



**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE
STATE OF CALIFORNIA**

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

Rulemaking 20-08-022

SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E)
CLEAN ENERGY FINANCING PROGRAM PROPOSAL

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Pursuant to the Assigned Commissioner’s Scoping Memo and Ruling dated November 19, 2021, Southern California Edison Company (SCE) respectfully submits this conceptual *Clean Energy Financing Program Proposal*.

I.

INTRODUCTION

In this proceeding, the California Public Utilities Commission (Commission or CPUC) seeks to develop a more cohesive and comprehensive strategy to help customers finance energy improvements to further support the state’s ambitious greenhouse gas (GHG) reduction goals. SCE agrees that well-designed financing options, operating in conjunction with incentive programs, would allow customers to finance deeper retrofits across a broad range of clean energy technologies and could help California meet its environmental and energy goals. SCE also agrees with the Commission that expansion of existing programs to new technologies, as well as creation of new financing mechanisms to support more comprehensive individual investment, will require leveraging ratepayer subsidies with private or public financing.¹ In developing its conceptual proposals, detailed herein, SCE focused on balancing

¹ Order Instituting Rulemaking to Investigate and Design Clean Energy Financing Options for Electricity and Natural Gas Customers, Rulemaking (R.) 20-08-022, p. 2.

five key principles: (1) emphasizing affordability; (2) encouraging maximum impact and uptake; (3) reducing complexity; (4) minimizing customer and utility risk; and (5) maximizing equity and inclusion.

Based on these principles, and the Commission's broad goal of expanding and streamlining financing options across clean energy technologies, SCE proposes, at a conceptual level, a two-pronged financing strategy for its customers: (1) expanding SCE's current and proven on-bill financing (OBF) program for non-residential customers to allow commercial, industrial and governmental customers to finance clean energy projects beyond energy efficiency measures through a no-interest, no-fee loan that is repaid on the utility bill or in full by the borrower, at its election; and (2) developing a new, phased tariffed on-bill (TOB) program specifically to assist residential customers to adopt a broad range of clean technologies, that could include energy efficiency, building electrification, solar and storage, single-customer microgrids, and other distributed energy resources, utilizing a tariff charge attached to the site meter, rather than a loan to individual customers.

In developing this conceptual proposal, SCE consulted with various stakeholders, and considered the expected needs of its customers, as well as the state's environmental goals. SCE also appreciates the feedback received at the Workshop on March 25, 2022 (Workshop), and SCE made some refinements to its conceptual proposal in response to the feedback and questions received at the Workshop.

The Workshop also highlighted the tremendous complexity of financing proposals that seek to equitably assist both non-residential and residential customers' transition to a clean energy future, while also ensuring any such proposals include robust consumer, ratepayer, and utility protections and comply with all applicable state and federal laws. Additionally, questions relating to who should pay – and how they should pay – the cost of financing clean energy measures that will benefit not only the individual consumer, but also the entire state of California, add to the complexity of designing and administering mass-scale programs that include upfront financing clean energy technologies.

As stated above, SCE agrees that it is important to explore expanding financing programs beyond existing programs and technologies, like energy efficiency, but notes that critical policy decisions being discussed and decided throughout the numerous other clean energy Commission proceedings and programs will significantly impact customer adoption of any proposals in this

proceeding, as may legal and funding challenges. For instance, many financing offerings, particularly the residential TOB model, may require complementary actions to realize the objectives of this proceeding (i.e., consumer protections, equity, lower to middle income customer participation, etc.), making policy coordination across the various impacted programs and their respective implementation plans critical to any rollout of financing programs. Examples include, but are not limited to, the in-progress applications, policies, or program frameworks determining incentives for Energy Efficiency, Demand Response, Building Decarbonization, Building Electrification, Transportation Electrification, Self-Generation Incentive Program, and Net Energy Metering.

Based on these complexities, the iterative nature of this proceeding, and the need to coordinate with the Commission, other agencies/regulators and branches of government, and various stakeholders, SCE clarifies that the TOB proposal described herein is still in the early concept phase, and the OBF expansion proposal, while further along, still requires further action by the California Department of Financial Protection and Innovation (DFPI) and the Commission to implement. While SCE has considered various program details, there remain numerous key preliminary policy, legal, and financial decisions and challenges that must be resolved before SCE can design final program details and expand its financing offerings to a broader array of technologies and customers. As with any new or expanded program, SCE must carefully balance the desire to quickly advance California's clean energy goals and the potential risks and costs of expanding too quickly without sufficient customer protections. SCE looks forward to tackling these challenges, with the policy guidance of the Commission and other relevant regulators and the input of stakeholders, to develop and administer successful financing programs to most efficiently reach California's energy and environmental goals.

More specifically, to implement its proposals, SCE, at a minimum, will require the following input and approvals:

- Authorization by the Commission for SCE to place tariffed on-bill charges on customer utility bill as a charge related to the provision of electric service, not as a loan obligation;
- Guidance from the Commission regarding the funding source for the first phase of the TOB program, and thereafter, whether it is prudent to pursue additional program funding

options that utilize third-party debt, through securitization legislation, or public funding for future phases of the TOB program, as presented in Section III.D hereof;

- Guidance from the Commission and input from stakeholders regarding the notice protocol sufficiently robust and enforceable to allow for automatic application to successor customers of the on-bill tariff charge to ensure compliance with all applicable laws;
- Opinion from the DFPI extending the exemption of the California lending laws to OBF loans for technologies beyond energy efficiency;
- Opinion from the DFPI that the TOB program, as a tariffed service, does not require compliance with California lending laws, including, but not limited to, the Debt Collection Act; and
- If automatic application to successor customers is adopted, coordination with state and local laws governing landlord tenant issues and the rights of tenants and subsequent purchasers of the property with the meter with which the obligation is associated.

II.

RESPONSES TO PART I: OVERALL GOALS AND PRINCIPLES

Set forth below in the headings labeled with capital letters and numbers are the Commission's queries, followed by numbered headings followed by subheadings that reflect the organization of SCE's responsive substantive content.

A. **Describe what this program is seeking to achieve, including which market barrier(s) is being addressed through the program.**

1. **Expansion of On-Bill Financing (OBF) Loan Program (Expanded OBF)**

SCE's OBF program currently offers no-interest, no-fee loans to non-residential customers for energy efficiency upgrades only. SCE's OBF program has been highly successful, with over 2,400 loans issued, representing \$99 million in funding and only a 0.7% default rate since 2008.

The OBF program has allowed non-residential customers that may not have easy access to capital, or have other priorities for their capital, to obtain funding to adopt energy efficiency measures

with the goal that those measures will essentially “pay for themselves” through the resultant energy savings. However, the OBF program’s efficacy is limited because it currently only permits non-residential customers to finance traditional energy efficiency program offerings. Therefore, today a non-residential customer interested in retrofitting its business or government buildings, for example, with energy efficiency upgrades, as well as electric vehicle or bus charging stations, distributed generation, and/or demand response measures would be able to finance the energy efficiency upgrades with OBF funds but would be required to finance the non-energy efficiency upgrades through an alternative mechanism to OBF. This likely increases cost and complexity and decreases the likelihood of a customer pursuing deeper retrofits that include technologies not eligible for the OBF program.

SCE therefore proposes to expand OBF to further the Commission’s goal of eliminating piecemeal financing options that do not view a customer’s clean energy needs holistically. In proposing to expand OBF to other technologies, SCE seeks to penetrate a wider customer base, educate non-residential customers about the full array of potential clean energy upgrades, and make the lending process more affordable and less complex. In SCE’s view, expanding an already successful program that has been deemed appropriate by regulatory policies for non-residential customers and has been an unqualified success is the most straightforward and efficient manner to advance the Commission’s goals in this proceeding.

2. Development of New, Phased Residential TOB Program (TOB Program)

The primary goal of developing and administering a TOB program is to enable adoption of clean energy technologies in residences across California to advance the State’s decarbonization goals, without overburdening lower to middle income customers with higher overall costs or additional debt repayment obligations. SCE recognizes that utility incentives alone are likely insufficient to accelerate the adoption of clean energy technologies at the pace required to meet California’s forward-looking goals, and SCE agrees that financing programs – if correctly designed and implemented with

regulatory and legislative support – may provide certain customers with the ability to adopt clean technologies.²

In SCE’s view, expanding SCE’s OBF program to residential customers, and particularly to renters, is not appropriate. A residential on-bill loan program would not serve the equity goal of this proceeding because it would create a large debt obligation the borrower is required to repay in full even if the borrower no longer owns or resides at the upgraded site. However, a well-designed TOB program, in conjunction with incentives and/or public subsidies, has the potential to address the following market barriers inherent in residential adoption of clean energy technologies:

- **Transferability Barrier.** Many residential customers, particularly renters, cannot or will not take advantage of traditional financing mechanisms to invest in clean energy technologies. Traditional loans obligate the borrower to repay the entire loan in full, even though the borrower may not reside in or own the property long enough to obtain the full benefit of the upgrades. Unlike vehicles, for example, many clean energy measures are not easy to re-sell or transfer to another location, and thus, under traditional models, residential customers may be bound to pay for loans that do not benefit them long term. A TOB model with the tariffed service charge attached to the property’s meter, rather than to a specific borrower, addresses this market barrier.
- **Equity Barrier.** Many lower to middle income customers, or those residing in disadvantaged communities (DACs), do not qualify for direct third-party loans based on traditional eligibility requirements, such as credit scores and debt-to-income ratio. A TOB program utilizing customer bill payment history and screening for cashflow-positive projects addresses some of the market barriers that currently exclude lower to middle income customers from being able to finance clean energy projects.
- **Split Incentive Market Barrier.** The purchase or financing of clean energy technologies are typically not feasible for renters that pay the electric bill and might prefer those technologies

² See Edison International, Mind the Gap – Policies for California’s countdown to 2030, (Sep. 2021), report available at <https://www.edison.com/home/our-perspective/mind-the-gap.html> (Mind the Gap).

but will not own or benefit from the upgrades if they move. Likewise, a landlord may be reluctant to make electrification or efficiency upgrades that are not required under the lease or by law. Landlords seeking to maximize cash flow may not invest in clean energy projects because they may not have sufficient capital and typically do not pay the electric bill or directly benefit from bill savings resulting from these projects. This problem is well-recognized and referred to as the “split incentive” market barrier.

- A key feature of the TOB program is that only the current occupant or electric service account holder pays the tariff charge. Once a customer moves and is no longer responsible for the electric bill, the customer is no longer responsible to pay the tariff charges. This feature should help resolve split incentive issues, because the installed equipment will remain with the property and property owners and their tenants can agree to have clean energy measures installed without either party being obligated to repay the entire amount of the investment if the owner/occupant of the residence decides to move.
- SCE’s proposed TOB program would strive to be “cash positive,” which, as defined in the Glossary for this document, means that the tariff charge recovered on the bill is *expected* to be lower than the total energy bill savings resulting from the installation of the project. This goal, while it cannot be guaranteed in each case, also addresses the market barrier to many residential customers – owners and renters – of clean energy technologies being more expensive upfront than some fossil fuel alternatives, even though the clean energy technologies are expected to provide long term energy savings and other health and comfort benefits. An exception to this framework is transportation electrification upgrades, such as electric vehicle chargers, if the subsequent customer does not have an electric vehicle and therefore receives limited benefit from the upgrade. SCE is therefore not proposing including TE in the initial phase of its TOB program and will reassess that decision in the evaluation process.

While SCE sees promise in the TOB program to address the market barriers described above, a TOB program will not solve California’s clean energy transition alone. The TOB model is untested in California, and has only been implemented by smaller utilities, with different utility rates, that have typically focused on conventional energy efficiency or distributed generation measures, rather than fuel substitution technologies to foster decarbonization. Thus, any SCE TOB program must be carefully designed and include strong consumer protections to ensure the program does not create more problems than it solves. Additionally, there are challenges that the utilities cannot solve, and therefore the Commission and other regulators must provide guidance and support for such a program to work. For example, the automatic application of the TOB charge to the next service account holder without explicit consent is a key feature of the TOB model;³ however, current Commission precedent⁴ and California law⁵ do not yet clearly support this model. Moreover, such a model would require significant consumer protections, such as notice obligations, that the utilities are likely not able to enforce, which could result in higher defaults potentially leading to more service disconnections and the need for more backstop funds from ratepayers, transforming the financing mechanism into a subsidy. Thus, SCE intends to engage the Commission and DFPI to work through these issues and to determine whether a

³ SCE has considered a TOB model that would include a voluntary assumption by a subsequent customer; however, SCE is concerned that making the tariff obligation voluntary could lead to gaming because owners could agree to upgrades immediately before a sale or while the property is vacant, and then encourage the subsequent owner or tenant to decline the tariff charge. SCE is concerned that this model, while solving issues related to notice and automatic application of the tariff charge without consent, would put a greater burden on ratepayers. SCE is open to pivoting to a voluntary assumption model if mandatory application, with a robust and enforceable notice regime, is determined to be untenable or unlawful in California. SCE proposes to work with the Commission, the DFPI, and other stakeholders to resolve this issue.

⁴ In D.13-09-044, at p. 50, the Commission mandated allowing loans using the on-bill repayment (OBR) to be transferrable “only with clear disclosure and a legally binding agreement between the building owner, building occupant, [financial institution], and the utility.” The Commission further found, at p. 55, that “it would be unwise to place reliance on an undeveloped, untested language model to force non-consensual assumption of liability for a third-party debt obligation . . .” See also, *id.*, Conclusion of Law 22 and Ordering Paragraph 10. The tariff-on bill charge is not considered a loan, but rather a tariff service fee that would be automatically applied to successor customers only for the time they are paying the electric bill at the upgraded property; thus, it is distinct from the loans at issue in the OBR decisions where customers would be transferring third-party loans. Notwithstanding the distinction, in any decision on TOB, the Commission should address these issues.

⁵ It is yet unclear whether California lending laws would apply to a TOB model. While SCE considers the TOB model distinct from a loan, SCE is not aware of any relevant precedent or regulatory guidance.

fair and equitable notice regime can be implemented and enforced. It is likely that a publicly funded statutory program administered by the Commission and implemented by the California investor-owned utilities (IOUs) could solve many of the complexities raised by a TOB program that does not include public funding or a statutory scheme addressing these intersecting legal issues.⁶

B. Provide a description of the proposed financing program, including a description of the expected benefits and costs of the program.

1. Expansion of OBF from Energy Efficiency to other clean energy technologies for non-residential customers:

As described above, SCE's proposal for the non-residential market is to expand its existing OBF program, rather than to create an entirely new mechanism that may complicate, rather than simplify, the loan process. The OBF program utilizes a revolving loan pool, funded by ratepayers, that is paid back over time by the borrower. Most of the expanded OBF features are already in place today, and the following chart provides a snapshot of SCE's current OBF program expansion proposal, which is subject to change based on SCE's internal program design analyses, stakeholder feedback, and Commission guidance. In the chart below, SCE highlights **(in bold)** the design elements that would be new or modified from the current OBF program.

⁶ See Section III.D.2 for a discussion of public funding considerations for a scaled-up TOB program; see Section IV.A.2 for a discussion of some of the legal issues raised by the TOB program.

Design Element	Expansion of On-Bill Financing (OBF) for Non-Residential Customers
Funding Source	100 percent ratepayer funds through the Public Purpose Program Charge (PPPC)
Financing Model	Loan
Financing Obligation Attached to	Borrower that is an SCE non-residential customer
Equipment Ownership	Borrower
Maintenance Responsibility	Borrower
Recovery of Defaults	Seek to collect from Borrower, with ratepayer backstop
Financing Amount and Term Determined by Projected Bill Savings?	Yes, but SCE is considering relaxing bill neutrality requirements, as explained in Section IV.A.1.
Financing Term Determined by Equipment Useful Life (EUL)?	Yes
Reduces or Eliminates the use of Utility Incentives	Potentially, depending on project scope
Targeted Clean Energy Technologies	Initially, Electrification and Energy Efficiency; and may add other clean energy technologies as appropriate. Eligible technologies must contribute to meeting at least one of the state's clean energy goals.
Occupancy Eligibility	Owners and renters that have landlord approval.
Disconnectable?	Yes, OBF is a disconnectable charge. Partial payments on energy bill results in a proportional allocation of the payment between energy charges and OBF loan amount.
Interest/Finance Charges	None. Ratepayers indirectly cover cost of financing as funding is through the PPPC.
Credit Verification	Based on customer's individual payment history and standing with SCE.
Borrower	On-bill charge attached to entity taking on loan.
Transferability Policy	Customer may choose to pay the loan balance, transfer the OBF loan to a new qualified customer that agrees to assume the loan (subject to transferee meeting eligibility requirements), or continue repayment through any other active customer account with SCE.
Bill Savings Design Goal	Potentially loosen bill neutrality goals, depending on project scope as explained in Section IV.A.1.

2. **Creation of Tariffed On-Bill (TOB) for residential customers:**

SCE's proposal for the creation of a TOB program through a phased and targeted approach is to enable greater residential adoption of clean energy technologies and advance the state's decarbonization goals. The TOB program would finance clean energy technologies by adding a tariff service charge to the SCE electric meter for the site. Thus, the financial obligation would be attached to the site rather than to a specific customer and would be the obligation of any future customer as part of their electric bill until the investment has been repaid in full. By performing due diligence on the estimated energy costs prior to the start of any TOB project, SCE aims for TOB projects to be cash positive. Because fuel substitution is foundational in electrification measures, TOB projects seek to compare total energy bill savings rather than only electricity bills. In the chart below, SCE provides the high-level design elements for SCE's proposed TOB program for residential customers.

Design Element	Tariffed On-Bill Program for Residential Customers
Funding Source	Initial phase funding by SCE through a regulatory asset treatment model, with cost of capital and administrative costs paid for through ratepayer funds; subsequent phases to be evaluated to consider other financing approaches (e.g., third-party or public financing) as the program scales and to mitigate the impact to ratepayers.
Financing Model	Tariff as a service charge on customer bill.
Financing Obligation Attached to	Premise/site energy meter
Equipment Ownership	Property owner
Maintenance Responsibility	Property owner and/or Program implementer (may vary depending on equipment type and implementation details not complete)
Recovery of Defaults	Ratepayer backstop
Financing Amount and Term Determined by Projected Bill Savings?	Yes, would include calculation of expected savings resulting from the reduction in use of other fuel sources (i.e., fuel substitution).
Financing Term Determined by Equipment Useful Life (EUL)?	Yes.
Reduces or Eliminates the use of Utility Incentives	Potentially, depending on project scope
Targeted Clean Energy Technologies	Initially, Building Electrification and Energy Efficiency; will add other clean energy technologies as applicable. Eligible technologies must contribute to meeting at least one of the state's clean energy goals.
Occupancy Eligibility	Owners and renters that have landlord approval. Must be consistent with lease and any applicable laws regarding owner/tenant rights.
Disconnectable?	Yes. Partial payments on energy bill results in a proportional allocation of the payment between energy charges and OBF loan amount.
Interest/Finance Charges	Covered by ratepayer funds for the initial program phase to confirm proof of concept.
Credit Verification	Based on customer's individual payment history and standing with SCE.
Borrower	On-bill tariff attached to energy bill for the site/premise.
Automatic Application Policy	Subsequent service account holders pay tariff as part of their energy bill. Notice requirements will apply. May consider allowing current customer of record/property owner to pay remaining TOB balance prior to transition of the meter to a new customer.
Bill Savings Design Goal	Cash positive, as defined in the Glossary to this document.

C. **Describe with specificity how this proposal meets each of the nine goals of the CPUC’s Environmental and Social Justice Action (ESJ) Plan. If it is unable to meet any of the nine goals, the proposal must explain why.**

SCE supports the Commission’s Environmental and Social Justice (ESJ) Action Plan and its operating framework (goals, objectives, action items) through which the Commission is working to integrate ESJ considerations throughout its operations. Although the Plan is an internal Commission document and its framework applies only to the CPUC, SCE also takes ESJ concerns into consideration as it performs its work and our TOB and expanded OBF programs will advance both SCE’s and the CPUC’s ESJ efforts. SCE has listed the nine goals of the Commission’s ESJ Plan and addressed each one individually below. Because the expanded OBF serves non-residential customers, SCE focuses in this section on its TOB proposal serving residential customers, but SCE mentions where the expanded OBF proposal would also further the ESJ goals.

1. **Consistently integrate equity and access considerations throughout CPUC proceedings and other efforts**

SCE’s proposed TOB program for residential customers intends to offer inclusive financing that makes it possible for customers who may otherwise face barriers to accessing credit in the general market to finance the installation of clean energy technologies. This could, particularly in later phases of the program, include customers with lower credit scores, customers with moderate or lower incomes, and customers who are unbanked.⁷ SCE’s proposed program would be intended to serve many of these customers to meet their needs for clean energy technologies, while maintaining robust customer protections to avoid potential for such customers to enter into unsustainable financing agreements, and steering those customers eligible to existing programs such as the Energy Savings Assistance Program that install some relevant technologies at no cost. This will promote greater equity and access to clean energy programs.

⁷ In the United States, Black, Latino, and “other” households are much more likely to be unbanked than White or Asian households, according to FDIC. <https://www.fdic.gov/householdsurvey/2017/2017report.pdf>.

2. **Increase investment in clean energy resources to benefit ESJ communities, especially to improve local air quality and public health.**

SCE's TOB program is initially designed to allow financing of energy efficiency and building electrification measures in homes and will add other clean energy technologies, as applicable. SCE's OBF program is initially designed to allow financing of energy efficiency, building electrification, and transportation electrification measures for non-residential customers and will add other clean energy technologies, as applicable. By reducing dependence upon fossil-fueled appliances and vehicles and helping customers meet more of their energy needs with clean electricity, SCE's program will mitigate pollution and improve local air quality. The program expects to initially focus on middle-income customers and those in ESJ communities with financing to upgrade combustion appliances in their homes to appliances using clean electricity, improving health outcomes.⁸

3. **Strive to improve access to high-quality water, communications, and transportation services for ESJ communities.**

SCE's OBF program is designed to allow financing of transportation electrification measures for non-residential customers. For the reasons discussed above, such measures are not included in SCE's TOB proposal. OBF should facilitate investment in EV charging infrastructure in ESJ communities, improving clean transportation service availability.

4. **Increase climate resiliency in ESJ communities.**

SCE's TOB program is designed to initially allow financing of energy efficiency and building electrification measures in homes (and can add other clean energy technologies as applicable). This can include projects that allow customers to weatherize their homes and install more efficient heat pump space conditioning, reducing the cost of keeping them comfortable in extreme heat events and

⁸ “One significant concern regarding appliance ventilation failure is pollutant backdraft and resulting spillage, which put residents at greater risk of CO poisoning. Backdraft refers to the backward movement of exhausted gases through the venting system, and spillage refers to the resulting leakage of exhausted gases from the appliance into the indoor environment, which leads to the buildup of pollutants inside the home.” UCLA Fielding School of Public Health Department of Environmental Health Sciences, Effects of Residential Gas Appliances and Indoor and Outdoor Air Quality and Public Health in CA, p. 14 (April 2020), available at <https://coeh.ph.ucla.edu/effects-of-residentialgas-appliances-on-indoor-and-outdoor-air-quality-and-public-health-in-california/>.

providing efficient space cooling to offset climate impacts. With regard to SCE's expanded OBF program, increasing adoption of electric vehicles in ESJ communities may allow them to become more resilient as vehicle-to-building back-up technologies are increasingly offered by electric vehicle and charging equipment manufacturers.

5. **Enhance outreach and public participation opportunities for ESJ communities to meaningfully participate in the CPUC's decision-making process and benefit from CPUC programs.**

SCE will also engage CPUC's Disadvantaged Community Advisory Group to obtain their input on how best to make its TOB and OBF programs beneficial to ESJ communities. SCE also plans to coordinate the TOB and OBF programs with relevant existing programs, utilizing those existing programs' outreach and design elements that target ESJ communities to provide information about new clean energy financing offerings as appropriate. SCE also expects to conduct other public engagement with community leaders from disadvantaged communities such as SCE's Clean Energy Access Working Group (CEAWG), schedule permitting, to seek feedback on its program designs.

6. **Enhance enforcement to ensure safety and consumer protection for ESJ communities.**

Consumer protection is a key design tenet of SCE's residential TOB program proposal. Section IV discusses SCE's approach to consumer protection.

7. **Promote high road career paths and economic opportunity for residents of ESJ communities.**

While SCE's proposal here is for financing programs, not specifically workforce development programs, SCE plans to coordinate implementation of TOB and OBF programs with existing workforce development in ESJ communities via energy efficiency, building electrification, and ESA programs.

8. **Improve training and staff development related to ESJ issues within the CPUC's jurisdiction.**

SCE does not plan to conduct any training of CPUC staff as part of the TOB or OBF programs but does expect to coordinate with Energy Division staff in development of these programs.

9. **Monitor the CPUC's ESJ efforts to evaluate how they are achieving their objectives.**

SCE plans to develop and report appropriate metrics to assess the effectiveness of various aspects of the first phase and inform any design changes needed for the second phase. For more information, see Section VI on Reporting and Metrics.

III.

RESPONSES TO PART II: FINANCING PROGRAM REQUIREMENTS

This section uses the same organizational framework as Section II.

A. **Describe the financing mechanism and/or proposed financial product offered through the program.**

1. **Expanded OBF**

The Commission issued D.09-09-047, adopting SCE's current OBF program. OBF is a loan program designed to assist eligible non-residential customers to finance the purchase and installation of energy efficiency measures. In the OBF model financing is provided in the form of a loan issued to a specific customer. The program provides zero percent interest, zero fee loans that are repaid through a customer's utility bill.

Through this proposal SCE seeks authorization to expand the existing OBF program to finance the purchase and installation of clean energy technologies beyond Energy Efficiency, after SCE receives the necessary and appropriate authorizations and exemptions from the Commission and DFPI. Funding for the expanded OBF program will continue to come from ratepayer funds to ensure that OBF loans continue to be offered to customers free of interest charges and other fees. SCE describes the key program features below and notes that SCE does not propose any significant design changes to the OBF program, other than its proposal to include a broader array of measures to be eligible for financing under the OBF program.

OBF Financing Model Projected Lifecycle	
Stakeholder	Action
Utility (SCE)	Creates a finance pool with ratepayer funds and launches OBF as an optional loan program to non-residential customers.
Solution Provider	Is hired by the Customer. Completes an energy assessment and develops project scope. Calculates the project cost and potential bill savings
Customer	Applies for the loan to finance the project and signs the Loan Agreement and any other requirements.
Solution Provider	Installs the equipment based on agreement with customer and the incentive program requirements.
Customer	Repays the loan through their utility bill. If the service account is closed, the loan balance is due in full, or may be assigned by a subsequent customer/borrower only with written consent. Loan repayment obligation is tied to the customer, not the meter or the land.

a) Customer Eligibility

The OBF program will continue to be available to all non-residential SCE customers in good credit standing with a risk score of Low to Medium. Participating customers must confirm that the financed project would not have been undertaken in the same capacity if it was not for the availability of the OBF loan.

b) Project Eligibility

SCE proposes that OBF financing will be available for the purchase and installation of clean energy technologies, with a specific focus on energy efficiency and electrification measures. This is the key difference between the current model and the model SCE proposes.

c) Program Delivery

SCE’s OBF is a utility-administered program, with SCE performing program administration, marketing and outreach activities. The customer chooses and retains a licensed contractor to install measures, and SCE is not a party to the contract between the customer and its contractor. Rather, as the program administrator, SCE oversees calculation of the eligible loan amounts,

determines eligible measures for OBF, and enters into the loan agreement with the participating customer.

SCE proposes to retain existing OBF loan caps and maximum loan terms for the expanded OBF program; however, SCE will continue to monitor the market demand to determine whether it is appropriate to seek Commission authorization, via a Tier 2 Advice Letter, to modify loan caps and/or loan terms for certain projects or entities (i.e., it may be appropriate to increase caps for governmental agencies, but not small commercial customers).

d) Transferability

In the OBF model, when the premises are vacated, the debt obligation stays with the customer. The customer may elect to pay the loan balance, continue repayment through any other active service account with SCE, or transfer the OBF loan to the new customer at the premises that received the improvements contingent on the new customer's written agreement to assume the loan and satisfaction of OBF's eligibility requirements.

e) Equipment Ownership and Maintenance

In the OBF model the customer owns the equipment installed behind the meter. Any maintenance or repairs are the customer's responsibility. The customer may purchase extended warranties, and/or certain repairs may be covered by manufacturer or contractor guarantees; however, SCE is not responsible for any maintenance or repairs, and the OBF program does not offer any equipment warranties or guaranties.

f) Loan Repayment

The loan agreement provides customers a repayment schedule that includes the total loan amount, monthly payment amount, and the term of the loan. The OBF program rules require the loan repayment term to be equal to or less than the Expected Useful Life (EUL) of the measure(s) providing the highest energy savings benefits. For the expanded OBF program, monthly payments will continue to be billed as a line item in the customer's utility bill. Any partial payment from customers are proportionally divided between the loan and the utility service obligation.

g) Marketing and Outreach

Program marketing and outreach will continue to be performed through various channels including vendors, program implementers, SCE account executives, SCE workforce education and training, IOU website outreach, and CPUC website outreach. This is consistent with the current OBF program delivery.

2. TOB Program Proposal

TOB is a financing model that has been used in other states, mostly to finance energy efficiency projects. The TOB program allows the customer to install clean energy improvements as a utility investment that is recovered through a tariff charge that is attached to the site meter of the location where clean energy improvements are made. While the tariff charge is initially opted in to by the customer, the charge remains with the site meter and subsequent customers are obligated, with prior notice, to continue to pay the tariff until it is fully paid.

As mentioned in other parts of this proposal, the TOB model has shown positive results and low default rates in other areas of the country; however, there is not enough information to prove the effectiveness of the TOB model outside of energy efficiency, and especially for the financing of electrification measures that may not always result in significant total energy bill savings due to increases in electricity consumption from fuel substitution and variations in fuel prices.

SCE proposes a TOB model to finance the purchase and installation of clean energy technologies for residential customers, with a focus on electrification. SCE's proposed funding for the TOB program is detailed in Section III.D.1.

TOB Model Projected Lifecycle	
Stakeholder	Action
Utility (SCE)	Creates a finance pool and launches TOB as an optional tariff for residential customers for the installation of clean energy equipment.
Program Implementer	Acting in coordination with the utility, conducts program outreach. Completes an energy assessment and develops project scope. Calculates the project cost and potential bill savings. Deploy Solution Provider(s) based on project scope. May offer maintenance plan to property owner outside of the tariff investment.
Customer	Applies for the tariff to finance the project, and, if customer meets TOB eligibility, executes SCE's tariff service agreement.
Solution Provider	Installs clean energy improvements at the site location. One project may have several solutions providers depending on project scope.
Program Implementer	Verifies installation by Solution Provider(s). Provides performance guarantees for the repayment period of the equipment. Conducts energy savings verification. Completes repairs through the tariff's lifecycle.
Customer (current & future)	Repays the investment through their utility bill. If customer closes their account, repayments are resumed by any subsequent customer of record at the site until tariff charge is paid.

a) Customer Eligibility

The TOB program will be available to residential SCE customers in good credit standing with a risk score of Low to Medium. The TOB program will be available to homeowners and renters in single family, multifamily, and mobile home dwellings. SCE proposes to determine additional customer eligibility requirements after various issues are resolved and SCE refines the proposal.

b) Project Eligibility

TOB financing will be available for the purchase and installation of clean energy technologies, with a specific focus on energy efficiency and electrification measures.

c) Program Delivery

The TOB program will be administered by SCE. SCE intends to contract with a third party to serve as Program Implementer, responsible for customer outreach, project development,

hiring Solution Providers, verification of project installation, maintenance and repairs, and measurement and verification of projects throughout the recovery period.

d) Automatic Application to Successor Customers

Because TOB is a tariff attached to the site meter and not the customer, the recovery obligation stays with the site even if the original customer moves out. In rental units, landlords will have the obligation to notify the next occupant about the additional tariff added to the site. Since SCE will not have visibility to a change in occupancy until a new service account is opened, SCE will not be able to provide notification to the new tenant or owner prior to the new customer moving into the premises. Instead, SCE will send out a welcome letter to the new account holder providing tariff information. SCE considers robust and enforceable notice requirements, with financial consequences for failure to comply, a key feature if the Commission is to permit automatic application to successor customers.

e) Equipment Ownership and Maintenance

In SCE's TOB model the property owner will own the equipment installed behind the meter. While SCE is still working through implementation details, and would welcome stakeholder comments and Commission guidance, SCE's initial proposal is that the Program Implementer be responsible for equipment repairs to ensure the equipment is operational. Under this model, the project package would likely include extended warranties and guarantees, with conditions, that the equipment remain operational while the tariff charge is attached to the meter. Additionally, to the extent available, the customer could elect to purchase a scheduled maintenance plan at an additional cost. While these features may increase total project cost, it is important to ensure that the equipment remains in good working order at least for the period the customer is required to pay the tariff charge. If any equipment installed under the TOB program becomes non-operational beyond repair, for reasons other than the customer's negligence or malfeasance, the tariff recovery obligation will end. SCE would seek to obtain contractual protections from the Program Implementer to recover any unpaid costs for non-operational equipment prior to its EUL from Program Implementer or relevant Solution Provider, with ratepayer backstop if those recovery avenues are not available.

f) Tariff Recovery - Potential Lapses in Investment Recovery

The participation agreement between SCE and the customer will include a tariff recovery obligation, which will include the total TOB amount, the monthly tariff charge, and expected length of the tariff charge obligation, subject to site occupancy. If the site is vacated during the recovery period, the investment recovery is paused until a new service account becomes active for that meter. In no case will the tariff recovery time period exceed the EUL of the measure(s) providing the highest energy savings benefits. TOB charges will be billed as a line item in the customer's utility bill. Any partial payment from customers will be proportionally divided between the tariff charge and the utility service obligation.

g) Marketing and Outreach

Program marketing and outreach is performed through various channels including the Program Implementer, Solution Providers, Community Based Organizations, IOU website outreach, and CPUC website outreach.

B. Is there any precedent for a program of this type, and if so, what are the lessons learned from previous and similar programs? Please include any applicable program results from those other programs, such as forecast and actual participation by targeted customer group and describe, to the extent possible.

1. Expanded On-Bill Financing Program

There is significant precedent in California for non-residential OBF programs. In fact, a key benefit of an expanded OBF program is its relative simplicity compared to the alternative of developing a new program for non-residential customers. All of the California IOUs have current OBF programs, and SCE has considerable experience administering and implementing the OBF program. Additionally, the DFPI has already opined that SCE is not subject to California lending laws for energy efficiency loans that meet certain requirements. Although only PG&E has sought approval from the Commission and the DFPI to expand the OBF program to additional technologies, SCE expects that it would be able to obtain the same expansion of the exemption. Other states and jurisdictions also have implemented OBF programs. In California, the OBF programs, while different in various respects, have

all been relatively successful and have resulted in very low default rates. As of December 31, 2021, the Statewide OBF program had funded over 9,000 loans amounting to almost \$460,000,000 with a default rate of .34%.

2. Tariffed On-Bill Program

While the TOB financing model has been implemented in several other jurisdictions, TOB has not been implemented in California. Also, while the TOB programs in other jurisdictions are instructive, there are some key specifics in California that will require careful program design and potential modifications from the “traditional” TOB model. This response first provides information about current TOB programs, and then explains some of the challenges of implementing a TOB in California. These distinctions are important to understand why SCE is proposing a more conservative phased approach, if the Commission ultimately determines that a TOB program is appropriate to test in California. While utilities in several states have enacted some form of tariffed-on bill program, the details and the size of each program varies widely.^{9,10}

While there is precedent from other jurisdictions, to SCE’s knowledge the TOB model has not been widely tested for the financing of fuel substitution (i.e., replacing appliances or equipment using one regulated fuel source with an appliance or equipment using a different regulated fuel source) measures. Any financing program intended to meaningfully further California’s energy and decarbonization goals, as well as the Commission’s stated interests in the Clean Energy Financing OIR,¹¹ must include the ability to finance fuel-substitution upgrades, and in particular electrification, which may result in an increase to overall energy costs in the short term, but be beneficial in the longer term, both in terms of energy burden reduction for the individual customer, and rate and other benefits to the customer base as a whole.

⁹ See Utility Tariff On-Bill Financing: Provisions and Precautions for Equitable Programs, available at: <https://pubs.naruc.org/pub/0E0B2716-947E-B0A8-2899-3DCA0F0C8F16>

¹⁰ See What is inclusive financing for energy efficiency, and why are some of the largest states in the country calling for it now? Whitepaper, available at: https://www.aceee.org/files/proceedings/2018/assets/attachments/0194_0286_000158.pdf

¹¹ R.20-08-022, p. 24, notes that “mechanisms beyond incentives will almost certainly be necessary” for building decarbonization.

C. **For tariffed on-bill programs, please include draft tariff language. Also provide a discussion of:**

- a. The expected payment prioritization of the on-bill charge that discusses any potential legal, regulatory, and customer protection mechanisms included.
- b. Whether the program will be implemented through modifications to an existing or a new tariff offering, and the anticipated costs associated with implementing the updated or new tariff.

1. TOB and Expanded OBF Programs

The expected payment prioritization would be the same for both the expanded OBF proposal and the TOB program and would adopt the same model as SCE currently applies to the OBF program. Specifically, if a customer makes a partial payment, the payment will be applied proportionally between the TOB or OBF charge and the energy charges. The same disconnection and other tariff rules relating to payment of energy charges will apply to the TOB or OBF charges, as applicable. In order to effectuate the TOB mechanism, SCE would require approval from the Commission to add a tariff as a cost of service to the site meter. SCE expects that there could be legal challenges to the Commission's authority to effectuate the TOB, and therefore SCE recommends that the stakeholders perform extensive outreach and research prior to any Commission approval of a tariffed on-bill program.

2. Expanded OBF

SCE expects that any expansion of the OBF program to additional technologies would be accomplished with revisions to the existing OBF tariff, including the filed loan agreements. SCE does not have specific tariff language at this time; however, the changes would reflect the program expansion features set forth in this proposal. SCE would propose that the Commission authorize, in any decision issued in this proceeding, SCE to file necessary tariff changes to expand eligible technologies through a Tier 2 advice letter.

3. TOB Program

Implementing a TOB program would require a new tariff offering, and SCE proposes that any such offering be implemented via a future application to the Commission. SCE expects that

it would utilize existing model tariff language as a starting point;¹² however, SCE expects that its tariff would include significant alterations from the model language. SCE has not drafted a proposed TOB tariff because the TOB proposal is still conceptual. Estimated costs of implementing the TOB program are discussed in Section VI.A. of this proposal.

D. Describe if and how this program will attract private capital in entirety or in addition to using public funds.

- a. If so, what portion of the program would be covered by private capital when the program launches?
- b. Does the program intend to ultimately transition to 100% private capital at a specific milestone? Why or why not?

1. Funding Proposal for First Phase of TOB Program

A key initial question in designing a TOB program is the program funding source. In financing terms, the TOB program design essentially offers participating residential customers consolidated financing to perform agreed-upon clean energy upgrades to the residences they occupy, which is then repaid through a tariff charge on the electric bill associated with the site meter.

There are a variety of ways that SCE can source the funding for the program, but each has distinct effects on the viability and cost of the program. For example, programs may be funded by the legislature through tax dollars. The utility itself, which raises capital as a part of its normal capital financing processes and receives its authorized rate of return, is another potential source of funding, as are other ratepayers. Some programs utilize a combination of private capital and ratepayer funding, such as California Alternative Energy and Advanced Transportation Financing Authority's (CAEATFA's) loan program, in which loans for clean energy upgrades are provided directly to customers by private capital entities, but utilities provide, for some programs, an on-bill repayment option and, for all CAEATFA/utility programs, credit enhancements, utilizing ratepayer funds. Other programs, such as OBF, solely use ratepayer funds as the capital source to provide individual non-residential loans.

¹² PAYS Decision Tool for Utility Managers, *Key considerations before investing in resource efficiency and rooftop solar through a tariffed on bill program*, Attachment 4, The Energy Efficiency Institute, Inc., January 2016. <http://www.roanokeelectric.com/wp-content/uploads/Decision-Tool-for-Utility-Managers-v14.pdf>

In the initial phase of TOB, SCE recommends an approach in which SCE funds the program with capital raised in the normal course of business. These investments would be authorized by the Commission to receive regulatory asset treatment over the repayment period, during which the participating customer repays the financed project's principal and the cost of capital and program administration costs are provided by all customers. This approach allows the benefitting customer(s) to spread out the cost of a clean energy investment over time, with SCE's ratepayers subsidizing the cost of capital due to the long-term grid and other benefits provided by the clean energy upgrades installed through the TOB program.

During the scaling phase, it will be essential that the Commission provide flexibility for SCE to pursue different program designs for the TOB program to evaluate how best to deploy investments as the program increases in scale. This approach will also allow the program to mature and provide real-world experience and information for the Commission and stakeholders to determine how to best to fund a more extensive program. Depending on the evaluation, stakeholders could determine if and when the transition to use of private capital is feasible.

2. Funding Considerations for Potential Future Expansion of TOB

While SCE considers its proposal to be reasonable for the more limited first phase of the TOB program, the Commission and stakeholders should consider alternative financing paths if the TOB develops into a large-scale program, including public sources, such as federal, state and local governments and agencies, or private sources, such as financial institutions like banks and investment funds in addition to the utilities themselves. Utilizing large-scale and long-duration investment capital from any of these sources comes with certain barriers, constraints, and costs that must be evaluated further to understand the trade-offs and risks associated with the different sources within the context of the TOB program design, objectives, and goals.

Despite a number of different options available, the objectives of the financing programs for which the Commission is seeking proposals from the IOUs limits the steady-state options for program funding to only those sources that can provide significant capital, i.e., tens or possibly hundreds of millions of dollars annually, over many years, potentially decades. This is because the over-arching

objective of the program is to introduce, promote, and widely install clean-energy technologies throughout California to meet the state’s climate goals. To do this most efficiently and effectively, a TOB program will need to be credit-neutral (i.e., available to all or most customers), and technology-neutral (i.e., available to serve projects with one or more eligible technologies). To meet the high-level objectives, the TOB program must complement existing incentive programs within the larger effort that is expected to take multiple decades and cost billions of dollars to decarbonize California’s economy.¹³

Despite these challenges, the TOB program has the potential to be a central part of the clean energy transition and given the breadth of available opportunities for investment within the program; however, the Commission should prioritize opportunities that ensure that the invested dollars are utilized for the highest value purposes and not invested in duplicative and/or unnecessary efforts. This necessary prudence of the Commission is essential for the long-term viability of any adopted TOB program because success will beget further success. And to ensure continued long-term funding of the program from any source, the Commission will need to establish certain parameters to appropriately compensate and mitigate risks for program funders or investors.

Fundamentally, the cost of financing or cost of capital reflects an investor’s required rate of return of any investment as compared with an investment of like risk and duration. And, as a result, different sources of funds with different risk sensitivities require different costs for investing. Public sources of funds are generally less expensive than private sources because risks can be absorbed over a larger population. Private debt, such as bonds, are generally less expensive than private equity because bonds have a higher priority of being paid than equity and therefore have less risk of not being recovered in the event of default or bankruptcy. This stratification of costs is critical to understand when contemplating how to finance an effort of potential scope and scale such as the TOB program.

Below, SCE outlines the various options for sourcing capital for a larger-scale TOB program, and SCE briefly explains the benefits and challenges associated with each option. SCE recommends

¹³ Mind the Gap, p. 18.

that the Commission consider these benefits and challenges when considering whether and how to authorize significant funds to be invested in a TOB program after the initial phase.

a) Investor-Owned Utility Funding as Capital/Regulatory Asset

As discussed above, SCE proposes to fund the initial phase of the TOB program and treat the resulting upgrades as regulatory assets; however, continuing to provide such funding if and when the program scales up will become more challenging.

In the utility funding model, the utility raises capital by selling debt and equity to investors and then earns a rate of return on those investments over the life of the investment such that it can adequately compensate its investors through interest payments, dividends, and capital (equity) appreciation. As the investments supported by the TOB program would not be owned by the utility and would be repaid by the customers over many years, the normal means for the utility to earn a compensatory rate of return is not available without authorization to treat the investments as regulatory assets. Thus, like for the initial phase of the TOB program, for the IOUs to continue to be a substantial source of capital for investment in the TOB program, IOU funding would need to be treated as all other long-term investments are treated such that all outstanding financing balances earn the authorized rate of return. While this approach would include raising third-party capital, it would not be exclusively for the TOB program, but rather as a part of SCE's normal course financing program. Because the IOU would not own the technologies or upgrades being financed, the Commission would need to authorize the IOU to create a regulatory asset equal to the amount of the financings that would earn the authorized rate of return and amortize based upon participant customer repayments. SCE is concerned that this approach might render the program too costly for residential customers, and given affordability concerns, may not be a viable approach without further analysis. The cost could be mitigated by continuing to have ratepayers cover the cost of capital, either for all customers or for certain income-qualified customers, which would still be significantly less costly than ratepayers fully funding the upgrades and would also make the program more cost effective for participants.

b) Ratepayer Funding

Another option is that the entire initial investment paid to the customer could be expensed and immediately recovered from all customers, or “ratepayer funded,” with the balances being held in balancing accounts during the maximum one-year recovery period for balancing accounts. This approach would be similar to other customer programs, whose costs are recovered through balancing accounts such as energy efficiency, including OBF, and demand response. Because the participating customers would be repaying the loans over many years, any losses through default or other risks that manifest during the repayment period could easily be absorbed over the broad customer base; however, ratepayer funding of all of the upfront capital for a large-scale program would be a costly option in the near term for all customers. Because this approach would exacerbate affordability concerns, with all customers experiencing potentially significantly higher bills assuming large investments in TOB projects to electrify SCE’s service territory and repayments being received over many years, this is not a preferred long-term option.

c) Third-Party Private Capital

Outside private capital can potentially serve as a source of substantial amounts of capital that can be leveraged to expand the scope and offerings of a large-scale TOB program that would be needed for California to broadly adopt clean technologies in the residential sector. Private capital can be sourced from nearly any type of investment entity such as large, regional, and local banks and credit unions, or investment firms such as hedge funds, or even entities such as pension and trust funds, and, unlike governmental entities (as discussed below), these financial entities require that they be fully compensated for the risks they bear in their investments. Key questions regarding the viability of sourcing TOB funds through third-party private capital is, “Who is the borrower of the private capital, who pays the borrowing costs, and who bears the risk of loan defaults?”

While the individual customers may borrow private capital to install clean energy upgrades, the TOB program does not contemplate this option as a program design feature. First, residential customers that qualify for loans can access the CAEATFA-administered Residential Energy Efficiency Loan (REEL) program, and thus a TOB program with the same option would be duplicative.

Second, the TOB model does **not** utilize a loan model, but rather a tariffed service charge, and thus it is the program as a whole that must be financed, not individual projects. In this way, the borrower of third-party capital would not be individual customers, as they are in the OBF and REEL programs.

As discussed below, however, the IOU cannot and should not be the borrower because the IOUs should not be risking their respective financial stability to obtain private debt other than through their respective Commission-authorized capital structures. Nonetheless, another option is that the utility could procure financing through a securitization process, in which the state legislature passes legislation authorizing the utility to dedicate a specific revenue stream for the repayment of a debt security. The benefit of securitization is that it often provides a lower interest rate than other utility borrowings as the repayment is guaranteed by the specific revenue stream collected from customers. However, there are some securitizations that have been authorized for the IOUs for wildfire and other costs, and the securitization market is not as large as other debt markets and there may not be many more opportunities to access the market. Additionally, securitization requires legislative approval which may make it a less dependable source of continuing funds as legislative priorities may differ from the Commission's priorities.

As alluded to above, SCE clarifies that it is not an option for SCE to borrow money solely to fund a TOB program and use the bill repayments to repay the loans. Rather, IOU funding without securitization could only be accomplished through funding via SCE's typical capital structure funding sources. In theory, the IOUs taking on additional debt by entering into loans at a lower rate than the IOUs' authorized rate of return would make the program less expensive for participating customers through lower interest rates. In practice, though, this approach is not viable and ultimately more costly for all customers. This is because the additional debt of the IOU would be added to the IOU's balance sheet, increasing the company's leverage. Without an offsetting increase in equity capital on the balance sheet, the additional leverage would impair the IOU's credit metrics, putting the IOU at risk for a credit downgrade, and increasing the costs for any future borrowing for the IOU which would then be passed to all customers.

d) Public Funding

For a larger scale TOB program, public funding of either direct subsidies for clean energy equipment and/or a large-scale TOB program is the most straightforward and logical approach given the broad climate goals that the program is intended to support; however, SCE understands the potential difficulty of obtaining such public funding. The TOB program is intended to help residential utility customers do their part to meet broader societal climate goals by reducing carbon usage and implementing clean technologies. As such, it makes sense for program funding to be sourced from the government, either directly through legislative allocation or executive agency funding. Public funding would also mitigate some of the risks posed by a TOB program that seeks to promote equity, including higher default risk due to offering the program to customers that may not otherwise qualify for financing and risks related to potential automatic application of the tariff to subsequent customers.¹⁴

In many ways, therefore, public financing is well-suited to meet the needs of a TOB program – it can be made available to all participants and losses are socialized and borne by all. However, certain aspects of the public financing may not work as well with all portions of the contemplated TOB program. For example, if there is a limited pool of public funds and wealthier, sophisticated customers who would otherwise be able to make private investments to electrify their properties through private financing like home equity loans exhaust the funds, other eligible participants who do not have access to other funding opportunities may not get the opportunity to make similar improvements. Thus, either public funds should be limited to those who are income qualified or a TOB program should be tailored to address that concern.

¹⁴ SCE recognizes that default rates in other TOB programs have been low, but TOB programs have not yet been utilized across a large number of customers to help meet fuel substitution goals, and therefore a TOB program in California may have a different risk profile. A program that is publicly funded would be better able to absorb losses from defaults as its revenue base is as broad as its tax base.

IV.

CONSUMER PROTECTIONS

A. **What are the potential financial, economic or other risks to the participating customer in this program and what customer protections does this proposal provide to mitigate customer/participant risk?**

- a. Describe any penalties that may be imposed if the customer does not repay the loan (such as credit reporting, asset forfeiture, utility disconnection).
- b. Describe any non-financial terms and conditions customers must satisfy to stay in compliance with the program.

1. **OBF Program**

a) Potential Penalties

Amounts due under the OBF loan agreement are part of the customer's utility bill obligation, and therefore non-payment of the loan amount is subject to the same disconnection rules that apply to the customer's utility bill under SCE's Rule 11 and other applicable rules. Moreover, SCE may, but is not obligated to, file a UCC-1 financing statement against the customer's obligation to pay the loan, and SCE may pursue its rights to repayment of the loan in law and equity. Once the loan is issued, there are no continuing non-financial terms that the customer must satisfy to stay in compliance. Despite these potential penalties, SCE has been offering OBF for several years, with a remarkable level of success. The default rate for SCE's OBF program is 0.7 percent, and SCE has never filed a UCC-1 financing statement¹⁵ or sought to recover funds from defaulting OBF customers through the courts. For the small number of OBF loan defaults, SCE follows its standard collection policies, and the loan is backstopped with ratepayer funds only if and when the loan is written off, similar to other uncollectible sums.

¹⁵ SCE determined that it would be too resource intensive and costly to file UCC-1 financing statements on the equipment, and moreover that it would not make sense for SCE to repossess equipment for non-payment given the purpose of the OBF program. This analysis is also relevant to SCE's TOB proposal, as discussed herein.

b) Risks and Potential Mitigation

As noted, a key benefit of the OBF program is that most of the risks are known, and SCE has already applied “lessons learned” and taken actions to mitigate those risks. For example, during the early stages of OBF, a small number of customers complained that contractors represented that the equipment was “free,” that the customers did not understand that they were entering into a loan obligation that was payable if the customers closed their respective service account, and/or that unauthorized individuals executed the loan agreement without the business owners’ consent.

To address these issues, SCE now requires that the OBF application be directly submitted by the customer, rather than allowing a third-party contractor to submit on the customer’s behalf. Additionally, SCE has expanded and refined the OBF program’s marketing materials, webpage and other communication to make program and loan terms and conditions easier to understand. SCE also changed the OBF rules to allow a customer to carry over its OBF loan to another site location or to assign the OBF loan to another customer, as long as that customer consents and meets the requirements of the program. These simple but effective controls have essentially eliminated customer complaints over the last several years. SCE will continue to implement these controls when it expands OBF to include other clean energy technologies. SCE will also review and edit all program marketing and educational materials to ensure that they address any distinct issues related to the expanded clean energy technologies.

SCE has identified one risk associated specifically with the expansion of OBF to a broader array of clean technologies, although there may be other customer risks not yet identified. If SCE expands the OBF program to include more technologies, it may be difficult or impossible to maintain the goal of bill neutrality that, while not guaranteed in the OBF program,¹⁶ helps mitigate financial impacts and cash flow concerns of participating non-residential customers.

¹⁶ The current OBF program pursues a goal of bill neutrality by requiring the customer to estimate energy savings and calculating the loan payments with the intent that they are equal to or less than the estimated bill savings; however, SCE does not guarantee or monitor bill savings, and if the installed equipment does not function as intended or if the customer’s usage pattern changes, the loan payments do not change.

Expanding OBF to more technologies, and particularly electrification technologies, could result in more difficulty calculating overall energy usage, due to limited accessible information about customer's non-electricity fuel usage. This, in turn, could make it more difficult for OBF projects to achieve or demonstrate bill neutrality in the short term. However, in the long-term, customers that implement efficient clean energy technologies are expected to save in overall energy costs, such as reduced natural gas costs due to fuel substitution; thus, these non-residential customers may prefer to pay a higher energy bill initially to receive upfront capital for long-term benefits, which may include goals other than only immediate bill savings (e.g., environmental goals, desire to adopt non-fossil fueled technologies, comfort and safety, hedging against future natural gas prices). SCE recognizes that the relaxation of the bill neutrality goal to allow for deeper retrofits could place a higher burden on non-residential customers and could result in higher defaults – although only experience will demonstrate whether that occurs. SCE's view is that, even if default rates increase slightly, ratepayers will still benefit as compared to an alternative of increasing incentives high enough to cause non-residential customers to undertake these large projects. Thus, in SCE's view, loosening the bill neutrality goals would be suitable for non-residential customers, with the appropriate protections such as ensuring informed consent, limiting the expected increase to a customer's bill to not more than 25 percent of a customer's average bill over the prior 12 months, and requiring the customers and their contractors to perform financial analysis of the costs and benefit of the equipment.

2. TOB Program

a) Potential Penalties/Program Features

SCE has not offered, and does not propose to offer, OBF to residential customers because of the specific and heightened risk of extending loans to residential customers, particularly lower-to-middle income customers that may take on a larger obligation than they can afford or not fully understand the consequences of default. The TOB concept is meant to mitigate several of those risks by attaching the repayment obligation to the site meter, rather than directly to the borrower. However, running with the meter comes with its own potential consumer protection, financial, and legal risks that must be considered and addressed.

SCE describes these risks and potential mitigations below, but SCE first highlights the potential program features and penalties, as well as SCE's preliminary determination of which should be incorporated into a TOB program in California. SCE has performed this analysis with the overarching consideration being the appropriate balance of risk to individual participating customers (as well as subsequent customers at the site) and the risk to ratepayers, as the backstop for TOB defaults. On one end, SCE could propose a program that ensures cash positive outcomes on energy costs, allows the customer to participate in all incentive programs, does not include disconnection, allows subsequent customers at a site location to decline the tariff charge for any reason, and include all costs of maintenance throughout the life of the equipment in the tariff charge. Under this model, there would be less risk placed on individual tenants and property owners receiving the benefit of the equipment, but ratepayers would likely be more at risk of having to cover higher-cost defaults, which could result in a substantial cost shift that causes affordability concerns for non-participating customers. There is also a risk of gaming under this model and fewer projects would meet the cash positive eligibility requirement.

On the other end, SCE could propose a program that does not require bill neutral or cash positive outcomes, requires the customer to choose between incentives and utility investment via the TOB program, subjects the customer to disconnection, requires subsequent occupants to pay the TOB tariff whether or not they received required notice, places a UCC-1 financing statement on all property subject to the TOB, and places all maintenance requirements, other than repair of a non-functioning product under warranty, on the property owner. These requirements would better protect and likely be less costly for ratepayers, but it would be harsher toward and result in more risk to individual residential customers. Adopting a model closer to this end of the spectrum would also likely require significantly more consumer protections and consultation with regulators, in addition to potentially requiring legislation, as discussed herein.

SCE proposes to take a middle ground approach to appropriately allocate the risks, while ensuring that customers directly benefitting from the clean energy investments have "skin in the game." SCE's proposed approach would include: (1) a goal, but not a guarantee, of projected cash positive outcomes when looking at a customer's overall energy costs; (2) applying SCE's disconnection

rules to the TOB charge; (3) requiring subsequent customers to pay the TOB charge, with implementation of a robust notice protocol(see below); (4) foregoing placing a UCC-1 financing statement or any other notice on either the site or personal property being financed; and (5) encouraging property owner or tenant, as applicable, to purchase an optional maintenance package, to support the equipment functionality (i.e., placing routine maintenance obligations on the occupant or landlord, as applicable).

SCE arrived at this proposed combination of program features and penalties by assessing various California and federal laws, examining the various risks and consequences of a particular feature, and studying what has worked in other jurisdictions; however, SCE's proposal is not final and requires additional research and consultation with various regulators, including the Commission and DFPI, to determine if the proposed features would comply with all applicable laws. For this phase of the proceeding, SCE would appreciate Commission direction and stakeholder feedback about its initial risk assessment and mitigation plan, as described below. Whatever approach is taken, the Commission must ensure that the risk inherent in this program is not placed on the utilities, as long as the utilities prudently administer the program.

b) Risks and Potential Mitigation

The two primary and related risks of the TOB model to residential customers are: (1) a customer could receive, and then be obligated to pay a charge on its bill for, products and services that increase energy costs and/or do not provide the projected benefits; and (2) if a customer's bill is higher than expected and the customer defaults, the customer is subject to disconnection. A third risk, specific to subsequent customers at the site, is that a customer could be obligated to pay a tariff charge, without the requisite notice, that it otherwise would not have agreed to pay. As a corollary to this risk, the subsequent customer may not benefit as much or at all from the equipment included in the tariff (i.e., HVAC upgrade that provided significant savings to initial customer using air conditioning regularly, but second customer utilizes air conditioning more sparingly).

The primary risks can materialize in several ways, including, but not limited to, a poorly designed program or mix of measures, contractor negligence or malfeasance, equipment failure,

or a natural disaster resulting in widespread loss of equipment. Each of these potential risks must be mitigated through careful program design and a comprehensive consumer protection plan. SCE has identified the following risk mitigation measures that, at a minimum, would be required to protect customers:¹⁷

- (1) Fixed monthly tariff charge assigned to a location or electric meter, not a particular borrower/customer:

This mitigation measure is a key feature of TOB that removes the risk of a specific residential customer obligating itself to long-term debt even if that customer moves.

- (2) Develop robust notice requirements to subsequent occupants of site with a tariff-on bill charge.

For the TOB program to function as intended, subsequent occupants must be obligated to pay the tariff charge attached to the meter. In D.13-09-044, the Commission held that loan obligations may not be transferred to subsequent customers without explicit written consent.¹⁸ While the tariffed on-bill is not a loan, but instead a tariff charge, that distinction may prove to be without difference. Thus, any subsequent customer obligated to pay the tariff charge, at the very least, must receive notice *prior* to becoming the customer of record at that site. Because the notice must be provided in advance, SCE cannot be the entity responsible for giving the requisite notice because SCE would not be aware of the subsequent service account holder until *after* the service account is transferred.¹⁹ SCE is concerned that subsequent service account holders at a particular site might not receive or understand the requisite notice, even if a clear notice requirement is part of the program terms and conditions. Thus, if the Commission determines it has the authority to approve a tariff that includes automatic application of a tariff to a subsequent customer, the Commission should develop – in

¹⁷ For purposes of this proposal, SCE has not delineated in all cases which entity will be responsible for implementing the specific risk mitigation measures. As noted above, SCE expects to hire a program implementer, and the implementer would likely be responsible, in consultation with SCE and as specified in the implementer contract, for contractor participation rules, training,

¹⁸ See *supra*, fn. 5.

¹⁹ As noted in Section III.A.2.d, SCE would be amenable to sending out a letter to customers after they've established service to notify them of the tariff on bill charge, but this letter would not be sufficient to serve as the requisite prior notice.

consultation with stakeholders, other regulators, and California legislators – a notice protocol that is dependable, clear and enforceable.

In addition, the prior customers, or their landlord if the prior customer was a tenant, must (1) be responsible for the entire obligation if the subsequent customer did not have notice and refuses to pay, and (2) indemnify SCE if notice is not given and the new customer of record sues SCE for injunctive relief or damages arising out of the debt or SCE's disconnection for the new customer's refusal to pay that portion of the utility bill.

SCE has considered the possibility of placing a UCC-1 financing statement or other notice on the property, but SCE does not believe that would be tenable for a program of this size or that it would accomplish its intended goal. First, placing a UCC-1 financing statement or other applicable notice formally on each project would be extremely costly and resource intensive. Second, a new tenant would be unlikely to be aware of any liens, notices, or financing statements associated with the property until after they receive a bill, so that approach would not reliably provide notice to successor customers. The Commission could require that the installed equipment funded by the TOB contain a sticker or other notice of the tariff charge on the bill, but again, this would be difficult to enforce.

(3) Leveraging incentives and co-pays to meet the goal of cash positivity:

Another key feature of a tariffed on-bill model is the goal of ensuring that a customer's overall cost of energy, plus the tariff on bill charge, after project completion does not exceed the customer's overall cost of energy prior to the installation of the clean energy upgrades. For consumer protection, SCE proposes to retain this feature of the traditional TOB program, but SCE also recognizes that this goal may be more difficult to achieve with a focus on higher cost electrification measures that have significant long-term benefits but may not be as inexpensive as traditional energy efficiency measures that seek to lower the electric bill. For this reason, a TOB program will require either significant subsidies by the state and/or ratepayers in the near term, or potentially significant co-pays by the property owner. SCE supports allowing a customer to utilize all available incentives and subsidies, but then requiring the property owner/landlord to provide a co-pay in order to ensure that

overall energy costs do not increase. This feature is especially important in a landlord/tenant situation. It would be inequitable and potentially a violation of California law²⁰ for a tenant's electric bill to increase above the tenant's total energy costs, but for the landlord to reap the benefit of ownership of the installed upgrades.

Additionally, achieving cash positive outcomes with a focus on electrification measures requires more complex calculations than just comparing the customer's electric bill both before and after project installation. Rather, the fuel-substitution or fuel-switching feature of these projects requires careful and consistent calculation of all energy costs to demonstrate that a customer's costs have decreased overall. To protect consumers, SCE would propose using commercially available fuel calculation data to develop a consistent methodology to calculate energy costs and savings.

The Clean Energy Financing OIR acknowledges that there may be complications with using this TOB model for electrification programs that increase customer electric demand.²¹ To address this issue, SCE proposes to combine any available incentives, along with sufficient co-pays from property owners, if necessary, so that the TOB charge does not increase a customer's overall energy costs. SCE's view is that this structure is preferable to any of the alternatives because it would allow homeowners to invest in the upgrades without requiring as high an initial capital outlay as would be necessary without the program, and it would retain the cash positive design of the TOB program. Another option is to initially offer TOB only to homeowners, and not tenants, and allow homeowners to choose whether they want to finance the entire amount (which might initially increase overall energy costs), or provide a co-pay that will render the TOB charge cash positive. That option

²⁰ In this proposal, SCE does not provide any detailed legal analysis of the challenges that need to be addressed, but rather points out various potential legal issue that will need resolution before SCE can implement a TOB program. California's housing laws include strong tenant protections, and many details of a landlord and tenant's relationship is governed by their lease agreement; thus, designing a cost split that complies with California law, including a landlord's obligation to maintain equipment, and will comply with all or a majority of leasing arrangements, may be a challenge.

²¹ R.20-08-022, p. 26

would not work if there is a split between the equipment owner and the SCE utility customer paying the electric bill.

(4) Capable and Proven Program Implementer with High Standards and Quality Assurance Process for Vendors and Contractors:

In SCE's view, having a skilled program implementer, along with significant controls on vendors and contractors, is key to protecting consumers. Any contract with a third-party program implementer must require strong consumer protections, require the implementer to hold appropriate levels of insurance, and include other contractual protections that benefit both consumers and protect ratepayers.

Moreover, other consumer protections are meaningless if the contractors directly interacting with customers mislead or negligently advise customers or perform sub-par work; thus, any program must include strong vendor qualification and participation requirements, robust and consistently-applied quality control and assurance procedures, clear disciplinary and suspension processes, equipment warranties, and other protections to minimize contractor negligence or malfeasance and address it quickly if it occurs.

(5) Require independent certification that products are appropriate and functioning and that savings estimates are expected to exceed payments in both the near and long term:

Another risk to consumers is that installed products or measures do not work as intended. This could result from faulty installation, improper recommendations from contractors, and/or defective products, among other reasons. For example, a contractor may recommend a highly efficient HVAC system, but not recommend weather sealing or other upgrades required to ensure the home does not lose heat or cold air easily. To address this issue, SCE is considering a requirement in the TOB program that the program implementer perform a whole-house audit to determine the appropriate and recommended upgrades on a case-by-case basis for a particular customer. The pre-installation audit will help the customer identify a package of measures that provides the greatest energy savings, while striving for a cash positive project.

(6) Develop a customer dispute resolution process:

SCE would seek to develop a program that would minimize customer complaints and concerns; however, SCE proposes that any contract with the program implementer would include the requirement to establish a customer call center and customer dispute resolution process so that customers have a clear way to seek to resolve issues or complaints.

(7) Develop program rules that ensure that landlord pays for required maintenance of equipment, through co-pay or warranty:

Another risk to consumers relates specifically to TOB projects in a rental unit, where a tenant pays the electric bill, including the TOB charge while living in the unit, but the landlord owns the installed equipment. In California, landlords are typically required to provide some, but not all, equipment and/or appliances that might be offered under a TOB program (i.e., not required to provide air conditioning or stove, but are required to provide adequate heating). Moreover, specific lease provisions may require the landlord to provide appliances, such as a stove and a refrigerator. In any case, if the landlord does provide HVAC and appliances, it is typically the landlord's responsibility, by law, to maintain the equipment they provide. While SCE has not worked through all program details, the TOB charge may include certain costs for maintenance or repair, and/or allow the participating customer to elect to roll the cost of a regular maintenance plan into the TOB charge. Any program design features that include warranties or maintenance plans must ensure that a landlord cannot pass the cost of its obligations, such as maintenance and repair of equipment, to its tenant through the TOB charge, which may not only violate the lease terms but also rent control ordinances and other features of landlord tenant law.

B. What processes will be included to ensure that customers understand and can shoulder the full financial burden of participating in this proposed financing program?

SCE's TOB program will include robust notice protocols, as discussed in Section IV.A.2.b. In addition to the notice protocols that must be developed for subsequent customers, SCE would propose to include a significant customer outreach and marketing campaign and coordination with other programs, so that residential customers are aware of and generally understand the TOB program. Additionally,

SCE proposes to utilize lessons learned from OBF and require customers themselves to submit the application to SCE or the program implementer, as applicable, rather than allowing third-party contractors to submit on the customer's behalf. This ensures, at the very least, that the customer is aware that it is applying to participate in the TOB program. SCE would also consider developing detailed program information tools so that participating customers fully understand how the program works, their financial and non-financial obligations, notice requirements, and all other relevant program terms. Additionally, in a landlord/tenant situation, both the landlord and the tenant would be required to consent to the project. Finally, as noted above, SCE would require participating contractor training to ensure that contractors and vendors are equipped to explain the program terms, conditions, and obligations to residential customers.

C. **How will the repayment obligation transfer if the participating customer vacates a property they lease or own? How will repayment obligations be communicated to any new tenants or owners?**

As SCE explained above, the Commission, in consultation with stakeholders, legislators, and other regulators, should determine what obligations would be placed on homeowners (occupants and landlords) to inform subsequent customers in advance of the tariffed on-bill obligation attached to the site. In addition, SCE proposes to send all tariff on bill customers a welcome letter, explaining the program and the repayment obligation, *after* the customer has established service. As noted, this letter could not serve as the requisite advance notice, and SCE is not in a position to enforce advance notice requirements.

The mechanics for automatic application of the tariff charge from one customer service account to another has not yet been fully determined and implementing that capability will likely require at least some SCE system and IT upgrades. SCE will determine the project scope and cost once the Commission provides additional guidance. SCE expects that the TOB charge will be a line item on the bill. Subject to the caveats and challenges discussed above SCE envisions the automatic application to function as follows: Once a customer service account is closed, that TOB charge will be included on the SCE electric bill for the next service account holder at that same site address. For example, if a tenant

moves and the service account at that address reverts to the landlord, the TOB charge will be on the landlord's bill. If a property is vacant and there is no service account associated with that address for a period of time, the TOB charge will not be collected for that period of time. If a customer later establishes a service account at that property address, the TOB charge will be placed as a separate line item on the bill.

D. Describe the customer outreach component of the program. Will community-based organizations or groups support and facilitate customer outreach to ensure all participating customers are appropriately made aware of their obligations, and if so, how?

SCE recognizes that one of the keys to a successful program is to ensure that the intended audience has knowledge of the program and how to access it, as well as the benefits such a program can provide eligible customers. To achieve that, SCE proposes a comprehensive outreach campaign that will include a multifaceted approach.

For the expanded OBF proposal, the main driver of customer adoption will continue to be contractors and vendors that educate customers about OBF and utilize it as a tool to engage new customers. Additionally, SCE will leverage the grass roots influence of professional organizations, such those that target small business and businesses in disadvantaged communities to promote the availability of OBF. These outreach efforts will be combined with a marketing campaign focusing on SCE's non-residential customers through the use of email and social media outlets, along with support from SCE's Account Executives, workforce education and training, and through SCE's website.

For TOB, SCE will engage in outreach efforts in the same communities targeted by the TOB program by working closely with Community Based Organizations (CBOs) to educate customers about the benefits and implications of TOB financing. This can be achieved through several mechanisms such as clean energy financing seminars for CBO representatives, as well as other key stakeholders. These seminars will include TOB information packages that can be used to promote TOB and explain the interplay between TOB and other clean energy programs.

SCE will also work with the Program Implementer to educate and reach out to potential customers and promote program participation. The scope of these outreach efforts will be refined and

negotiated with the Program Implementer in the contracting phase of the TOB pilot, but SCE views one of the roles of the Program Implementer to provide personalized customer services to educate customers and assist them in developing the best eligible clean energy project for their specific situation. The Program Implementer will be instrumental to the success of the TOB program, including guiding customers through the TOB process from application until the tariff is fully recovered and, importantly, ensuring that participating customers are aware of all of their obligations if they elect to participate in the TOB program. Additionally, solution providers, or vendors, specializing in clean energy technologies eligible for TOB financing will have an important role in providing outreach and program information to eligible customers and directing them to the Program Implementer if they elect to participate in the TOB program.

All of the outreach efforts mentioned here will be complemented by a mix of marketing campaigns, leveraging other utility communications, such as social media campaigns, bill inserts, and SCE's company website.

V.

RESPONSES TO PART III: PROGRAM DESIGN AND DELIVERY DETAILS

What sector(s) will this program target (i.e., residential (Single Family/Multifamily), commercial, industrial, agricultural, public, disadvantaged, and hard-to-reach)?

A. How does the program propose to determine customer eligibility?

a. What are the credit score ranges used to determine customer eligibility?

For both its OBF and TOB proposal, SCE intends to determine customer eligibility based on the customer's credit standing with SCE. No external credit score ranges would be used to determine eligibility. This is akin to how SCE currently evaluates non-residential customers for its OBF loans.

b. What criteria in addition to or in lieu of credit scores will be used to determine eligibility (such as bill payment history)?

As stated above, for both OBF and TOB, SCE intends to use bill payment history in lieu of credit scores to determine customer eligibility. SCE assigns a risk rating to all

customers, based on the customer's interaction with the utility regardless of program participation. Customers are assigned to a low, medium, or high-risk category. For OBF, customers with low or medium risk ratings are eligible to participate, and SCE proposes to extend the same requirements to the TOB.

c. *How will the program measure ability to repay loans?*

i. *What are the debt-to-income ratios used to determine customer eligibility?*

Debt-to-income ratios will not be used to determine customer eligibility for either the TOB or OBF program. The TOB program is not a loan (because the customer is not obligated to continue to pay if they move) and will require the customer's total expected energy costs (i.e., natural gas, gasoline, propane) be less after the clean energy technologies; therefore, SCE does not view it necessary to determine the customers' debt-to-income ratio.

Traditionally, OBF has included a bill neutrality goal, but SCE expects that some OBF projects under the expanded program will result in an increase in the customer's bill resulting from the installation of measures that are not replacing existing technologies such as in the case of EV charging stations. SCE proposes to ameliorate this concern by capping OBF loans to an amount that is not expected to raise the customer's average electric bill over the last 12 calendar months by over 25%. SCE recognizes that the expanded OBF could result in higher default rates, but given the success of the program thus far and the fact that this financing option is still significantly less expensive for non-residential customers than traditional financing, SCE views this as an acceptable risk. SCE will monitor the expanded OBF program, and if default rates increase substantially, SCE seek further Commission guidance about program changes.

ii. *What are the estimated customer energy savings (IOU and Non-IOU) used to determine customer eligibility?*

The TOB program will be designed for each project to be cash positive for the customer, i.e. the overall customer's energy cost will remain unchanged when

considering both energy bill reductions and monthly TOB charge. This customer *energy bill savings* is distinct from *energy savings*. Customer energy savings will not be used to determine customer eligibility. However, the ability of a project to generate customer energy bill savings (across energy sources, i.e., natural gas, propane, wood, etc.) net of the tariff charge will be a criterion for project eligibility. For electrification projects, customer electric usage is expected to increase as the usage of other fuels decreases. The estimated project energy bill savings will be calculated on an individual case-by-case basis based on expected energy usage, technologies being installed, climate zones, estimated useful life, hours of operation, and other factors that can impact the overall energy usage as well as the customer's current energy bill. Depending on the specific situation, the customer's estimated energy savings will vary from the estimate.

iii. *How will energy savings be calculated and tracked? (IOU and non-IOU fuels).*

Energy bill savings will be calculated on a project basis as discussed immediately above. Electricity savings will be reflected on the customer's electric bill, but customer cost savings in other fuels will not be reflected on the customer's electric bill, and SCE cannot track those savings directly. SCE proposes to estimate those savings, but SCE also recognizes this as one of the challenges of a TOB program that seeks to promote fuel substitution technologies, and SCE seeks stakeholder comment and Commission guidance on these complex issues.

B. How are the criteria described in Question 1 of this section prioritized to determine customer eligibility?

To initially qualify for TOB or OBF, the customer must be in good credit standing with SCE. The project itself must also qualify as there must be additional factors considered such as (1) maximum financing term that does not exceed the length of the estimated useful life of the technology and the maximum financing term limits, (2) estimated calculation for OBF shows an estimated bill neutrality or a "not to exceed" 25 percent increase in electric bill, and for TOB, an estimated "cash positive" outcome

across energy sources, (3) consideration of any loan amount limits, and (4) any additional notifications/agreements from a landlord (as applicable). There is not a single priority as all of these requirements must be met in order for the project to proceed.

1. **Which clean energy technologies or distributed energy resources will be supported by the program?**

If the program focuses on a limited or specific type of technology or technologies, explain why that specific type of technology or technologies should be prioritized for a new clean energy financing program.

SCE proposes to expand OBF for non-residential customers to building electrification and transportation electrification technologies. Currently OBF is limited to measures within energy efficiency.

For its TOB proposal, SCE seeks to include electrification measures, specifically building electrification and energy efficiency in its initial phase. Should TOB expand beyond the initial phase, SCE would determine which other clean energy technologies can also be incorporated into the program.

2. **How will IOU or non-IOU program incentives be delivered to customers? How will program incentives be coordinated with existing incentives offered through other clean energy financing programs?**

Any program incentives that the customer is eligible for would still be delivered through the normal path for those incentives. SCE's proposal would allow for financing options in addition to the current incentives offered through clean energy technology programs such as TECH Clean California, Self-Generation Incentive Program (SGIP) HPWH, California Energy-Smart Homes Program and other energy efficiency programs.

VI.

RESPONSES TO PART IV: COSTS AND BENEFITS

A. **What is the estimated budget for this program, broken down by estimated percentage and amount of rate-payer funds (including funding category, such as public purpose charge, distribution rates, generation rates), private capital, state, federal funds (e.g., DOE), IOU shareholder, public or private bonds, or other sources?**

While SCE is providing high-level budget and savings estimates, these estimates are likely to change after program implementation details are further developed for many reasons, including, but not limited to, variations in fuel, electricity, equipment, and installation costs, that will need to be refined closer to program implementation. The final proposed budget may also change due to SCE's further analysis of likely customer adoption rates. SCE proposes that the Commission authorize the establishment of a memorandum account to allow for the recovery of any incremental administrative costs associated with this proceeding upon approval of the reasonableness of those costs by the Commission.

1. **OBF Expansion**

For the proposed expansion of the OBF program SCE proposes to continue leveraging ratepayer funds both for the loan pool and for its operational costs. As a way to minimize impact to ratepayers, SCE requests authorization to use the existing energy efficiency loan pool balance to finance all clean energy projects that meet the updated program eligibility, once SCE receives the necessary authorizations and input from stakeholders, such as the DFPI and the Commission, and to only request additional funds for operational expenses. This means that ratepayers will fund 100 percent of the expanded OBF program via the public purpose program charge (PPPC), in the same way that OBF is currently funded, but customers are expected to receive the vast majority of those funds back via customer repayment of the loans. The estimated budget for the first year of the expanded OBF program is \$16,700,000. This includes \$15,000,000 already in SCE's OBF loan pool balancing account, and \$1,700,000 for operational costs. SCE will continue to monitor the OBF budget and request additional funding through the Advice Letter process if needed.

2. TOB Program

For the proposed TOB program, SCE proposes an initial program budget of \$27,700,000 for the program’s first three years of operation. SCE proposes to fund the capital cost of the upgrades in the same manner SCE funds its other capital investments, but requests regulatory asset treatment, because SCE will not own the behind-the-meter equipment. SCE further proposes to fund the cost of capital and program operational expenses with ratepayer funds. If and when the TOB program expands, the Commission may consider other funding sources, such as use of public funds, utility funding with securitization, and/or other options. SCE’s funding proposal for the initial phase and considerations for future phases are further explained in Section III.D.1. An overview of program expenses and percentages by funding source is provided in the following table.

TOB BUDGET BY CAPITAL SOURCE	BUDGET	PERCENTAGE
SCE Funding (to be repaid by tariff charges)	\$20,000,000	72%
Ratepayers	\$7,700,000	28%
Total Program Budget	\$27,700,000	100%

B. What are the forecasted benefits, energy and/or GHG savings, if any, from this program at the sector, customer type (SF, MF, DAC, HTR, etc.), and measure/technology/project levels?

The following tables illustrate the forecasted distribution of financed projects and energy savings. Many factors such as building type and vintage, climate zone, equipment efficiency ratings and customer billing rates will determine the actual energy savings of each specific project. SCE’s illustrative energy savings estimates represented in the tables below were developed using Commission approved energy efficiency workpapers.

1. OBF Expansion:

For the expansion of OBF the forecasted benefits will be reflected in energy savings, GHG and other fossil fuel reductions, such as those resulting from reduction in gasoline consumption. The following table illustrates the estimated energy savings for electricity and natural gas only.

PROJECTED ANNUAL ENERGY SAVINGS			
	ENERGY EFFICIENCY	BUILDING ELECTRIFICATION	TOTAL
PROGRAM KWH:	17,300,595	(818,900)	16,481,493
PROGRAM THERMS:	0	141,976	141,976

2. TOB Program:

It is important to note that TOB is a new program in California, and there is no precedent for a TOB model used for fuel substitution, which makes forecasting and estimates of customer participation and energy savings aspirational.

PROJECTED SAVINGS BY PROJECT SCOPE			
	ENERGY EFFICIENCY	BUILDING ELECTRIFICATION	TOTAL
KWH SAVINGS ²²	(4,750,380)	(32,634)	(4,717,746)
THERM SAVINGS ²³	1,040,064	5,600	1,045,664

²² Savings calculated using measure kWh savings values from approved EE work papers.

²³ Savings calculated using measure Therm savings values from approved EE work papers.

PROJECTED ENERGY SAVINGS BY BUILDING TYPE		
BUILDING TYPE	KWH SAVINGS	THERM SAVINGS
Single Family	(2,319,940)	514,463
Multi Family	(2,397,806)	531,202
TOTAL	(4,717,746)	1,045,664

C. What number of loans is this program expected to support?

1. Expanded OBF

SCE forecasts that it will approve 900 OBF loans during the first year of the program’s expansion. SCE’s OBF program will continue to serve all qualifying non-residential customers.

PROJECTED NUMBER OF PROJECTS BY PROJECT SCOPE						
	Energy Efficiency	Building Electrification	Transportation Electrification	Energy Efficiency/ Building Electrification	Energy Efficiency/ Building Electrification/ Transportation Electrification	TOTAL
Number of Projects	245	459	108	76	12	900

2. TOB Program

The TOB program anticipates financing 3,000 projects during the first phase of implementation. Of those, 50% are expected to be completed in single family homes and the remaining 50% in multifamily dwellings.

PROJECTED NUMBER OF PROJECTS BY BUILDING TYPE AND PROJECT SCOPE				
		ENERGY EFFICIENCY	BUILDING ELECTRIFICATION	TOTAL
Single Family	Number of Projects	938	529	1,777
Multi-family	Number of Projects	569	535	1,223

D. How many years will the program run?

1. Expanded OBF

The OBF program has been in effect since 2010 and SCE proposes to continue offering OBF, with the expanded technologies, until such time that either SCE or the Commission deems that the program is no longer necessary or effective. In the event that SCE proposes in the future to discontinue OBF, SCE would do so in an appropriate advice letter to the Commission.

2. TOB Program

SCE recognizes that the importance of offering financing mechanisms to customers can be scalable, but also recognizes that the TOB model is untested in California and has not been applied to financing significant non-energy efficiency technologies, particularly electrification technologies focusing on fuel substitution.

To mitigate potential risks, SCE is proposing a phased implementation approach. This will allow SCE to test TOB in California with the technologies that will further California's goals, while also allow SCE and the state to learn from the program's performance and refine the TOB model prior to making extensive investments in the program.

Phase 1 is anticipated to last for three years from program implementation. During this phase the goal is to use TOB as a way to complement existing incentives for the installation of clean energy technology. SCE proposes the Commission establish a program evaluation process to begin during the third year of Phase 1, to measure program performance, apply lessons learned, and, if necessary, modify the program through the filing of an Advice Letter.

SCE expects Phase 2 will extend for six years after the initial phase; however, this will be contingent on the results of the evaluation of Phase 1. The expected goal of Phase 2 will be to reduce Utility program incentives in the range of 5-25%. SCE recommends that the Commission establish an evaluation process at the mid-point and conclusion of Phase 2 of the TOB program. Depending on the TOB program's performance, SCE will either seek to extend the program on an ongoing basis, with the goal of further reducing incentives, or to terminate the program.

VII.

RESPONSES TO PART V: REPORTING AND METRICS

A. Describe the key performance indicators (KPI) that will be developed for the program in order to determine:

- a. whether the program is successful in delivering benefits and addressing specific market barriers.
- b. whether the program aligns with local and regional clean energy goals.
- c. whether/when the program needs to be reconfigured or closed.
- d. any other KPI.

SCE recognizes the importance of key performance indicators (KPIs) that should be developed for the program to determine the success in delivering benefits, addressing market barriers, alignment with local and regional energy goals, and ultimately used to determine if the program needs to be reconfigured, expanded, or closed. As guiding principles, SCE believes these metrics should be:

- discretely defined;
- quantitative data driven;
- remove consideration of outside factors, where possible; and
- leverage any available data points and existing reporting

Clearly defined metrics allow for comparisons between various clean energy technologies, use cases, and limit the potential for confusion. Metrics that are quantitative serve to decrease potential for misinterpretations between multiple parties regarding the same situation. Should there be program design alignment across the utilities, the metrics and templates used should also be uniform to decrease potential for confusion and present the data in a uniform fashion. Finally, having discrete and quantitative KPIs, while also removing the consideration of outside factors, where possible, focuses the data on the program created and the actions taken by the utility and the customer. Finally, SCE recommends that any currently available data points and reports be leveraged to mitigate the administrative burden and provide consistency when looking across potentially multiple proceedings.

As SCE is recommending a phased approach to the financing proposals, SCE also recommends the use of independent, third-party evaluators to evaluate the success of the initial phase. This should be done through experimental design with a control group and treatment group to determine the customer impact by the proposal. Beyond gauging the customer's adoption of clean energy technologies, the evaluation would also seek to understand the success rate of the customer in the financing options, whether there were unforeseen barriers, and overall customer satisfaction with the program.

Because the proposals are still in the preliminary stages and details are not yet decided, SCE seeks to find common ground with stakeholders on the guiding principles for the metrics and utilize the workshop to discuss metrics, reporting, and evaluation to determine what metrics are necessary. Additional metrics may be necessary as the third-party evaluator is contracted to better inform the measurement and evaluation.

B. Describe the proposed schedule and process for tracking and evaluating these KPIs.

1. OBF Expansion

Because OBF is an existing program, reporting on metrics is currently within the broader Energy Efficiency metrics, which are submitted annually. SCE recommends leveraging the existing reporting as the foundation for any metrics in this proceeding and expanding it to incorporate any new technologies that are also included. This serves to decrease the possibility for confusion as some stakeholders may already be familiar with the current metrics for OBF and eases the administrative burden of creating new metrics. Based on the need for system updates to track, coordination between programs, and extension of the lending laws exemption for OBF expansion from DFPI, SCE believes that the OBF expansion can begin within six months after a final Commission decision. Reporting of metrics should follow in the next year.

2. TOB Program

SCE's proposed phased approach would begin with an application in 2023 and request an initial program term of three years, with a process for expanding the program based on certain criteria. SCE recommends that the evaluation not begin until a minimum of 24-months into the initial phase to provide sufficient and more robust data regarding customer adoption rates as well as impact on energy

bills. Because energy usage and any potential savings on the energy bill may be influenced by seasonal customer energy usage, it is recommended that at least 12-months of data be used in evaluation.

In the interim, SCE recommends that annual reporting on agreed upon metrics be submitted so that stakeholders are aware of any trends that may be emerging. This also allows for the soliciting and contracting with a third-party evaluation implementer.

During the third year of Phase 1, the evaluation can begin and run concurrently so as to not impact existing customers. At the end of the third year, the evaluation report should be published by the independent evaluator and used by stakeholders to determine if the program should proceed into Phase 2.

VIII.

CONCLUSION

SCE looks forward to continuing to develop its conceptual proposals with stakeholder and Commission collaboration.

Respectfully submitted,

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ATTACHMENT A
GLOSSARY OF TERMS

The following key terms are defined based on this proposal and the definition of the same terms may differ in other proceedings or contexts:

Bill Neutrality: means the estimated energy bill savings, measured in dollars across all fuel sources utilized by customer, realized by installing the clean energy technology(ies) financed, is equal to or more than the cost of the repayment amount on the customer's SCE electric bill.

Cash Positive: means that the estimated energy bill savings, measured in dollars across all fuel sources utilized by the customer, realized by installing the clean energy technology(ies) covered, is more than the cost of the charge placed on the customer's SCE electric bill.

Electrification: means installing clean energy technology(ies) that result in the switching of fuel used from fossil fuels to electricity, which can encompass a multitude of uses such as transportation (electric vehicle) and building heating/cooling (HVAC) or water heating (heat pump water heater)

Expanded On-Bill Financing (OBF): means the proposed SCE program for non-residential customers that, if implemented, will offer zero interest, no fee loans for customers to effectuate energy efficiency and electrification projects that will be repaid through SCE utility bill. This program is a proposed expansion of SCE's already existing OBF program.

Tariffed On-Bill (TOB): means the proposed SCE program for residential customers that, if implemented, would permit SCE, with the eligible customer's permission and the permission of the property owner (if different) to make site-specific investments in qualifying clean energy investments and recover the investment via a tariff service charge included in the SCE bill of the customer and subsequent customers at the same site until the tariff service charge is paid in full.