Based Organizations

Participation in program outreach and potential case management or application assistance services

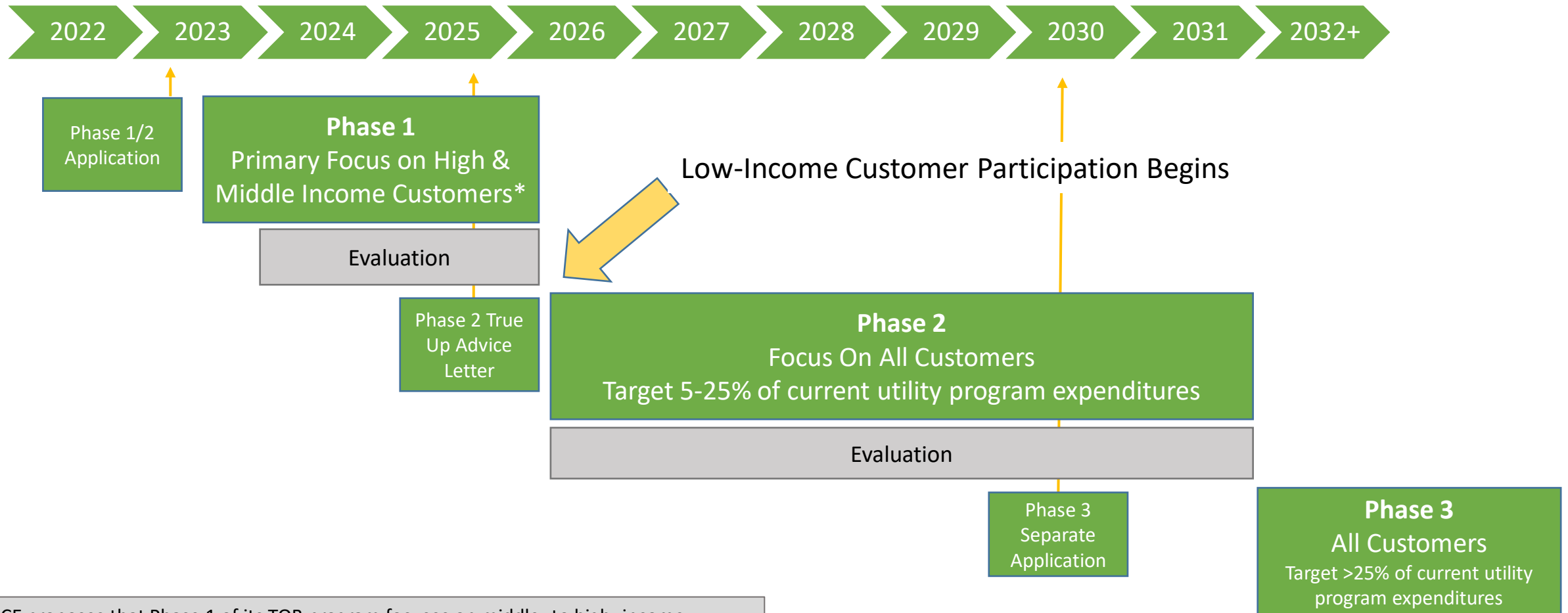
Program Materials

Development of program materials both for program promotion and educational purposes

Marketing Efforts

Execution of marketing campaigns, through social media, bill inserts, and SCE's company website

Conceptual Timeline for TOB



*SCE proposes that Phase 1 of its TOB program focuses on middle- to high- income customers and is open to CPUC guidance on permitting low-income customers (i.e., those eligible for CARE or FERA) to participate in the first phase of the TOB program.

Questions/Answers



QUESTIONS

SCE welcomes questions and feedback on our proposal.



CONTACT US

Please email SCE's Regulatory Case Manager at Luis.Gutierrez@sce.com



THANK YOU



PG&E CEFO Proposal: LIOB Presentation

PG&E's CEFO proposal seeks to leverage **Outside Debt Funding** to create a **Finance Platform** that would enable programs to:

1. Enable Customer Programs to be funded by Outside Debt Funding (rather than Customer Funds)
2. Enable **Financial Program Implementers** to develop more effective customer programs to support local communities and policy objectives
3. Address the first cost barrier by supporting turnkey projects with repayments through **Customer Financing Mechanisms**
4. Support energy affordability for participating and non-participating customers by capturing benefits to more efficiently use customer funds

Key Takeaway: CEFO can address multiple challenges



Accessible Programs: Enable accessible, transparent programs to support comprehensive projects for more customers.

Outside Funding: Achieving CA's clean energy and resiliency goals will require multiple funding sources and partnerships.

Lower Life Cycle Costs: Ensure that customer programs can provide long term cost savings to benefit customers and the grid.

PG&E CEFO Proposal is a financing platform that enables policy goals while prioritizing long-term affordability for all customers



PG&E CEFO Proposal: Customer Financing Mechanisms

Key Takeaway: The platform will issue funding to customers through TOB or OBF, depending on residential or non-residential status.

New Funding Structure

Non-Res Customer Programs

Expanded On-Billing Financing (OBF)

- **PG&E's Existing** OBF program will be expanded using outside funding
- Expanded to other non-res PG&E customer programs (where risk capital can be provided)
- Increased available capital for EE OBF, removing loan limits for customers/projects.
- Able to combine different technology types under a single loan agreement
- OBF loan repayment risk is a program cost
- Will require review with lending regulators

Residential Customer Programs

Tariffed On-Bill (TOB)

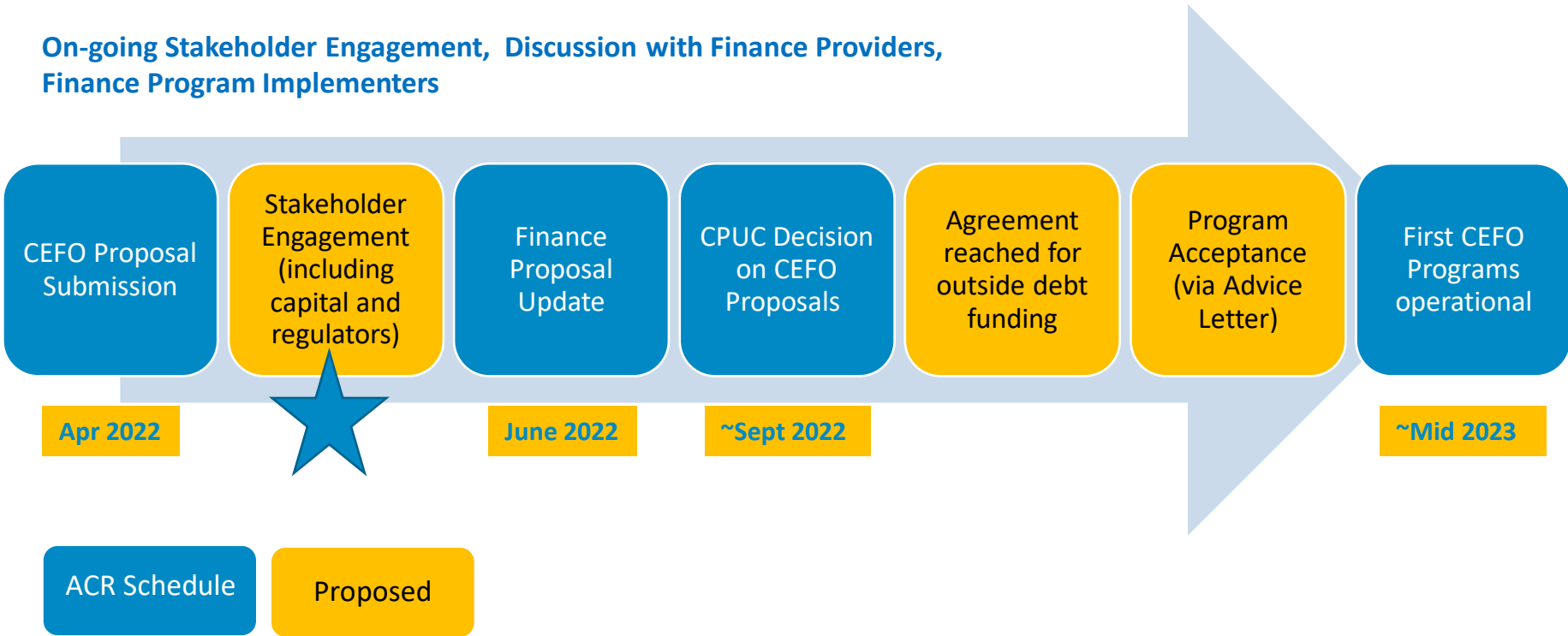
- **New as-a-service** tariff model - enables monthly payment options for a wider range of customers
- Finance Program Implementer (FPI) must address project performance risk over life of customer obligation
- TOB repayment risk will be modeled as a program cost and managed at the portfolio level
- Participating customer repayments made to be affordable for customer
- TOB charge is not due and payable if the customer moves – this is key to supporting residential customers, especially renters
- FPI will facilitate transfer and acceptance by subsequent customers (with IOU support)
- Will require review with lending regulators



PG&E CEFO Proposal: Process and Timeline

Key Takeaway: PG&E envisions co-creating a transparent CEFO program proposal with stakeholders

On-going Stakeholder Engagement, Discussion with Finance Providers, Finance Program Implementers



CLEAN ENERGY FINANCING PROGRAM PROPOSALS

Joe Frausto

June 28, 2022



Clean Energy Financing Proceeding

- » **Goal:** Develop financing options for electricity and natural gas customers to reduce customer Green House Gas (GHG) emissions.
 - Encourage large scale and deeper investments
 - Reach CA clean energy and climate goals by 2045
 - Overcome barriers to entry for disadvantaged customers (e.g. income, creditworthiness)

- » **Scope:** Any financing mechanisms that support customers investing in clean energy equipment behind the meter.

- » **Final Proposals were due:** June 15, 2022

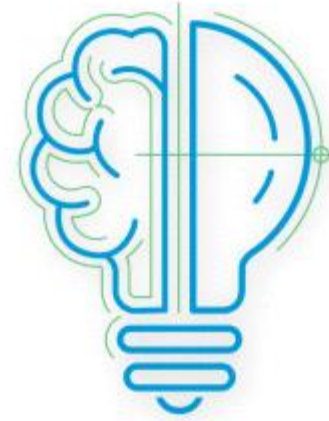
SoCalGas Principles

» Our Mission is to build the:

- **Cleanest**
 - Net zero carbon emissions by 2045
 - Incorporating cleaner fuel sources
- **Safest**
 - Operational excellence and pipeline integrity
- **Most Innovative Energy Company in America**
 - Advance new technologies

» Sustainability Strategy

- Accelerating the transition to clean energy
- Protecting the climate and improving air quality in our communities
- Increasing clean energy access and affordability
- Advancing a diverse, equitable, and inclusive culture
- Achieving world-class safety



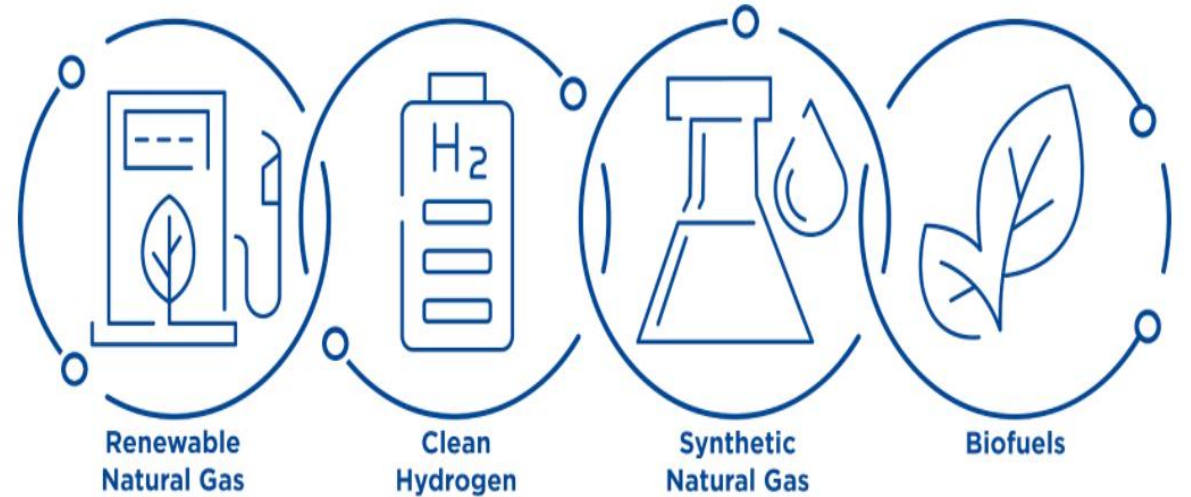
Overarching Themes

» Support Clean Energy Technologies

- Financing options proposed to be available for other clean energy technologies beyond energy efficiency

» Remove barriers to affordable financing

- Solutions targeting disadvantaged communities
- Equitable solutions



SoCalGas has financed energy efficiency equipment since 2005

What We Do Today:

Overview



Financing Programs

Ratepayer Funded

Administered since 2005

Available for Nonresidential and Multifamily customers

Finance lending
Exemption granted by Dept. of Corporations

On-Bill Financing (OBF)

- \$5.5 million loan pool collected through transportation rates
- Only available for EE equipment participating in SoCalGas rebate programs
- 0% interest rate; up to 15-year payback period depending on customer and equipment
- Monthly loan payment added to customer gas bill
- To Date: 111 enrolled loans / 1 default / \$4.8 million in total loans disbursed

Private Capital - Credit Enhancements Funded by EE Ratepayers

Administered by CAEATFA*, program funded by EE ratepayers

- 70% of loan must be used for EE upgrades
- 30% can be applied to non-EE equipment

GoGreen-Home

- Launched in 2016
- Loans up to \$50k
- \$33M funded
- 1,920 loans enrolled
- 573 enrolled contractors
- 9 approved lenders

GoGreen-Business

- Launched in 2019
- Loans up to \$5M
- On-Bill Repayment (OBR) feature launched 2022
- 10 enrolled loans
- 8 approved lenders

GoGreen-Multifamily

- Launched in 2019
- Loans up to \$10M
- On-Bill Repayment (OBR) feature 2022
- 0 enrolled loans
- 2 approved lenders



Proposal 1: Extend OBF to Residential Consumers



Eligible Technologies for Financing:

- Energy Efficiency (Water/Space Heating, Appliances, Solar Thermal)
- Fuel Cells

Program Details*:

- All residential customer accounts are eligible:
 - owner occupied or renters
- 0% interest; no fee; unsecured loan
- No income verification
- Credit verification:
 - Minimum 2-year account established
 - Based on customer utility repayment history
- Monthly loan repayment added to customer utility bill
- Approval based on account establishment and utility payment history

*Proposed Terms- subject to change

Proposal 1: Extend OBF to Residential Consumers Cont.



Benefits:

- Expand access to new clean technologies
- Remove barriers to access affordable financing

Outreach:

- Target disadvantaged communities
 - Community Based Organizations
 - Energy Saving Assistance Program

Funding Source:

- Gas Cap & Trade Funds (establish up to \$10M loan pool)
- Loan repayments would replenish loan pool

Questions?

Joe Frausto, Senior Customers Programs Advisor

Email: jfrausto@socalgas.com

Appendix

Proposal 2: Expand Existing Nonresidential OBF Program



Eligible Technologies for Financing:

- Energy Efficiency (available today)
- Distributed Energy (Combined Heat to Power, Waste Heat to Power, Fuel Cells)
- Microgrid & Resiliency (Digesters, Biogas Conditioners, Renewable Fuel Tech)
- RNG, CNG, Hydrogen (Heavy Duty Trucks, Fueling Stations, RNG Interconnections)

Program Details:

- 0% interest; no fees; unsecured loan
- No credit/income verification
- Monthly loan repayment added to customer utility bill
- Approval based on account establishment and utility payment history

Benefits:

- Established program with general market awareness
- Expand access to new clean technologies
- Low default rates

Funding Source

- Gas Cap & Trade Funds (\$5M - \$10M a year for at least 5 years to establish loan pool)
- Loan repayments would replenish loan pool

Required Next Steps Prior to Implementation

- Requires CPUC Approval
- Requires expanded Exemption from CA Dept of Financial Protection and Innovation



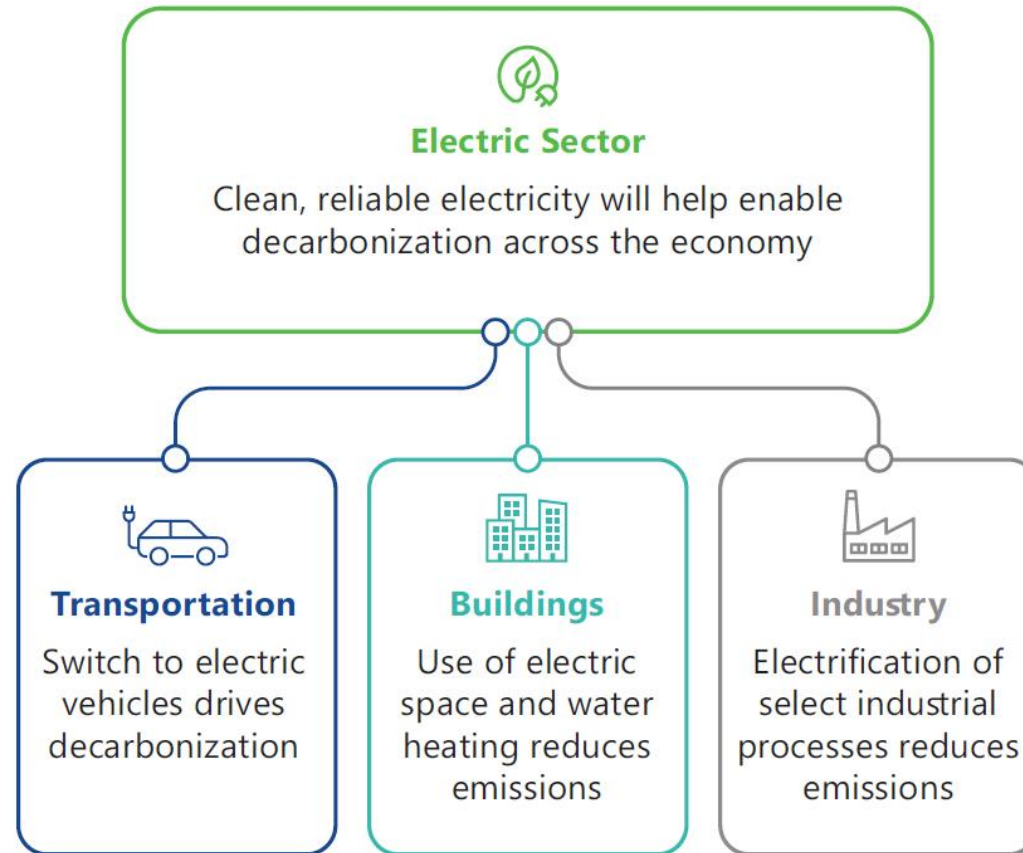
Clean Energy Financing Proposal

Heat Pump Water & Space Heating, and Electric
Panel Upgrade Financing for Business
Customers

Jon Kochik, Customer Programs, Solutions Manager
Athena Besa, Customer Programs, Strategy Advisor



The Path to Net Zero: A Decarbonization Roadmap for California



Proposed Program – Business Customer Clean Energy Financing (BCCEF)



Clean Energy Focus

- Building decarbonization - transition from natural gas to electric
- Heat pumps for water heating and space conditioning
- Panel upgrades to support future electrification

Customer Target

- Small and medium businesses (83%)
- 11,500 businesses in SDG&E DACs
- 50% of program focused on Hard to Reach and Disadvantaged Communities
- Outreach and education

Financing Mechanism

- On-Bill Financing
- 0% interest, no fees
- Eligible based on standing with SDG&E
- Incentives to balance costs
 - Energy Efficiency
 - Infrastructure (Panel Upgrade)
 - Energy Credit

Addressing Equity and Disadvantaged Communities



Proposal Features	Benefits for DACs and ESJ Communities
Targets small and hard-to-reach businesses	Funding reserved specifically for small business customers who often have low participation
Zero-percent interest loan	Reduces up-front cost, no added cost to borrow
Qualification based on paying energy bill	Does not require credit score or income verification
Monetary incentives to transition from natural gas to electric	Reduces total customer cost of project
Customer outreach and education	Increases awareness of benefits of newer heat pump technologies
Implementors conduct project cost reviews with customer	Provides clear understanding of costs and benefits of projects
Directly aligned with State of CA and regional clean energy goals	Contributing to the clean energy transition, with low out-of-pocket costs

Questions?

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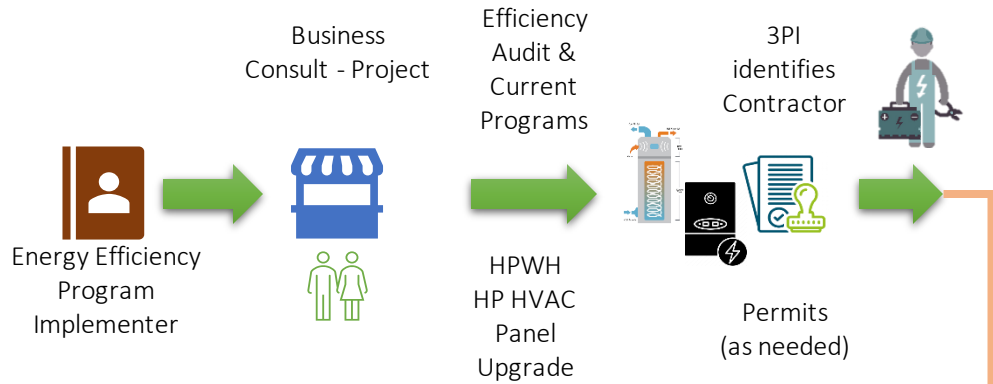


Appendix

Business Customer Journey

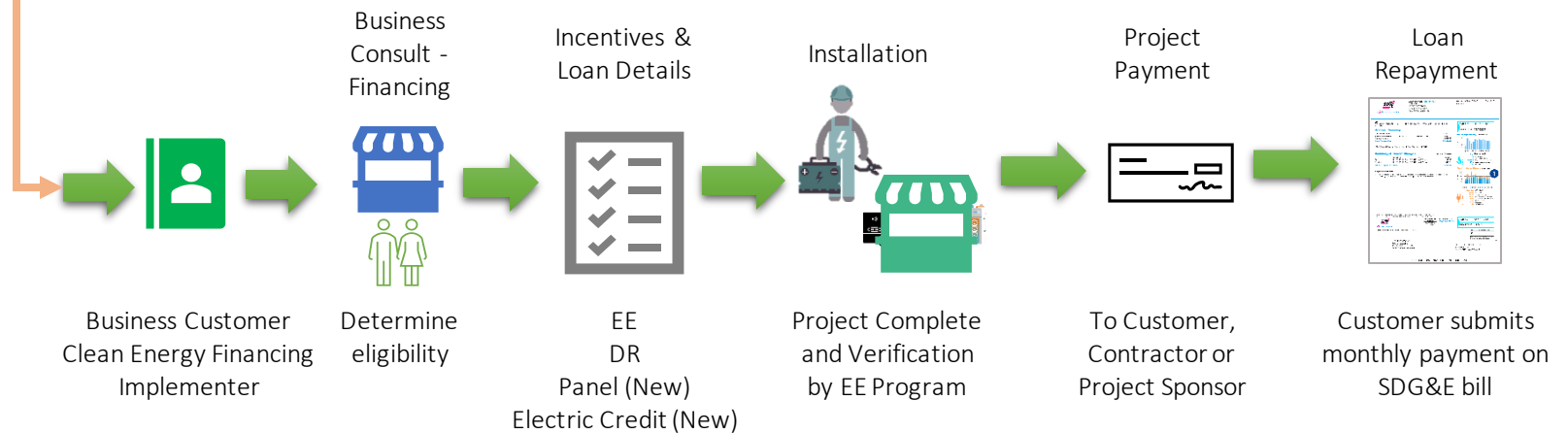


Energy Efficiency Program



- Customers must participate in EE program with fuel-substitution measures
- Will leverage EE rebates, and DR as applicable
- Clean Energy Financing adds more support and funding to remove up-front cost barriers

Business Customer Clean Energy Financing Program



1 What measures are included to protect customers against unfavorable finance arrangements through outside lenders?

- SDG&E's proposed program will be funded through public purpose funds vs. outside lenders
- Utilizing established OBF program requirements
- 0% Financing
- No costs

3 How is debt load projected to increase across the DAC vs non-DAC customer populations

- Participating customers will be incurring new debt
- All customers have access to zero percent financing with no fees in order to limit customer debt to only the equipment and installation costs

2 What measures are included to protect customers against assuming excessive unmanageable debt under credit enhancement?

- SDG&E's proposed program does not utilize credit enhancement.
- Customer will be made aware of financing terms and conditions through loan disclosures/agreement
- Transparency of loan terms with customers
- No financing charge or fees

4 What measures are included to ensure effective ME&O in DACs?

- Target program education and awareness for hard-to-reach customers
- Create program collateral material for customer distribution. Include content on SDG&E website
- Educate contractors and third-party programs
- Include key performance indicators to measure ME&O effectiveness

5 How are program participants targeted?

- SDG&E is specifically targeting small and medium business customers based on energy consumption, with a dedicated focus on hard-to-reach customers.

7 How does this program fit into the CPUC's ESJ Action Plan?

- SDG&E's proposed program was designed to align with the ESJ Action Plan, including a particular focus on hard-to-reach customers. For more information, refer to SDG&E's proposal filing.

6 Is there a guarantee of a lower bill? If so, what are the details of that guarantee?

- SDG&E is not guaranteeing a lower bill. Energy savings and bill impact will depend on individual customer's usage and other considerations.



Santa Barbara
CLEAN ENERGY
CHOOSING RENEWABLE ELECTRICITY



**LOCAL GOVERNMENT
SUSTAINABLE
ENERGY COALITION**

Decarbonization Incentive Rate (DIR) Financing Proposal

Developed by Local Government Sustainable Energy Coalition
and Santa Barbara Clean Energy

*Order Instituting Rulemaking to Investigate and Design Clean Energy
Financing Options for Electricity and Natural Gas Customers.*

June 28, 2022

Proposal: Offer Marginal Cost-Based Rates to Incremental Electricity Loads Prompted by Fuel Switching

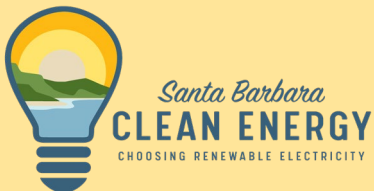
Customers who trade their natural gas-, fossil methane-, or propane-powered appliances for electric models would be provided with a discounted rate for the incremental (additional) electricity consumed.

These new loads would be exempt from the power cost indifference adjustment (PCIA) stranded asset charge to recover legacy generation costs.

Community Choice Aggregators (CCA), for example, would not have to pass on PCIA charges to DIR-eligible load.

Costs for incremental service are best represented by the marginal costs developed by utilities and other parties in General Rate Case (GRC) Phase II cases or California Public Utilities Commission's (CPUC) Avoided Cost Calculator.

California has adopted marginal cost-based electricity rate discounts previously to incentivize beneficial choices.



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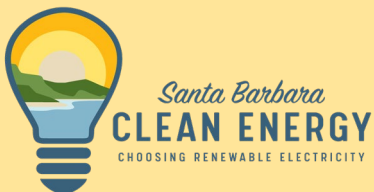
Incremental Load Induced by Decarbonization Would be Eligible for Lower Rates

For bundled Southern California Edison (SCE) customers, average rate would go from 17.62 cents per kilowatt-hour (kWh) to 12.95 cents, 26.5% less. Residential rates would decrease from 22.44 cents to 15.22 cents, 32.2% less.

- Tiered rates pose a significant barrier to electrification and would cause the effective discount to be greater than estimated here.
- These estimates were based on average electricity rate; added demand would be charged at the much higher Tier 2 rate. The decarb allowance could be introduced as a new Tier 0 below the current Tier 1.

Incremental electricity use would be determined through regulatory vetted sources.

- Building energy use: California Energy Commission's Title 24 building efficiency and Title 20 appliance standard assumptions, adjusted by climate zone.
- Vehicle energy use: based on average annual vehicle miles traveled in a designated region (e.g., county, city or zip code) as calculated by the California Air Resources Board for use in its EMFAC air quality model or from the Bureau of Automotive Repair Smog Check odometer records

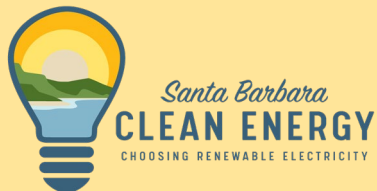


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Pilot Sponsor: Santa Barbara Clean Energy (SBCE)

- Single City CCA with a goal of reaching carbon neutrality by 2035
- Almost 20% CARE customers, with significant renter population.
- Leverage DIR to help incentivize the switch to all electric buildings for all income levels



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How it Would Work

↖ Customer
Installs
Electrification
Measure
(possibly with
TOB)

↻ Customer
pays reduced
rate for added
load, realizes
bill benefits,
enrolls in LSE
program

↻ CCA/IOU
leverages
installed
technology
for RA, LCR,
DR value

↖ CCA/IOU
reinvests
value gained
into
electrification
programs

Participant Eligibility

Single family residential customers receiving electric service at a location with a meter.

Customer must have maintained an active utility account for the previous 24 months and had service at the premises to be retrofitted for least 12 months

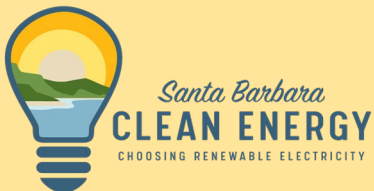
Renters may participate in the program as long as the building owner agrees to permit SBCE to install upgrades that replace fossil fueled appliances with electrical units in the building.

The owner will be required to maintain upgrades.

Eligible measure installation is confirmed

Customer must be in good payment standing from when the customer's program application is approved through the funding of the investment.

Customers must voluntarily opt to receive program services.



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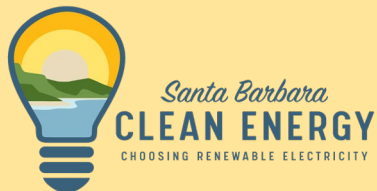
Metrics and Key Performance Indicators

Affordability:

- Ability of pilot measures to keep customer cost neutral (or save money) on monthly energy bills.
- Customer benefits demonstrated and quantified so that they can be leveraged to attract third party capital.
- Projected annual and lifetime emissions and utility bill savings (using meter-based data whenever appropriate and feasible) relative to fuel switched.

Maximum Impact, Uptake, Reduced Complexity:

- Ability of granular customer data to be used to estimate customer uptake or measure interest.
- Number of high gas users converted to electric space heating and cooling.
- Number of TOB/DIR participants, level of interest, ease of pilot enrollment.
- Market share for eligible technologies.
- Cost per metric ton of avoided GHG emissions (using meter-based data whenever appropriate and feasible).



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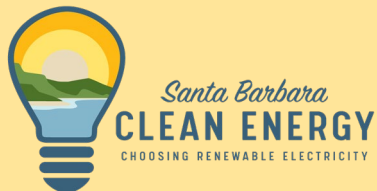
Metrics and Key Performance Indicators

Minimizing Risk:

- Customer energy bills at least net neutral to fuel switching, considering costs of intervention.

Equity and Inclusion:

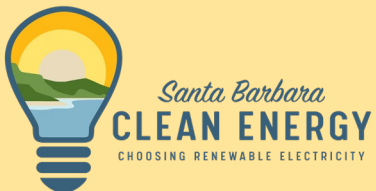
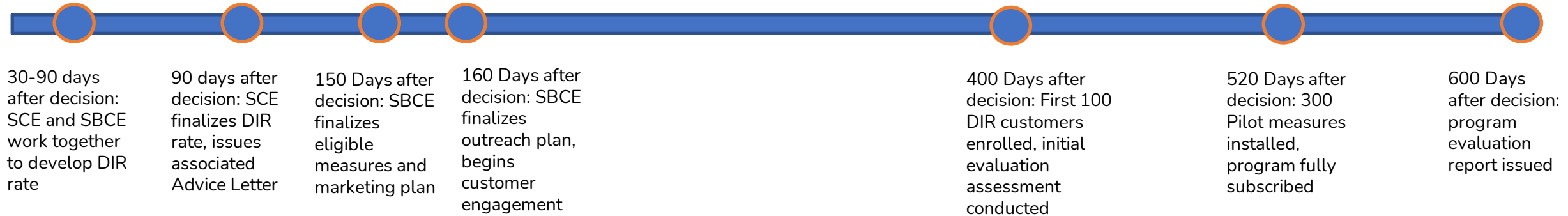
- Number of Spanish-speaking customers engaged and enrolled in the pilot.
- Number of CARE households served.
- Number and percentage of workers involved in implementation that are disadvantaged or otherwise underrepresented.
- Expected first-year GHG and utility bill savings for equity-targeted participants.
- Number of residential equity-targeted households receiving upgrades that are expected to improve home comfort, safety, and health outcomes.
- Number of residential equity-targeted households that could not be served due to the need for additional home repairs.
- Customer comprehension of program offers and satisfaction with program outcomes.
- Effectiveness of marketing and outreach campaigns based on engagement metrics.



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Pilot Timeline



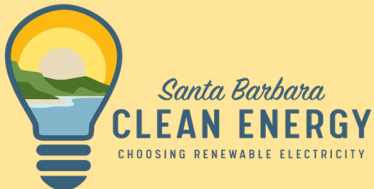
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Thanks!

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Director, City of Santa Barbara, Sustainability & Resilience

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Consultant



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A CCA Proposal for an Inclusive Utility Investment Pilot

Presented by

Silicon Valley Clean Energy

In partnership with **TECH Clean California**



Partner Profiles

- **Silicon Valley Clean Energy**

- Public agency serving 13 jurisdictions in Santa Clara County
- 270,000 residential and commercial customers
- 715+ MW renewable + storage PPAs under contract
- \$77M in on-bill customer savings, \$28M invested in customer programs



- **TECH Clean California**

- \$120 million initiative to drive market adoption of heat pumps and heat pump water heaters for existing homes in CA
- Authorized by SB 1477, funded by gas IOU ratepayers under the auspices of the CPUC
- Key activities include incentives, workforce training, consumer inspiration campaign, and 6 pilots, including Inclusive Utility investments



Presentation Outline

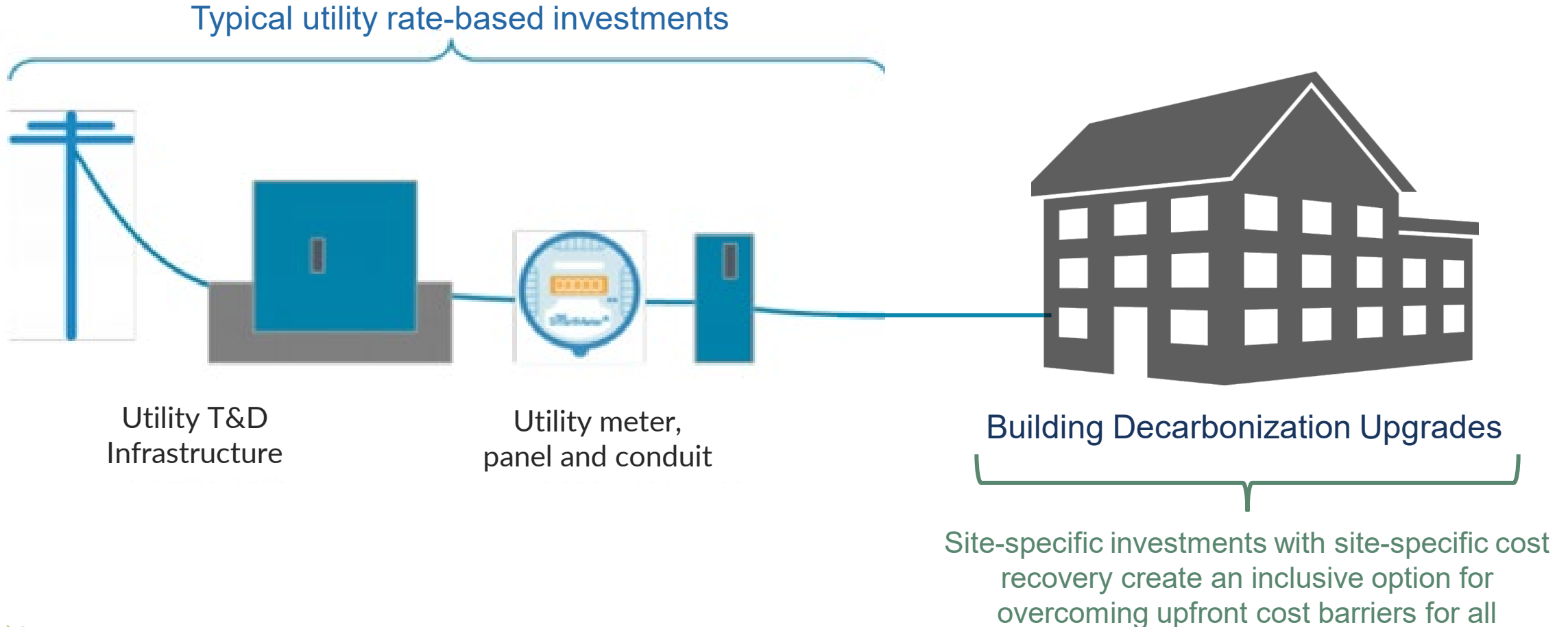
1. What is Inclusive Utility Investment? How Does It Work?
2. SVCE+TECH Proposal for a CCA IUI Pilot
3. Customer Protections
4. Open Questions

What is Inclusive Utility Investment? How Does It Work?



Q. What is Inclusive Utility Investment?

A. Site specific investment on tariffed terms with on-bill cost recovery. Also referred to as *Tariffed On-Bill*

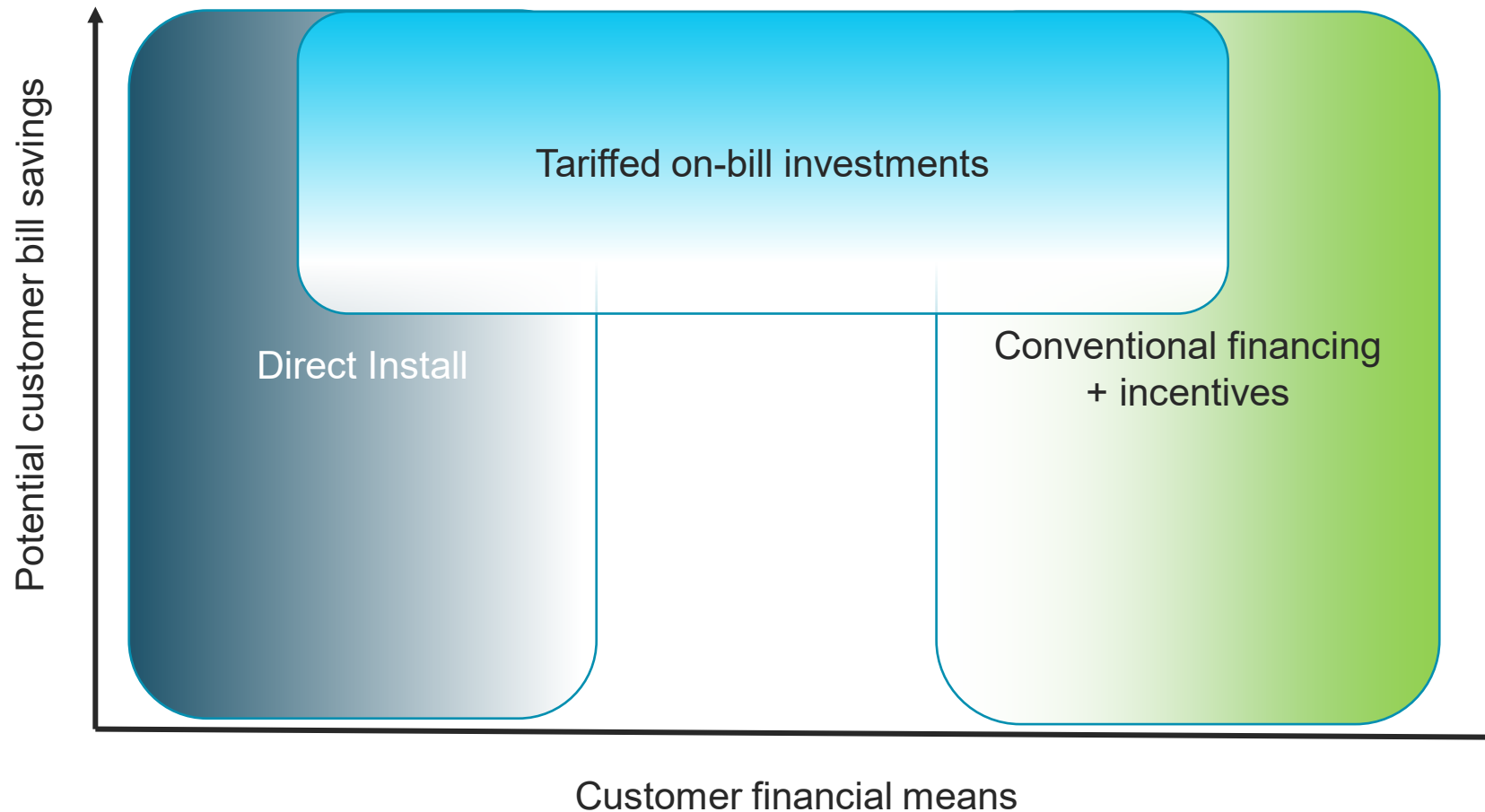


IUI Investment vs. On-Bill Financing

		OBF	IUI
Program Attributes	<ul style="list-style-type: none"> • Cost recovery is through a fixed charge on the utility bill 	✓	✓
	<ul style="list-style-type: none"> • Participant accepts an opt-in utility tariff <u> tied to the location </u> 		✓
	<ul style="list-style-type: none"> • Charge applies automatically to successor customers until cost recovery is complete 		✓
	<ul style="list-style-type: none"> • Estimated savings <u> must exceed </u> cost recovery charges 		✓
Customer Benefits	<ul style="list-style-type: none"> • No upfront participant cost for cost effective upgrades 	✓	?
	<ul style="list-style-type: none"> • No credit or income qualification required 		✓
	<ul style="list-style-type: none"> • Renters are eligible 		✓
	<ul style="list-style-type: none"> • Estimated savings <u> exceed </u> cost recovery charges 		✓
	<ul style="list-style-type: none"> • Payments end if upgrade fails and is not repaired 		✓

IUI's Role in the Program Portfolio

- Expand residential customer access to decarbonization upgrades and accelerate investments



SVCE+TECH Proposal for a CCA IUI Pilot



IUI Pilot Proposal

- 500 heat pumps, 500 heat pump water heaters, EE improvements as needed
- Target high energy users
 - Space heating: >400 Therms per year
 - Space cooling: >1,600 kWh per year
 - Water heating: >360 Therms per year
- Customer eligibility: Independent of income or credit standing but subject to good utility bill payment history
- Year 1: focus on middle-income single-family customers with aging mechanical systems
- Year 2: expand outreach to lower income tiers and multifamily

Capital Source	Amount
Utility incentives	\$2,560,000
IUI contribution	\$5,807,736
Participants and/or ratepayers	5,966,883
Total Investment	\$14,334,619
Customer bill savings	\$7,259,670
Bill savings net of cost recovery charges	\$1,451,934
Avoided equipment replacement costs	\$10,087,000

Proposed Roles & Responsibilities: Implementation

SVCE

- Hire and oversee Program Operator
- Meet PG&E cost recovery requirements
- Lead community engagement
- Support marketing & outreach
- Transmit IUI Service Charge info to PG&E
- Manage financial & regulatory compliance

PG&E

- Fund Behind-The-Meter investments & recover costs
- Remit revenues to capital providers
- Recover regulatory asset costs from ratepayers

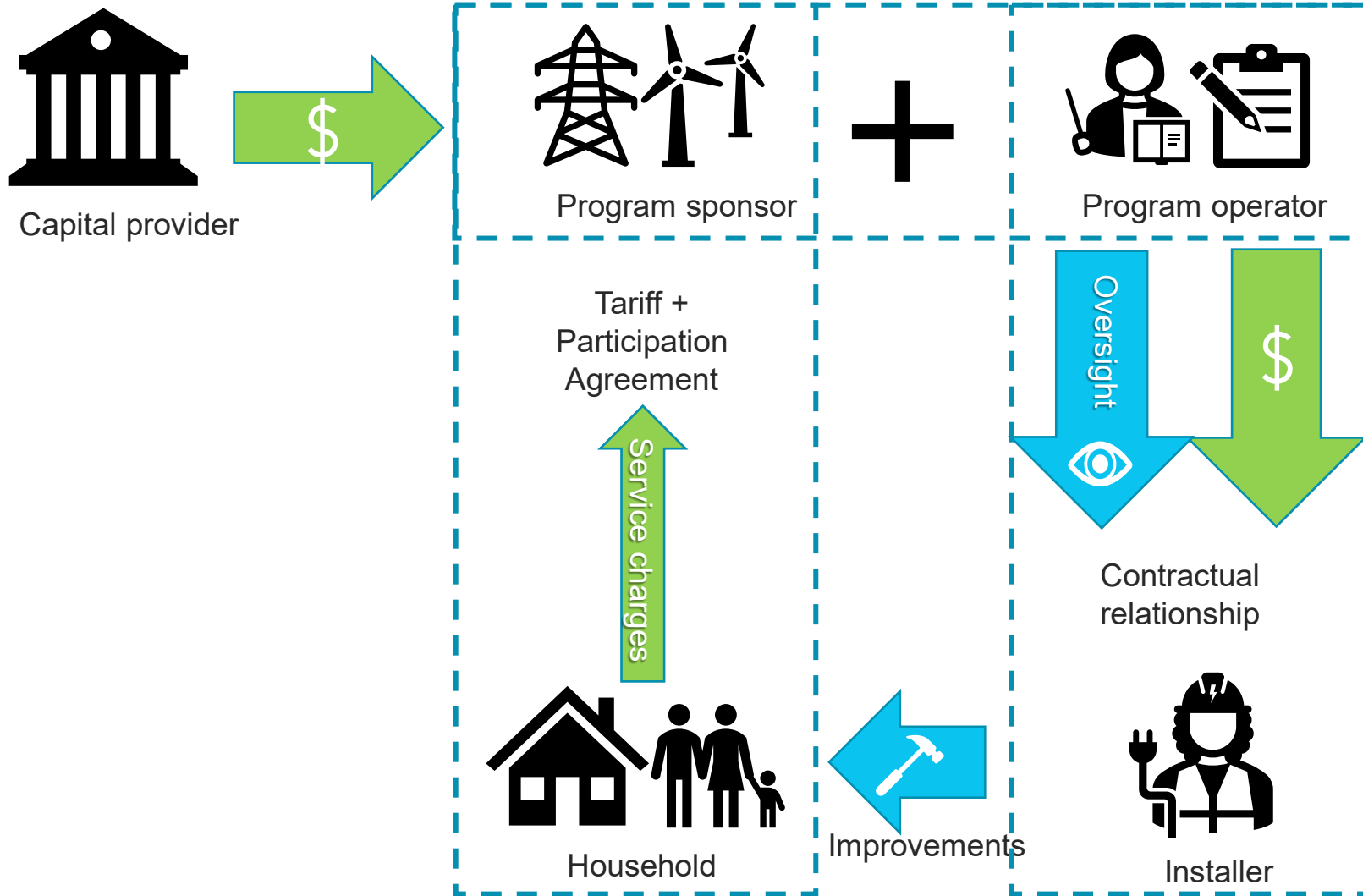
TECH Pilot

- Support Program Operator recruitment & onboarding
- Fund risk mitigation, startup costs
- Contribute implementation resources - TBD
- Leverage complementary TECH efforts
- Conduct QA/QC of improvements
- Conduct M&V

Program Operator

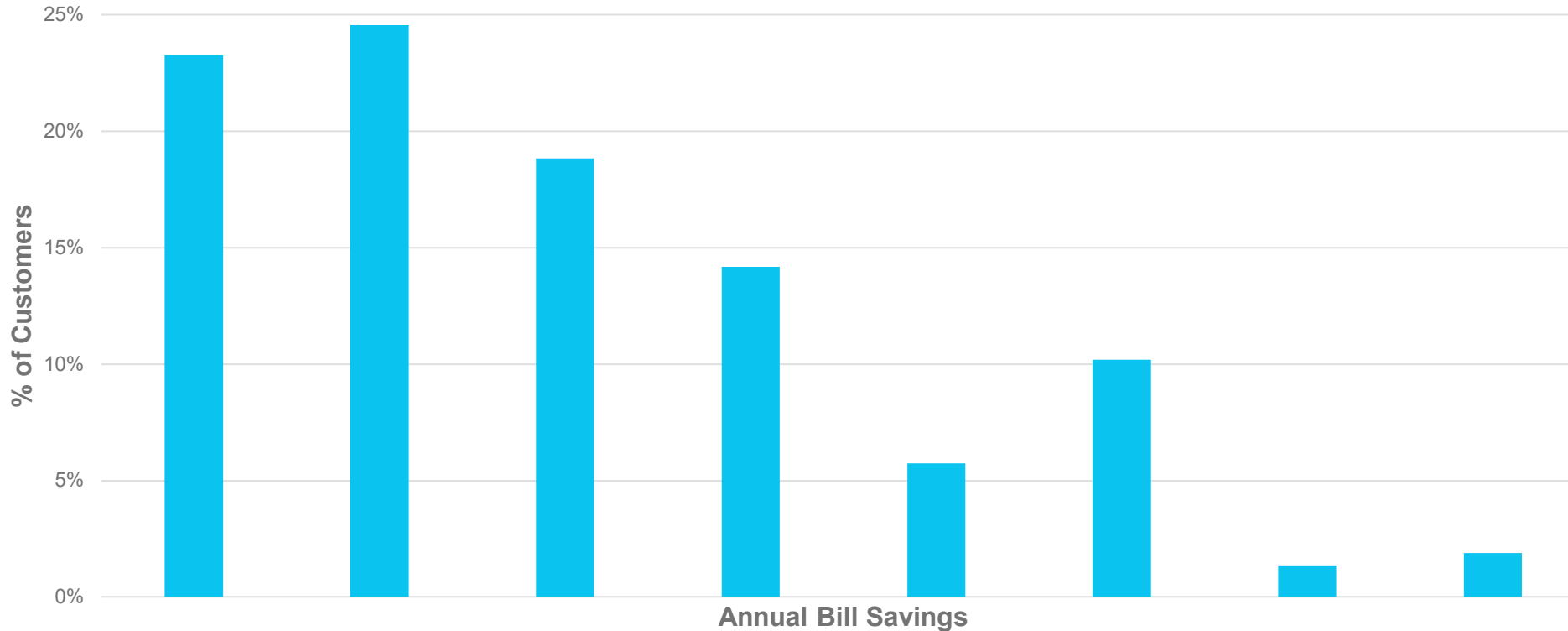
- Operational responsibility for customer acquisition, cost containment & quality control
- Hire & manage installers
- Per approved implementation plan:
 - Handle marketing and customer acquisition
 - Conduct all phases of project origination: site assessment, project scope & specifications development, permitting, financial analysis, determine IUI capital contribution
 - Manage O&M, customer service

Program Delivery Model



Meter-Based Customer Targeting

Analyze customer energy consumption to ID customers with highest bill savings opportunities



- **Target customers with HIGH cooling electric usage and HIGH heating gas usage**
- From analysis of HP+HPWH impacts for selected Bay Area communities, assuming PG&E electric EV2, gas G-1, 30% improvement in heating and cooling loads

Proposed Metrics

Data Type	Program Metrics
Site Assessment & Application	<ul style="list-style-type: none"> • Projected annual and lifetime utility bill savings • # equity-targeted households served • Health and safety issues abated for equity-targeted households • # equity-targeted households that could not be served due to the need for additional home repairs • # equity-targeted households expected to improve home comfort, safety, and health outcomes • Impacts of billing history screening criteria on customer eligibility, enrollment, and subsequent payment arrears
Energy Monitoring	Actual first-year energy, GHG, and utility bill savings attributable to program investments
Program Metadata	<ul style="list-style-type: none"> • % of IUI customer offers are accepted • % of contributions to project investment from IUI capital, incentives, grid benefits, customer copays • Cost per metric ton of avoided GHG emissions • Cost-effectiveness of program interventions • Incidence of post-retrofit bill payment arrears for program participants • Participation rates among LMI households • Participation rates among renter households
Participant Feedback	<ul style="list-style-type: none"> • Customer comprehension of program offers and satisfaction with program outcomes • Effectiveness of marketing and outreach campaigns

Customer Protections



Customer Protections: Planning and Post-Retrofit Phase

- **Project Planning Phase Protections**

- Program Operator develops project scope or budget, not the installing contractor
- Adopt best practices & QA protocols for developing savings estimates
- Build in 20% buffer between expected annual savings and Program Service Charge

- **Post-Retrofit Protections Under Consideration**

- Customer owns upgrades. No liens, no threat of repossession or foreclosure.
- Customer-specific limited savings prediction guarantee based on end-use submetered results (to distinguish performance issues from confounding changes in customer behavior and lifestyle)
- Investigate causes of mispredictions in pilot projects and incorporate lessons learned into revised program protocols

Tenant Protections

Design principles:

- Landlord must consent to let the utility program sponsor install upgrades.
- Landlords continue to have a fiduciary duty to provide space heating and hot water services to tenants.

Recommendations:

- Require landlord copayments for space heating and hot water upgrades
- Apply waterfall provisions for landlord copay, incentives, and IUI Program Service Charge structured to minimize tenant obligations, maximize benefits

Protections Against Equipment Failure and Performance Degradation

- **Tariff Terms**

- Charges stop if upgrades stop working until they are repaired and working again.

- **Installation Quality Control**

- Require installers to provide geo-coded and date-stamped video and photographic documentation of all equipment installations
- Require or reward installers for systems commissioning of new mechanical systems
- Program to perform quality-control inspections and acceptance testing of equipment installations on at least a sampled basis
- Charge installers for failed inspections and increase project sampling rates

- **Warranties**

- Require extended manufacturer warranties (e.g., 10-12 years) on installed equipment
- Require installer to provide a one-year warranty on labor

- **Feedback loop: post-installation fault detection and diagnostics**

- Perform “big data” analytics of metered energy consumption data, smart thermostat data (HVAC), and hot water controls to detect possible instances of equipment performing outside of design parameters
- Dedicated customer service for the duration of cost recovery charge (i.e., expected measure life)
- Program Operator investigate suspect cases via customer phone interviews, site visits, as appropriate

Open Questions



Some Outstanding Questions

1. How should we weigh considerations of (a) enabling residents in equity-targeted communities to "move to the front of the line" for clean energy investments, versus (b) shielding vulnerable households from program delivery models that have not yet been fully field tested in California?
2. What are the pros and cons of applying IUI terms for cost recovery automatically to successor customers? In the absence of automatic succession, how might a program meaningfully address rental housing where occupants change every few years?
3. What are recommendations for educational or informational materials that we should make available during CBO and customer engagement?
4. How might we structure an appealing offer to landlords without enabling them to outsource their statutory obligations to provide heat and hot water to their tenants?

Thank You!

For more information, contact:

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FINANCING™

Clean Energy Financing Proposal

Low Income Oversight Board Meeting
June 28, 2022

GoGreen Financing increases access to affordable clean energy financing options

- **Facilitates attractive financing options for customers** for behind-the-meter improvements
- **Leverages private capital** using a credit enhancement
 - Enables lenders to lower interest rates, extend payback terms, and broaden approval criteria
- **Authorized by the CPUC**, administered by CAEATFA (an agency of the State Treasurer's Office)



GoGreen Home
2,000+ loans enrolled

- Owners and renters of single-family homes (inc. manufactured homes, condos, multiplexes)
- Microloans for appliances reaching underserved borrowers



GoGreen Business

- Small businesses and nonprofits, owners or tenants
- On-bill repayment option available

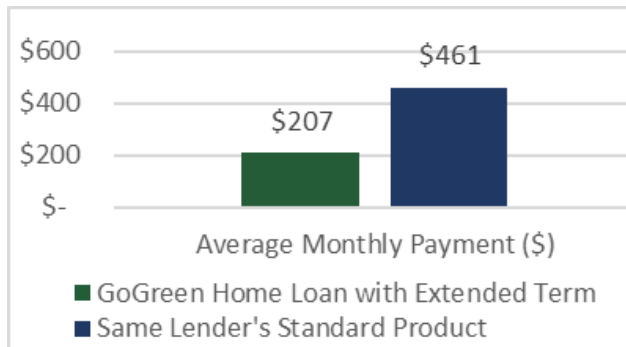


GoGreen Multifamily

- Affordable multifamily properties where >50% units are LMI-restricted
- Interest rate buy-down promotion lowers rate to 0%

Consumer protections are built into program design

Average Monthly Payment Reduction Due to Extended Terms



GoGreen Home loans with terms >60 months, compared with same lender's non-GoGreen Home signature product with terms limited to 60 months

- Existing consumer protection measures will continue if proposal is approved:
 - **No property liens** – loans are unsecured or equipment-secured
 - **Interest rates capped** at US Treasury + 750 basis points; lenders must show how credit enhancement reduces rates from their non-GoGreen products
 - **Debt-to-income maximum** of 55% to prevent customers from taking on debt they cannot repay (for loans >\$5,000)
 - Credit enhancement allows lenders to offer **extended terms**, which significantly reduces monthly payments, thus reducing risk of default
 - **No risk of utility disconnection** for off-bill repayment products
 - **Lenders have “skin in the game”** on every loan made; encourages them to make loans customers can repay

Debt-based financing is one of many financing options needed to achieve clean energy goals

- GoGreen Financing offers debt-based financing that complements TOB, OBF and other interventions
- Supports borrowers in the middle of the energy financing “donut hole”
 - Provides an improved product with broader underwriting criteria for energy upgrades
 - Customers who have the ability to pay for their upgrades/repay a loan should do so to preserve subsidy dollars for the most underserved

The Clean Energy Financing “Donut Hole”

Customers who qualify for traditional, market-rate financing options



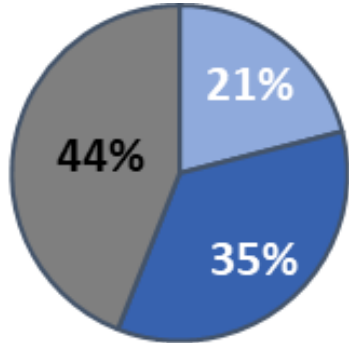
Customers who require support from subsidies or direct install programs

Customers who don't qualify for traditional financing or subsidy programs

GoGreen Home outcomes: 2,000+ loans and \$35 million in private capital leveraged

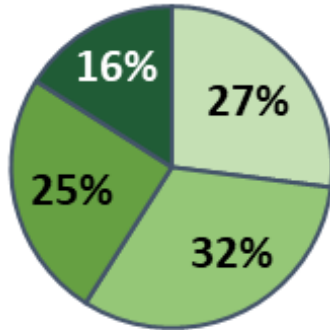
For every \$1 of credit enhancement allocated, **\$6.52** in private capital is leveraged

% of Loans Made to Upgrade Properties by **Census Tract Income**



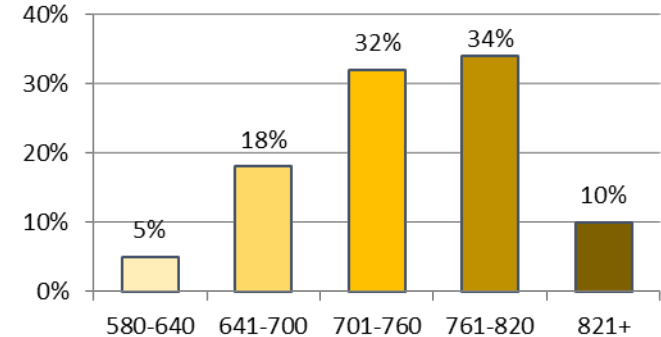
- <80% AMI (lower income)
- 80-120% AMI (moderate income)
- >120% AMI (higher income)

% of Loans Made to Upgrade Properties by **CalEnviroScreen Score**



- 0-24%
- 25-49%
- 50-74%
- 75-100% (DAC)

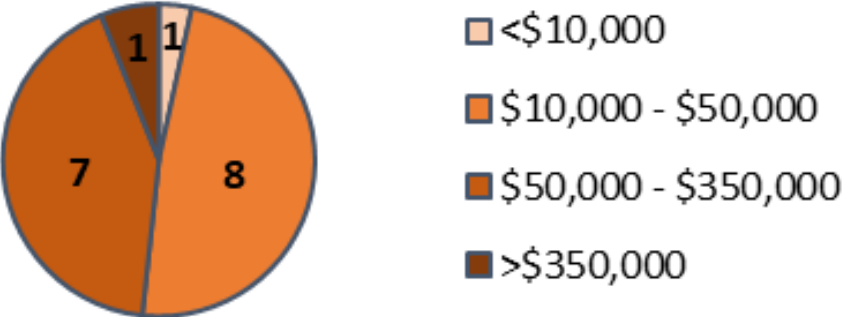
% of Loans Enrolled by **Borrower Credit Score**



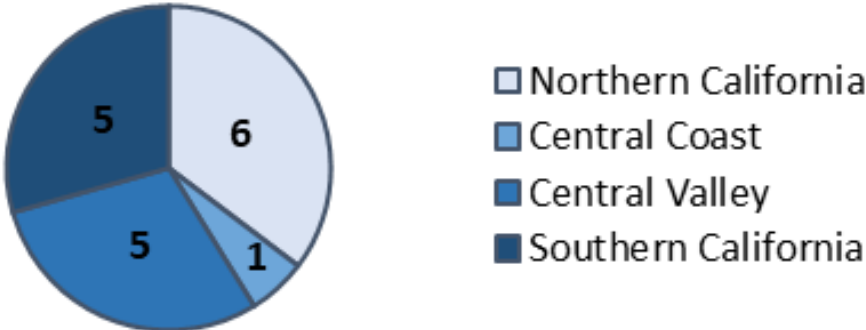
<1% of loans are made to borrowers with no FICO

GoGreen Business outcomes: 17 financing agreements and \$2 million in private capital leveraged

Breakdown of Projects by Financing Agreement Amount



Breakdown of Projects by Region



For every \$1 of credit enhancement allocated, **\$10.59** in private capital is leveraged

Clean Energy Financing Proposal: Leverage more private capital toward more of the State's goals

Expand the GoGreen Financing Programs to support financing of **comprehensive clean energy technology**

- Move beyond the silos of Energy Efficiency and Demand Response to support state goals of decarbonization, GHG reduction and resiliency
- Potential measures may include battery storage, EV charging, combined heat and power, etc.



Re-authorize CAEATFA to develop the **Public Buildings/Large Commercial Program**

- Allow on-bill repayment without a credit enhancement for large commercial and public buildings

Objectives of Proposal 1: Comprehensive Clean Energy Technology Expansion



1. **Immediately unlock tens of millions of dollars** in private capital toward state energy goals



2. Enable the GoGreen Financing Programs to serve as a “**one-stop shop**” for borrowers



3. Expand debt-based **options for low-to-moderate-income customers** who have the cash flow to repay loans



4. **Complement** expanded OBF and new Tariffed On-Bill (TOB) Financing proposals

GoGreen Home customer benefits from technology expansion

Type of Technology	Measure	Cost
Energy Efficiency	Heat pump HVAC upgrade + insulation	\$20,000
Distributed Generation	Rooftop solar PV system	\$8,250
Storage	Peak battery with controls	\$12,000
		\$40,250

GoGreen Home Financing Options				National Credit Union Average
<i>Rate</i>	3.49%	4.49%	5.49%	10.7%
<i>Loan Term in Months</i>	60	120	180	60
Monthly Payment	\$732	\$417	\$329	\$869
Total Interest Paid	\$3,672	\$9,784	\$18,909	\$11,897

Objectives of Proposal 2: Re-Authorization of Large Commercial/Public Buildings Financing Program



1. **Expand access** to the already-developed On-Bill Repayment infrastructure



2. **Preserve credit enhancement** dollars for qualified small businesses



3. **Leverage tens of millions of dollars** in GoGreen private capital financing options



4. **Leverage the CHEEF's existing infrastructure** to yield significant GHG reduction with little additional expense

Reaching underserved communities and meeting ESJ plan goals

- Robust ME&O efforts to reach underserved communities
 - Statewide marketing outreach focuses on Central Valley
 - [GoGreenFinancing.com](https://gogreenfinancing.com) limits bureaucratic interactions and make loan enrollment easy to navigate, links to ESA and CARE
 - Broad contractor network with **capacity to serve 99% of Californians in 13 languages**
 - Full website available in Spanish, with plans to translate into more
 - 200+ Spanish-speaking contractors, 6 Spanish-speaking lenders
- Program expansion works toward ESJ Action Plan goals
 - Comprehensive measures will help ESJ communities access clean energy resources for resiliency and local air quality/public health
 - CAEATFA has and will continue to share lessons learned with CPUC

The screenshot shows the GoGreen Financing website. At the top, there is a navigation bar with the GoGreen Financing logo, the State of California logo, and links for 'Elija un programa', 'Encuentre un contratista', 'Solicite financiamiento', 'Socios', and 'Ayuda'. The main content area features a large green circular graphic with the text 'Comodidad para su hogar. Rendimiento para su empresa.' and 'Financiamiento para la eficiencia energética respaldado por el estado de California'. Below this is a 'MÁS INFORMACIÓN' button. The background image shows a woman and a young girl sitting together, looking at a laptop. Below the main content area, there is a green banner with the text 'Le damos la bienvenida a GoGreen Financing'.

The screenshot shows the GoGreen Financing website content area. It features a large image of a woman and a man looking at a laptop. Below the image is a green banner with the text 'Comodidad que usted puede permitirse'. The main content area is divided into two columns. The left column is titled 'Soluciones de financiamiento para su proyecto de eficiencia energética' and contains text about the program. The right column is titled 'Beneficios' and lists several benefits. Below the benefits is a section titled 'Las medidas que califican incluyen' and a list of measures. At the bottom of the page, there is a footer with the GoGreen Financing logo and a small disclaimer.

Soluciones de financiamiento para su proyecto de eficiencia energética

El programa de Financiamiento Energético Residencial GoGreen (GoGreen Home Energy Financing) se diseñó para ayudar a los propietarios e inquilinos de viviendas de California a que accedan a financiamiento atractivo para proyectos de eficiencia energética. GoGreen Residencial es un programa administrado por el estado disponible para los residentes de California, ya sean propietarios o inquilinos, que cuentan con servicio de gas o electricidad de alguno de los siguientes servicios públicos que son propiedad de inversionistas: Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), Southern California Edison (SCE) y SoCalGas®.

Explore las opciones de préstamos y encuentre un contratista para su mejora residencial de eficiencia energética.
[GoGreenFinancing.com/comodidad](https://gogreenfinancing.com/comodidad)

Beneficios

- Tasas de interés por debajo del mercado y pagos aseguilados
- Sin cuota inicial, ni costos de cierre, ni gravámenes a su propiedad
- Califican prestatarios con un amplio rango de calificaciones de crédito
- Utilice hasta un 30% del monto del préstamo para mejoras no energéticas
- Actualizaciones necesarias con financiamiento, incluidos los paneles eléctricos

Las medidas que califican incluyen

- Calentadores de agua con bomba de calor
- Bomba de calor de climatización
- Otros medios eficientes de calefacción y aire acondicionado
- Ventanas y techos reflectivos
- Aislamiento y sellado de aire
- Electrodomésticos de ENERGY STAR®

Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), Southern California Edison Company (SCE) y Southern California Gas Company (SoCalGas)® no ofrecen préstamos ni cumplir con los requisitos de calificación de crédito ni calificación de financiamiento. El crédito es proporcionado por un prestador de servicios financieros. El programa de financiamiento GoGreen Residencial es un programa administrado por el estado disponible para los residentes de California, ya sean propietarios o inquilinos, que cuentan con servicio de gas o electricidad de alguno de los siguientes servicios públicos que son propiedad de inversionistas: Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), Southern California Edison (SCE) y SoCalGas®.

Questions and requested feedback for Low Income Oversight Board

- What role do you envision credit enhanced, debt-based financing playing in helping low-income communities decarbonize and improve resiliency?
- Beyond what CAEATFA suggests, how can the GoGreen Financing Programs best complement the expanded OBF, TOB and other clean energy financing programs being proposed?
- What are the most effective ways that CAEATFA can promote these Programs and the proposed expansions in low-income communities?



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Thank You

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www.GoGreenFinancing.com