CALIFORNIA ALTERNATIVE ENERGY AND ADVANCED TRANSPORTATION FINANCING AUTHORITY

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April 15, 2022

Mr. Simon Baker
Director, Energy Division
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3298

Re: California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) Proposal to Expand California Hub for Energy Efficiency Financing (CHEEF)/GoGreen Financing Programs to Incorporate Comprehensive Clean Energy Technologies and Re-Authorize the Nonresidential/Large Commercial Financing Program

Dear Mr. Baker:

CAEATFA appreciates the opportunity to participate in Track 2 of the Clean Energy Financing Proceeding and submits the below proposal for the Commission's consideration. Through this proposal, CAEATFA seeks Commission authorization to:

1. Expand the CHEEF beyond energy efficiency (EE) and demand response (DR) to include support for comprehensive clean energy technologies
2. Re-authorize CAEATFA to develop the Nonresidential/Large Commercial financing program

Sincerely,

Derek Chernow

Executive Director

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Summary of Proposal 1: Expand Beyond Energy Efficiency and Demand Response Technologies to Include Support for Comprehensive Clean Energy Technologies

This expansion would allow CAEATFA to provide credit enhancements for the financing of comprehensive clean energy technologies, which could potentially include battery storage, microgrids, EV charging infrastructure, and more.[1] The objectives of this expansion would be to:

1. Immediately unlock tens of millions of dollars in private capital from participating finance companies for comprehensive energy upgrades, allowing CAEATFA to leverage existing infrastructure (including regulations, website, and contractor network) with minimal administrative lift.
2. Enable the GoGreen Financing Programs to serve as a "one-stop shop" for customers to finance comprehensive clean energy projects aligned with CPUC and statewide goals of decarbonization, GHG emissions reduction, peak demand resilience, and grid resilience.
3. Expand debt-based clean energy financing options for customers who have the cash flow to repay loans, including "Median" and "Moderate" Income borrowers, while allowing subsidy dollars to be preserved and channeled toward very low-income customers.
4. Complement the expanded Investor-Owned Utility (IOU) On-Bill Financing (OBF) programs, new Tariffed On-Bill (TOB) Financing program proposals, and other clean energy financing proposals expected to be submitted by parties to this Proceeding.

CAEATFA recommends both of two potential funding options to support this expansion:

- *Option 1:* Allow CAEATFA to seek external non-IOU ratepayer, non-Public Purpose Program (PPP) surcharge funds to support this expansion, such as state, federal, or Publicly-Owned Utility (POU) funds, as was done to allow CAEATFA to expand the CHEEF to non-IOU geographic territories in D.21-08-006.
- *Option 2:* Determine that the up to $75.2 million authorized to support the CHEEF from July 1, 2022-June 30, 2027 through D.21-08-006 can be used to support comprehensive clean energy technologies.

[1] CAEATFA would add comprehensive clean energy technologies to the existing eligible measure lists for each Program through its public rulemaking process. Methodology for the proposed eligibility framework can be found in CAEATFA's response to Part III, Question 3.

Summary of Proposal 2: Re-Authorize CAEATFA to Develop the Nonresidential/ Large Commercial Financing Program

This program would provide support for financing via On-Bill Repayment (OBR) for large commercial and municipal/state government, university/college, school, and hospital (MUSH market) buildings without the use of a credit enhancement.[2] The objectives of this program would be to:

1. Expand access to the already-developed OBR infrastructure to non-residential, large commercial, public, and MUSH market properties.
2. Preserve credit enhancement dollars for qualified small businesses while responding to the demand for OBR from larger businesses, project developers and finance companies.
3. Leverage tens of millions of dollars in private capital financing options to support comprehensive clean energy investments for larger property types with high project costs, preserving On-Bill Financing (OBF) funds for other projects.
4. Leverage the CHEEF's existing infrastructure to support projects with significant anticipated savings with very little additional operational expense.

CAEATFA recommends that the CPUC determine that CAEATFA may use a portion of the up to $75.2 million authorized to support the CHEEF from July 1, 2022-June 30, 2027 through D.21-08-006 to support what CAEATFA refers to in this proposal as the "Public Buildings/Large Commercial Financing Program" for administrative costs only.

[2] Decision 13-09-044 authorized a nonresidential financing pilot as described on page 65: "It is reasonable for the Commission to authorize the implementation of the OBR for Non-Residential Customers without CE pilot program as described above."

Additional Background and Context

CAEATFA appreciates the deliberation provided by the Commission and the parties of R.20-08-022 in D.21-08-006, which approved up to a $75.2 million budget for the GoGreen Financing Programs from July 1, 2022 through June 30, 2027 and authorized CAEATFA to incorporate external funding sources to support geographic expansion of the Programs in non-IOU territories.[3] The three GoGreen Financing Programs currently offered via the CHEEF are:

- GoGreen Home Energy Financing (GoGreen Home) for single-family residences
- GoGreen Business Energy Financing (GoGreen Business) for the small business sector
- GoGreen Affordable Multifamily Energy Financing (GoGreen Multifamily) for the affordable multifamily sector

Since the issuance of D.21-08-006, CAEATFA has launched a partnership with the TECH Clean California initiative[4] that will remove some measure eligibility restrictions faced by joint IOU gas/POU electric customers. CAEATFA has also launched On-Bill Repayment (OBR) for GoGreen Business in San Diego Gas & Electric (SDG&E), Southern California Edison (SCE), and Southern California Gas (SCG) territories, piloted an interest rate buy-down promotion for GoGreen Multifamily[5] allowing borrowers to access interest rates as low as 0%, and launched a financing option for microloans through GoGreen Home issued at the point-of-sale for residential customers purchasing efficient equipment from utility marketplaces.

During Track 1 of this Proceeding, CAEATFA and several other parties advocated for expansion of the GoGreen Financing Programs to include technologies beyond energy efficiency and demand response. Multiple parties broadly supported the idea of CAEATFA expanding its list of eligible measures for the Programs to include comprehensive clean energy measures during the Track 1 opening comment period in April 2021, including East Bay Community Energy (EBCE), the Environmental Defense Fund (EDF), Pacific Gas & Electric (PG&E), Renewables100, and SCG. Several finance companies participating in the GoGreen Financing

[3] D.21-08-006 Extending California Hub for Energy Efficiency Financing Programs and Conditionally Approving Use of Platform for Non-Ratepayer Funded Programs.
[4] CAEATFA explained its partnership with TECH Clean California in its February 7, 2022 letter to the Director of the Energy Division, issued in compliance with D.21-08-006 and circulated to the R.20-08-022 service list.
[5] CAEATFA explained its intent to sponsor an interest rate buy-down pilot for GoGreen Multifamily in its October 6, 2021 letter to the Director of the Energy Division, issued in compliance with D.21-08-006 and circulated to the R.20-08-022 service list.

Programs (California Coast Credit Union, First US Community Credit Union, Matadors Community Credit Union, DLL, and Renew Energy Partners) also expressed their support for measure eligibility expansion, citing the increased simplicity and improved product offerings that a credit enhancement for measures such as on-site solar generation and battery storage would enable them to provide. Other parties, such as Gridium, VEIC and the Wild Tree Foundation, suggested solutions that were generally supportive of measure eligibility expansion with some caveats. The Commission ultimately determined in D.21-08-006 to defer any measure eligibility expansion decisions to later in this Proceeding, pending more information about other potential funding sources and consideration of additional clean energy financing programs.[6]

CAEATFA's Track 2 proposal requests authorization to expand the GoGreen Financing Programs to offer comprehensive clean energy technologies beyond the EE and DR measures that the CHEEF is currently authorized to credit enhance[7], which could potentially include technologies like on-site solar generation, battery storage, EV charging infrastructure, hydrogen fuel cells, combined heat and power, microgrids, and more. Since the issuance of D.17-03-026[8], CAEATFA has determined the lists of eligible measures for the Programs, in accordance with broad CPUC guidelines, via CAEATFA's public rulemaking process.[9] The most current eligible measure lists are published online and include a broad variety of EE measures with a few DR measures eligible for financing under each Program.[10]

[6] D.21-08-006, page 36: "For this decision, we are only considering extension of the existing CHEEF programs, with the parameters and limits previously adopted by the Commission related to financing of any project costs that are not related to energy efficiency technologies. Further consideration of increased loan and financing options for other non-energy efficiency technologies or fuel substitution measures that are not already covered by existing CHEEF programs will be addressed later in this proceeding, when we have more information about other potential funding sources and may consider additional or new administrators for clean energy financing programs."
[7] D.13-09-044 created the CHEEF specifically to facilitate energy efficiency financing. Resolution E-4663 authorized financing for demand response measures in Finding 8: "It is reasonable to further the Commission's policy of encouraging integrated demand side management by allowing DR-enabled technologies and solutions to be included in energy efficiency projects that will be financed by the credit enhanced pilots in this program."
[8] D.17-03-026, page 10: "CAEATFA is fully authorized as the decision-maker for these pilots, utilizing its own public input and rulemaking processes…To be clear, CAEATFA has authority over the pilot program design, financing mechanism designs, finance credit support, measure eligibility…"
[9] As a State agency, CAEATFA follows the standards set forth in California's Administrative Procedure Act to establish regulations for each of the CHEEF Programs. The public rulemaking process to adopt and modify Program regulations includes public workshops, public comment periods, and CAEATFA Board approval.
[10] The GoGreen Home eligible measure list is available at https://www.treasurer.ca.gov/caeatfa/cheef/reel/resources/reel_eeemsList.pdf. The GoGreen Business eligible measure list, which is also used for GoGreen Multifamily, is available at https://www.treasurer.ca.gov/caeatfa/cheef/sblp/resources/esmlist.pdf.

This proposal also revisits the concept of a non-residential financing program, which CAEATFA was initially authorized to implement in D.13-09-044. The "nonresidential pilot," referred to in this proposal as the Public Buildings/Large Commercial Financing Program, was envisioned as a clean energy financing option for large commercial and public buildings that would leverage the On-Bill Repayment infrastructure to facilitate financing without a credit enhancement for EE, DR and distributed generation (DG) measures.[11] However, in D.17-03-026, the Commission stipulated that all CHEEF pilots should launch by the end of 2019[12], and since OBR functionality had not yet been developed at that time[13], the authorization to develop the nonresidential pilot was cancelled. With OBR expected to be fully functional in all four IOU territories by the end of Q3 2022, multiple finance companies now approved to offer OBR, and demand present from potential large commercial and public borrowers, CAEATFA requests that the Commission re-authorize this program.

[11] D.13-09-044, page 65: "Eligible financing shall include a 70%/30% ratio of EE projects, but the 70% may include DR and DG."
[12] D.17-03-026, Ordering Paragraph 4: "The California Alternative Energy and Advanced Transportation Financing Authority shall cancel any financing pilot program originally authorized in Decision (D.) 13-09-044, as modified by D.15-06-008, D.15-12-002, and this decision, if it is not launched by December 31, 2019."
[13] OBR was developed in accordance with D.13-09-044, though the actual design and implementation of the functionality proved to be much more legally and logistically complex than anticipated and has taken several years of effort to develop. CAEATFA has been working extensively with the IOUs and participating finance companies to address significant operational and administrative challenges related to OBR, including establishing secure and seamless payment flows, providing sufficient legal protection and risk mitigation for all parties, and building out the technical infrastructure to communicate data points and codify data exchanges.

Responses to Questions Posed in CPUC Proposal Template

Part I: Overall Goals and Principles

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

   The current CPUC guidelines in place that prevent the CHEEF from providing credit enhancements for comprehensive clean energy technologies effectively restrict participating finance companies (particularly those in GoGreen Home) from financing comprehensive measures through the Programs, as the credit enhancement is essential to their underwriting and approval of borrowers for these loans.[14] For example, while financing options exist for residential customers to finance solar photovoltaics (PV) outside of GoGreen Financing, GoGreen Home lenders are not able to offer financing for solar PV as part of a loan that also includes a heat pump or another eligible energy efficiency measure. These circumstances create a barrier for borrowers to easily undertake comprehensive projects and limit efforts to grow and scale GoGreen Financing, despite interest from currently participating lenders and contractors in offering comprehensive technologies beyond EE and DR.

   CAEATFA seeks to achieve four main objectives by expanding the Programs to include comprehensive clean energy technologies:

   1. ***Immediately unlock tens of millions of dollars in private capital from participating finance companies for comprehensive energy upgrades:*** There are currently 16 finance companies participating in the GoGreen Financing Programs that have hundreds of millions of dollars in financing capacity that could be deployed toward State climate goals. Additional lenders, including the National Energy Improvement Fund (NEIF), are expected to join the Programs in the coming months, and more can be anticipated to be drawn to GoGreen Financing should the Programs begin offering comprehensive clean energy measures. CAEATFA has already built the lender network and Program infrastructure to facilitate private capital financing of energy upgrades at scale for Californians, which could quickly and easily be leveraged to address the market barriers faced by customers seeking to finance comprehensive energy projects under one loan.

[14] Under current Program regulations, participating lenders may finance technologies that are not EE or DR without a credit enhancement at their discretion. However, to date, no GoGreen Home projects have included any other clean energy technologies, as lenders are unwilling to have less than 100% of their loan be credit enhanced and considered "claim-eligible."

2. ***Enable GoGreen Financing to serve as a "one-stop shop" for customers to finance comprehensive clean energy projects:*** As indicated by several parties in D.21-08-006, establishing a "one-stop shop" for borrowers to meet their clean energy financing needs would simplify and enhance accessibility to financing, thus attracting more borrowers to engage in energy retrofits and comprehensive projects. While market-rate financing options exist for solar and storage, many residential customers do not want the property lien associated with PACE loans and most solar PPA and lease products do not encourage the adoption of energy efficiency technology. Furthermore, there is no state-backed financing program for residential electric vehicle (EV) charging or storage.

   GoGreen Home has successfully facilitated extended payback terms up to 15 years, interest rate reductions of up to 1,650 basis points[15] lower than participating lenders' market-rate products (which can be as high as 20% without Program support), increased loan maximums of up to $50,000, and broadened approval to borrowers with credit scores as low as 580. GoGreen Business has facilitated extended payback at fixed rates out to 10 years, broadened credit approval to newer businesses, restaurants and nonprofits, and reduced rates up to several hundred basis points. These products could benefit those who wish to take out a single financing agreement to cover their energy-related needs.
3. ***Expand debt-based clean energy financing options for customers who have the cash flow to repay loans:*** CAEATFA recognizes that debt-based financing is not a suitable option to support very low-income households in achieving energy upgrades, but GoGreen Home fills an important role for properties in Low-to-Moderate Income (LMI)[16] census tracts and for borrowers with adequate cash flow to repay a loan. More than 50% of GoGreen Home loans are made to properties in LMI census tracts, and 88% of GoGreen Home loans have been "finance-only," meaning they did not apply a rebate or incentive to reduce the cost of the project.
4. ***Complement expanded OBF, TOB and other clean energy financing proposals:*** GoGreen Financing reaches different market segments and meets different customer

[15] One basis point is equal to 1/100th of 1% (e.g., 100 basis points = 1%).
[16] Low-to-Moderate Income (LMI) census tracts are those where the median income falls below 120% of the Area Median Income. As of February 2022, 56% of GoGreen Home loans have been made to properties in LMI census tracts and 52% of total loan capital has gone to properties in LMI census tracts.

needs than OBF and TOB programs. While proposals submitted through this Proceeding may offer new and expanded variations of these programs, OBF programs typically require customers to meet qualifications related to bill pay history, bill neutrality, and participation in another IOU program, and project approval can be a lengthy process. GoGreen Business does not carry these requirements and is able to approve projects faster, which is particularly beneficial for emergency replacements. GoGreen Home may serve customers who are not served by TOB programs or may serve those same customers for different types of technology.

As for the Public Buildings/Large Commercial Financing Program, CAEATFA has seen interest from several lenders who have customers only in need of the OBR infrastructure without a credit enhancement, as well as from public building managers whose properties cannot qualify for GoGreen Business. The four primary objectives CAEATFA seeks to achieve by developing this Program are:

1. ***Expand access to the already-developed OBR infrastructure to nonresidential, large commercial, and MUSH market properties:*** As described above, there is significant interest from both finance companies and property managers in leveraging OBR functionality to finance energy upgrades in this sector, even without a credit enhancement. This would facilitate projects with high amounts of anticipated energy savings using limited amounts of ratepayer dollars.
2. ***Preserve credit enhancement dollars for qualified small businesses:*** The GoGreen Business regulations stipulate that only eligible small business customers may finance projects through the Program. This typically excludes large commercial entities and organizations from eligibility to help preserve credit enhancement dollars for qualified small businesses, but it does not provide these property types with a financing option as part of the GoGreen Financing Programs. There is currently no GoGreen Financing option for publicly-owned buildings. Developing the Public Buildings/Large Commercial Program would facilitate a financing option for this sector without pulling credit enhancement dollars away from other Programs.
3. ***Leverage tens of millions of dollars in private capital financing options to support comprehensive clean energy investments for larger property types:*** Six of the finance

companies participating in GoGreen Business operate statewide and have significant financing capacity for large projects. These lenders are well-positioned to offer financing via the Public Buildings/Large Commercial Program, and other lenders are expected to join the program should it launch.

4. ***Leverage the CHEEF's existing infrastructure to support projects with significant anticipated savings with very little additional operational expense:*** Program regulations for GoGreen Business can be modified for use by the Public Buildings/Large Commercial Program with relatively little administrative lift, and infrastructure central to the Program (namely OBR, but also including the GoGreen Financing website and the GoGreen Business lender/contractor network) already exists and can be leveraged to stand up the program quickly and easily.

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

Comprehensive Clean Energy Technology Expansion

- *Description of Financing Program:* Under this proposal, the Program design features of GoGreen Home, GoGreen Business and GoGreen Multifamily would not change; the eligible measure lists for each Program would be expanded to incorporate comprehensive clean energy technologies. The Programs use a credit enhancement in the form of a loan loss reserve[17] to mitigate risk for participating lenders, thus enabling them to offer financing products with exceptional rates and terms for energy upgrades. At present, GoGreen Home has eight participating credit union lenders who offer unsecured loans with rates between 2.95%-8.12% for amounts up to $50,000 and payback terms up to 15 years; borrowers with credit scores as low as 580 may qualify. GoGreen Business has eight participating finance companies, several of which can finance projects up to $5 million and offer financing agreements such as equipment leases and service agreements. There are two finance companies participating in GoGreen Multifamily, who offer

[17] For every financing agreement enrolled in the Programs, a contribution is made to a loss reserve account for the finance company who issued the loan. GoGreen Home lenders can make a claim to recoup up to 90% of the charged-off principal balance in the event of a default; GoGreen Business lenders are limited to reclaiming up to 90% of the first $1 million financed.

equipment finance agreements up to $250,000 and energy service agreements up to $10 million.

- *Expected Benefits of Expansion:* As described above, all three Programs are currently only able to credit enhance financing for EE and DR measures. Leveraging existing resources, infrastructure, and financing pathways to expand the types of clean energy measures available through the Programs will provide significant customer, utility and system-level benefits. Residences and businesses will be able to engage in whole-building retrofits inclusive of many energy-saving measures under one financing agreement, resulting in higher potential bill savings and greater resilience during power shut-offs and other grid failures. Possible utility benefits include grid resilience from properties that are able to incorporate storage into their projects and avoided new transmission and distribution (T&D) upgrades. A central benefit is accelerated progress toward the State's energy efficiency and decarbonization goals.
- *Costs of Expansion:* CAEATFA anticipates that a significant amount of existing resources can be leveraged to expand the GoGreen Financing Programs to include financing for comprehensive measures. CAEATFA will need to modify Program regulations to add additional technologies to the eligible measure lists and anticipates that one additional staff person will be needed to manage operations and coordination related to the expansion. Contracting costs could be absorbed under the existing budget. Funds to support credit enhancements for comprehensive measures would be needed, but could come from the already-approved CHEEF budget for fiscal years 2022-2027 (see Part IV for more information on budget estimates).

Re-Authorization of Public Buildings/Large Commercial Financing Program

- *Description of Financing Program:* The Public Buildings/Large Commercial Financing Program will provide access to On-Bill Repayment for large commercial entities and public agencies without a credit enhancement. The Program is expected to attract private finance companies offering several financing models to borrowers, such as loans, leases, and energy service agreements, including those already participating in GoGreen

Business. The maximum financing amount would be between $5 and $10 million.[18] Market-rate interest rates are expected, but the demand in this sector is primarily for OBR functionality rather than low-cost financing. CAEATFA will amend the current GoGreen Business Program regulations to include OBR without a credit enhancement for large commercial and public properties. Eligible measures will include EE, DR and comprehensive technologies intended to meet the complex needs of large buildings (see Part III, Question 3 for CAEATFA's proposed framework to determine technology eligibility).

- *Expected Benefits:* This program will address demand for OBR from the large commercial and publicly-owned building sectors while preserving credit enhancement funds for small businesses. Benefits for customers to be derived from this Program will include significant energy savings and resilience during public safety power shutoffs, while utilities will see system benefits that can only be achieved by the multi-million dollar, large-scale retrofits that CAEATFA expects will be supported by the Program.
- *Costs:* This Program is expected to require very minimal upstart costs, as the OBR infrastructure has already been developed, tested and launched, and resources and Program design elements created for GoGreen Business can be modified for use by the Public Buildings/Large Commercial Financing Program. Like the technology expansion proposal, CAEATFA anticipates that one staff person will be needed to guide the regulatory process, coordinate operations and manage the Program. There would be no need for any credit enhancement dollars for this Program.

3. 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.

- *Goal 1: Consistently integrate equity and access considerations throughout CPUC regulatory activities.* Expanding the GoGreen Financing Programs to incorporate additional clean energy measures greatly simplifies the project and financing process for

[18] The maximum financing amount for this Program may be as high as $10 million, depending on the capacity of the OBR operational reserve and feedback received as part of CAEATFA's public rulemaking process. The OBR operational reserve is a revolving fund that utilizes some credit enhancement dollars, used to smooth out payments to finance companies in the event that their payment is delayed through no fault of their customer.

borrowers seeking to complete comprehensive energy upgrades. Homeowners and renters, small business owners, and affordable multifamily property owners will have access to the lower interest rates, longer terms, larger amounts of capital available and broader credit approvals of the GoGreen Financing Programs to help them with battery storage, EV charging and other projects.

- *Goal 2: Increase investment in clean energy resources to benefit ESJ communities, especially to improve local air quality and public health.* As of December 31, 2021, 56% of standard loans enrolled through GoGreen Home have been made to properties in Low-to-Moderate Income (LMI) census tracts[19] and 16% have been made to properties in the highest quartile of CalEnviroScreen scores.[20] CAEATFA expects to maintain the amount of loans made to properties in LMI census tracts and those in the highest quartile CalEnviroScreen scores should the Programs be authorized to support additional clean energy technologies. GoGreen Financing customers regularly cite health and comfort motivations for their energy efficiency upgrades, and with expanded technologies like battery storage and solar thermal hot water, overall household health could be better maintained during power shut-offs and grid failures.
- *Goal 3: Strive to improve access to high-quality water, communications, and transportation services for ESJ communities.* EV charging and hydrogen fuel cells are examples of additional clean energy technology that could potentially become eligible for the GoGreen Financing Programs under this proposal and would provide access to improved clean transportation networks.
- *Goal 4: Increase climate resiliency in ESJ communities.* The methodology for qualifying comprehensive clean energy technologies recommended by CAEATFA in response to Part III, Question 3 includes resiliency considerations as a system benefit. Potential eligible measures through the Programs that would increase climate resiliency could include battery storage, solar thermal hot water and microgrids, which have community and storage-related benefits and help mitigate the impacts of power outages.

[19] Low-to-Moderate Income census tracts are those with incomes that fall below 120% of the Area Median Income.
[20] CalEnviroScreen is a pollution burden mapping tool that uses environmental, health, and socioeconomic data to produce scores for every census tract in California; CAEATFA reports loans for properties in tracts scoring in the top quartile (75-100%) as loans for projects in disadvantaged communities (DACs).

- *Goal 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.* CAEATFA does not anticipate this proposal affecting the CPUC's decision-making process. However, CAEATFA's public rulemaking process allows for public engagement via workshops and comment periods when new regulations and modifications to existing regulations are being established, which provides direct opportunities for public participation from advocates to weigh in on technology decisions and consumer protections.
- *Goal 6: Enhance enforcement to ensure safety and consumer protection for all, especially for ESJ communities.* CAEATFA implements a lengthy vetting process for all financing products offered through the Programs to ensure the incorporation of significant borrower benefits and consumer protections in exchange for access to the credit enhancement. GoGreen Home regulations require diligent underwriting practices to ensure that borrowers do not take on loans that they are unable to repay; see CAEATFA's responses to Part II on consumer protections for more information.
- *Goal 7: Promote high road career paths and economic opportunity for residents of ESJ communities.* With over 550 GoGreen Home contractors and 85 GoGreen Business contractors and project developers currently participating in the Programs, there are workforce benefits in underserved communities that can be derived from these financing options. The majority of residential and commercial contractors who participate in GoGreen Financing are local to specific regions of California; as the Programs increase uptake of comprehensive clean energy measures, job opportunities are created in communities across the state.
- *Goal 8: Improve training and staff development related to environmental and social justice issues within the CPUC's jurisdiction.* CAEATFA has collaborated with the Energy Division since 2013 throughout the conceptualization, development, and implementation of the CHEEF Programs to share experiences and lessons learned from the Programs to Commission staff. One area through which CAEATFA has supported CPUC staff development is by sharing lessons learned on how financial institutions define and lend to "credit-challenged" customers; these findings later informed some of the evaluation metrics assigned to GoGreen Home.

- *Goal 9: Monitor the CPUC's environmental and social justice efforts to evaluate how they are achieving their objectives.* CAEATFA has readily participated in CPUC-directed evaluations of all three CHEEF Programs; an evaluation on GoGreen Home (referred to at that time as REEL) was published in April 2020[21], and a combined evaluation of GoGreen Business and GoGreen Multifamily is currently underway. In response to D.21-08-006, which required CAEATFA to report on new metrics as well as those adopted in Resolution E-4900[22], staff have revised the quarterly report structure and have undertaken an effort to calculate deemed energy savings estimates for all GoGreen Home projects through December 31, 2021. In addition to meeting these requirements, CAEATFA reports on metrics including loan activity and total amount financed by census tract income and CalEnviroScreen score in its monthly and quarterly reports to provide transparency into how the GoGreen Financing Programs support disadvantaged communities and underserved customers.

Part II: Financing Program Requirements – Financial Product Description and Program Development

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

Financial products will be the same or very similar as those currently offered through the GoGreen Financing Programs.[23] Through GoGreen Home, private lenders may offer loans, leases or retail installment contracts up to $50,000. Through GoGreen Business and GoGreen Multifamily, private finance companies may offer loans, leases, service agreements or savings-based payment agreements up to $5 million, with the first $1 million receiving a credit enhancement and being "claim-eligible" in the event of a default. Just as with financing for EE and DR measures through the Programs, in exchange for the ratepayer-funded credit enhancement, finance companies would need to demonstrate benefits to customers (such as reduced interest rates, extended terms, larger financing amount

[21] The Residential Energy Efficiency Loan Assistance Pilot Impact Evaluation Report is available here: https://pda.energydataweb.com/api/view/2312/CPUC%20Group%20B%20FIN20%20REEL%20Evaluation%20Final%20Report%20REVISED%20DRAFT%202019-11-22_TO%20PDA%20(1).pdf
[22] D.21-08-006, pages 48-49 and Ordering Paragraph 14.
[23] Currently available financing product information can be reviewed using the "Find Financing" feature on the GoGreen Financing website: https://gogreenfinancing.com/

maximums, broader approvals, broadened types of equipment allowed, etc.) to offer additional clean energy technologies. Lenders may choose to take a UCC fixture filing on some clean energy equipment, like solar PV panels.

CAEATFA expects that several currently participating finance companies will offer financing through the new Public Buildings/Large Commercial Program, and CAEATFA will consider allowing financing of up to $5 million or $10 million per project.

2. *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.*

Many of the energy efficiency financing programs across the country that are similar in structure to the GoGreen Financing Programs, including Michigan Saves, Connecticut Green Bank's "Smart-E" Program, and Colorado's RENU Loan, successfully provide financing for customers to make comprehensive energy upgrades and operate at a scale beyond that of GoGreen Financing's current impact.[24] These programs follow the same model of using a credit enhancement to improve lender's terms. Each of these programs includes some combination of energy efficiency along with clean energy technologies like EV charging, solar PV, solar hot water heating, and/or battery storage.

Precedent for the Public Buildings/Large Commercial Financing Program has been established by the Commission itself in D.13-09-044, which initially authorized a financing pilot of this nature. CAEATFA has engaged with several property managers and finance companies that are interested in this type of program, and very recently (within the past month) had to tell a participating finance company that their energy efficiency project for a school district would not qualify for GoGreen Business. This project would have been eligible for the Public Buildings/Large Commercial Financing Program, if it were operable.

[24] Michigan Saves (in a state with a population 25% of California's) financed almost 4,000 residential projects and 132 commercial projects in 2020, and Connecticut's Smart-E Program (in a state with a population 9% of California's) closed 971 loans in 2021. In comparison, GoGreen Home supported 447 residential loans in 2020 and 650 in 2021 (excluding marketplace microloans). Data is sourced from the Michigan Saves 2020 annual report (https://annualreport.michigansaves.org/) and the Connecticut Green Bank's 2021 annual report (https://www.ctgreenbank.com/wp-content/uploads/2021/12/FY21-annual-report-website.pdf).

3. *For tariffed on-bill programs, please include draft tariff language.*

CAEATFA is not proposing a tariffed on-bill financing program.

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

The GoGreen Financing Programs have thus far attracted 16 private capital lenders, several of which participated in Track 1 of this Proceeding to advocate for simple, streamlined Program eligibility guidelines. California Coast Credit Union, which to date has enrolled nearly 1,000 loans in GoGreen Home, encouraged the Commission in their Track 1 Opening Comments to allow credit enhanced financing for solar and battery storage, noting that this would allow them to enter the market, provide an "advantageous and fair" product for borrowers, and stop turning away potential customers who request these measures each month.[25] Renew Energy Partners, the first energy service agreement provider to enroll in GoGreen Business, explained the importance of the ability to implement a broad range of energy solutions with "one trusted partner" in their comments.[26]

a. *If so, what portion of the program would be covered by private capital when the program launches?* At present, GoGreen Home standard loans leverage $6.54 in private capital for every $1 in IOU ratepayer funding allocated to credit enhancements. CAEATFA is considering regulatory updates to increase this ratio by reducing the percentage of loss reserve contribution per loan, given that defaults have been low. Borrowers take on 100% of their own project costs via private capital through the Programs, and ratepayer funds are used to facilitate the credit enhancement and cover administrative costs (staffing, contracts, operations, etc.). The Public Buildings/Large Commercial Financing Program would not offer a credit enhancement, meaning that ratepayer funds would only be needed for administrative costs.

[25] Opening Comments of California Coast Credit Union to Assigned Commissioner's Ruling Seeking Party Feedback on Track 1 Issues Related to California Hub for Energy Efficiency Financing Programs, p. 5.
[26] Opening Comments of Renew Energy Partners to Assigned Commissioner's Ruling Seeking Party Feedback on Track 1 Issues Related to California Hub for Energy Efficiency Financing Programs, p. 5.

b. *Does the program intend to ultimately transition to 100% private capital at a specific milestone? Why or why not?* Credit enhancement contributions are revolved rather than expensed, meaning that over time (as the Programs enroll more loans and as those loans are fully paid back by their borrowers), the loss reserve contribution that was made at each loan's origination is deposited back into the credit enhancement funding pool; the only situation in which credit enhancement funds are expensed is when a loan defaults. Over the next 15 years, all of the loans currently enrolled in the Programs will reach the close of their payback term and their loss reserve contributions will be returned to the Program. However, CAEATFA does not anticipate that the Programs will transition to being funded entirely by private capital, as public or ratepayer funding will likely be required to support ongoing administration expenses. CAEATFA is actively seeking ways to improve administrative efficiency, including by implementing IT solutions. As the Programs grow, administrative costs are spread over a larger base of loans.

Part II: Financing Program Requirements – Consumer Protections

1. *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?*

CAEATFA has consistently held that debt-based financing is one of many financing options that may be considered for energy retrofits and is only suited for borrowers with the cash flow ability to repay a loan. The primary financial risk of debt-based financing to the customer is default, which may result in adverse reports to credit bureaus and collections attempts. In rare cases, if the finance company took a security filing on the energy equipment, they may attempt to repossess it, but only if the equipment would retain some value when removed from the property.[27] The Programs were designed to mitigate some of

[27] Regulations currently permit participating finance companies to take UCC fixture filings on the properties making the energy efficiency upgrades, but to date, GoGreen Home finance companies have offered unsecured products and GoGreen Business finance companies have utilized UCC-1 filings on equipment. Should lenders begin to finance comprehensive energy measures (such as rooftop solar panels), some may choose to begin using fixture filings. Most lenders file a UCC fixture filing not because they intend to repossess the affixed equipment, but because they want to cloud the property title to ensure repayment prior to a real estate sale or to protect their interest in the event of a foreclosure by the mortgage lender.

the risks of debt-based financing, and the following features would continue with any technology expansion:

- The credit enhancement enables participating lenders to offer rates and terms that significantly reduce the borrower's monthly payment obligation in most circumstances by lowering interest rates and allowing for extended terms. As of December 31, 2021, the average monthly payment for a GoGreen Home borrower who takes advantage of an extended payback term (greater than 5 years) is roughly $200, compared with an expected monthly payment of $450 had they accessed the same lender's market-rate product and been limited to a 5-year term. Reduced payment obligations from the credit enhancement not only enhances borrower accessibility, but protects the borrower from high monthly payments that carry a greater risk of loan default.
- In all of the GoGreen Financing Programs, participating finance companies absorb 10% of the losses on each financing agreement that they charge off in the event of default. Finance companies can also only afford a certain percentage of losses across their portfolio of GoGreen Financing loans, as claim payments are limited to what is available in their loss reserve accounts[28]. Finance companies thus have "skin in the game" and maintain a financial interest in approving loans that borrowers are able to repay, regardless of whether they are credit-challenged or underserved.
- GoGreen Home caps interest rates at the value of the 10-year US Treasury rate plus 750 basis points, though most lenders have set their rates much lower given the value of the credit enhancement. Program rules require that borrowers have a minimum credit score of 580 for loans above $5,000 and a maximum debt-to-income ratio requirement of 55%. Finance companies may set stricter credit and underwriting guidelines, though CAEATFA encourages them to utilize the credit enhancement to reduce their credit minimums and expand access, provided the borrower has the cash flow to repay the loan.

[28] For example, if a participating lender enrolls 10 loans (of equal size) through the Program and 3 of them default, the loss reserve contributions made for the 10 loans enrolled would not be enough to cover 90% of the remaining loan balance for the 3 defaults.

- Financing agreements offered through GoGreen Business are commercial (not consumer) financial products, and the Program regulations reflect this distinction. Interest rates are not capped, allowing finance companies to offer credit to newer businesses that pose more risk. Program underwriting guidelines increase in stringency with the size of the financing agreement to protect the ratepayer-funded credit enhancement dollars and protect customers from large defaults. As with GoGreen Home, finance companies may set stricter credit and underwriting guidelines than the regulations require, though CAEATFA encourages them to utilize the credit enhancement to reduce their credit minimums and expand access, provided the borrower has the cash flow to repay the loan.

To date, finance companies have charged off and submitted claims for 25 GoGreen Home loans among more than 2,200 enrolled loans, and there have yet to be any defaults from GoGreen Business financing agreements. Additionally, lenders report an approximate 50% approval rate for new loan applications in GoGreen Home, demonstrating that the approval process is sufficiently rigorous to ensure that only qualified candidates are able to receive a loan.

a. *Describe any penalties that may be imposed if the customer does not repay the loan (such as credit reporting, asset forfeiture, utility disconnection).* For both GoGreen Home and GoGreen Business, in the event of a default, the finance company is likely to report the non-payment to credit bureaus and begin collections.

   GoGreen Home is an off-bill Program (meaning that the financing payment is completely separate from the borrower's utility bill), so utility disconnection will not result from non-payment of financing charges. To date, GoGreen Home finance companies have not elected to secure loans with UCC fixture filings; if they were to do so in the future, they would technically have the right to repossess equipment. However, in all practicality, there is little resale value from repossessed energy equipment and the time and hassle is prohibitive for finance companies.

   GoGreen Business borrowers who repay their financing agreement off-bill are not subject to utility disconnection for non-payment. Customers who elect to use On-Bill Repayment for their financing may be disconnected for non-repayment of their loan at their utility's discretion and subject to each utility's OBR tariff, which are filed with the CPUC. GoGreen Business lenders typically take a UCC-1 filing on equipment that is financed at a value of $25,000 and up, which gives them the right to repossess equipment in the event of non-payment, though the actual decision to do so would be made only if there was significant resale value.

b. *Describe any non-financial terms and conditions customers must satisfy to stay in compliance with the program.* Customers do not have any direct requirements to be in compliance with Program rules; participating contractors are subject to compliance standards to mitigate the risk of fraud.

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

Loans made through GoGreen Home are highly regulated consumer lending products. Beyond CAEATFA's Program rules, finance companies must comply with numerous state and federal lending laws, including disclosure rules – all of which will continue with expanded clean energy technology offerings.

GoGreen Business customers sign documentation with participating finance companies that clearly state payment obligations. CAEATFA's Program regulations for GoGreen Business also require equipment leasing companies to disclose either an annual percentage rate (APR) or the total cost of the lease over its lifetime for transparency. Both of these practices will continue with expanded clean energy technologies included.

The Public Buildings/Large Commercial Financing Program is expected to serve large businesses and public properties, who are likely to employ financial officers and asset managers with a sophisticated understanding of their property's finances. CAEATFA expects that these customers will take advantage of energy service agreements through the Program, which include deep analysis of existing and projected energy use and tie financing payments to equipment performance.

3. *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?*

   The GoGreen Financing Programs do not include any repayment obligation transfer; payment is still due even if a customer vacates their property.

4. *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?*

   The primary vehicle for customer outreach is the GoGreen Financing website (GoGreenFinancing.com), which serves as the online platform for customers to learn about the Programs, find participating contractors and finance companies, determine measure and financing eligibility, and more. Statewide and regional marketing campaigns supported by the IOUs have included webpages, social media posts, emails, bill envelope messaging, billboards, radio ads, and more.[29] Because GoGreen Financing is a financing program, not an energy efficiency program, there is no on-the-ground "implementer" or field partner visiting properties to generate projects. Therefore, CAEATFA also engages in direct outreach to local governments, Regional Energy Networks (RENs), Community Choice Aggregators (CCAs), and Community-Based Organizations (CBOs) to raise awareness and provide training on their use to staff for dissemination through their networks and programs.

   All partners sharing information about the GoGreen Financing Programs are encouraged to direct interested parties to the GoGreen Financing website, which helps to ensure that all potential borrowers receive the same information about the Programs. Should the Commission authorize measure expansion and/or the Public Buildings/Large Commercial Financing Program, CAEATFA will incorporate information about them into existing outreach efforts and conduct new marketing campaigns to raise public awareness.

[29] A joint workshop on marketing efforts for the Programs and future marketing plans was held and a workshop summary was distributed to the R.20-08-022 service list in October 2021 in compliance with D.21-08-006, Ordering Paragraph 6.

Part III: Program Design and Delivery Details

1. *What sector(s) will this program target (i.e., residential (Single Family/Multifamily), commercial, industrial, agricultural, public, disadvantaged, and hard-to-reach)? How does the program propose to determine customer eligibility?*

   CAEATFA will use existing Program eligibility criteria as follows:

   - *GoGreen Home (single-family residential):* Borrowers must receive service from one of the four IOUs to be eligible for financing.[30] Financing may be used for energy projects at one to four units of residential property (whether borrowers own it and occupy it, own it and rent it to someone else, or rent it), including single-family homes, townhomes, condos, duplexes, triplexes, fourplexes, or site-attached manufactured homes.
   - *GoGreen Business (small business):* Borrowers must receive service from one of the four IOUs to be eligible for financing.[31] Financing may be used for energy projects at properties used for business activity regardless of whether the borrower leases or owns the property, and both for-profit and non-profit entities are eligible. Borrowers must qualify as an eligible small business by meeting one of the following criteria: fewer than 100 staff; less than $15 million in annual revenues; or meet the federal Small Business Administration size standards for their industry.
   - *GoGreen Multifamily (affordable multifamily):* Borrowers must receive service from one of the four IOUs to be eligible for financing.[32] Financing may be used for energy projects for deed-restricted affordable multifamily properties of 5 or more units where at least 50% of the units are income-restricted and a minimum of 5 years remains on the affordability covenant at the time of qualification.

   For the proposed Public Buildings/Large Commercial Program, customer eligibility will require service from one of the four IOUs. Borrowers that could potentially finance projects through this Program would include large commercial entities and public agencies. Financing may be used for energy projects at commercial or public buildings, regardless of whether the borrower owns or leases the property.

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[30] Should CAEATFA receive non-IOU ratepayer funding to support expansion into territories beyond that of the four IOUs, this requirement may change to allow non-IOU customers to participate in the Program.
[31] Ibid.
[32] Ibid.

a. *What are the credit score ranges used to determine customer eligibility?* For GoGreen Home, the Program rules set the minimum credit score for a borrower at 580; incorporating comprehensive measures into the Programs would not change this. Most participating finance companies will approve customers with scores as low as 580 or 600, provided they meet other credit criteria.

The Program rules for GoGreen Business and GoGreen Multifamily do not set credit score requirements, but require finance companies to inform CAEATFA of their acceptable credit ranges for approval upon application to the Program and check each applicant's credit (utility bill pay history is an acceptable form of credit check for microloans). For financing agreements above $10,000, finance companies must verify other underwriting criteria such as minimum years in business and profitability, and for financing agreements above $350,000, finance companies must confirm the business has a debt service coverage ratio of at least 1.10. Participating finance companies may also have their own underwriting requirements in addition to those established by CAEATFA through Program regulations.

Finance companies participating in the Public Buildings/Large Commercial Financing Program would likely perform "full underwrites" of borrowers (reviewing financial statements and performing cash flow analysis) rather than rely on credit scoring, because of the large size of the finance agreements. CAEATFA would not necessarily set a regulatory minimum credit requirement for the finance companies to follow, but would work with participating finance companies to understand and implement the appropriate financial standards by which to determine customer eligibility for this Program.

b. *What criteria in addition to or in lieu of credit scores will be used to determine eligibility (such as bill pay history)?* Additional credit eligibility criteria includes debt-to-income ratio for GoGreen Home and length of time in business, operating profits, and debt service coverage ratio for GoGreen Business.[33] Customer eligibility beyond what is stipulated in the Program regulations may also be determined by the

[33] Detailed eligibility criteria for the GoGreen Financing Programs is established in the regulations for each Program, which are available on the CAEATFA website: https://www.treasurer.ca.gov/caeatfa/cheef/index.asp

underwriting criteria of the participating finance companies. Bill pay history is an optional credit criteria for microloans (loans under $10,000) for GoGreen Business.

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

i. *What are the debt-to-income ratios used to determine customer eligibility?* GoGreen Home requires a debt-to-income ratio of no more than 55%. GoGreen Business requires a debt service coverage ratio of greater than 1.10 for finance agreements over $350,000. GoGreen Multifamily finance companies can determine their own underwriting criteria with CAEATFA's approval.

ii. *What are the estimated customer energy savings (IOU and non-IOU) used to determine eligibility?* For GoGreen Home, site-specific energy savings calculations are not required for financing. Projects must be comprised of measures included on CAEATFA's pre-qualified list. The current list has been developed to include measures that are likely to yield energy savings in the vast majority of installation cases. CAEATFA would take the same approach with technology expansion and update the list of eligible measures to include technology related to comprehensive energy projects. For more discussion on technology eligibility, please see the response to Part III, Question 3 below.

For GoGreen Business and GoGreen Multifamily, customers and contractors can use a similar list of pre-qualified measures as with GoGreen Home or can rely on an energy professional (either a Professional Engineer or Certified Energy Manager) to certify savings for a potential project. This allows for a custom project pathway through these Programs. With the expansion of technology to include comprehensive energy projects, CAEATFA would take a similar approach as with GoGreen Home and expand the list of pre-qualified measures. The custom pathway could potentially be expanded as well, if the energy professional were able to certify other types of benefits beyond savings. For more discussion of technology eligibility see the response to Part III, Question 3 below.

iii. *How will energy savings be calculated and tracked (IOU and non-IOU fuels)?* D.21-08-006 instructed CAEATFA to calculate energy savings for the Programs.[34] CAEATFA is in the process of producing its first energy savings report for GoGreen Home, which uses deemed analysis. CAEATFA hopes to complete an NMEC analysis using actual pre- and post-project metered data in the future if data sharing with the IOUs can be achieved. Analysis of actual energy savings was included in the GoGreen Home evaluation conducted in 2020 and is expected to be included in future formal CPUC evaluations. If comprehensive clean energy projects are approved, CAEATFA would expand the current deemed energy efficiency savings analysis to incorporate the energy benefits of different types of technology.

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

Customers must meet all established eligibility criteria for the GoGreen Financing Program through which they are seeking financing as well as the financing approval criteria established by their chosen finance company.

3. *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.*

CAEATFA proposes that the Commission approves broad criteria that clean energy technologies beyond EE and DR must meet in order to be eligible for credit-enhanced financing through the GoGreen Financing Programs. CAEATFA will then use this guidance to expand the pre-qualified measure lists for each Program through its public rulemaking process, as has been done for since D.17-03-026.

CAEATFA has identified three sectors – customers, utilities, and society – for which technology benefits can be analyzed, and nine benefits (see list below) that can be assessed

[34] D.21-08-006, page 48 outlines metrics and key performance indicators for CAEATFA to include in its quarterly reports, including “annual estimated energy savings from installed measures funded through the CHEEF programs.”

for any particular technology. CAEATFA's proposed framework for measure eligibility criteria (for technologies beyond EE and DR) stipulates that a technology must deliver benefits to all three sectors in order to qualify for financing. This framework will allow CAEATFA to ensure that any technology approved for credit-enhanced financing generates distinct benefits in line with CPUC and State climate/energy goals, while maintaining the flexibility to add specific technologies to the Programs' eligible measure lists via CAEATFA's public rulemaking process. This ability has been crucial for the Programs, as it enables CAEATFA to add to the measure list as new technologies become viable, remove measures that no longer serve State goals, and make changes in response to customer, contractor, and finance company feedback.

Examples of technologies that could potentially be added to the Programs through this process include on-site generation, solar domestic hot water, solar lighting and fans, combined heat and power, battery storage, EV charging infrastructure, hydrogen fueling infrastructure, microgrids, and more.

Should this framework be approved by the CPUC, CAEATFA will research potential technologies to add to the Programs, "run" proposed measures through the approved framework to determine eligibility, and present these findings for public input during the rulemaking process (e.g., workshops) before adding them to the pre-qualified eligible measure lists for each Program. CAEATFA may also consider "bundling" requirements for technologies under this framework; for example, standalone solar PV would likely not deliver benefits to all three sectors, but solar PV could become eligible when paired with battery storage.

The nine benefits that CAEATFA proposes to use as criteria for clean energy technology eligibility are:

- Bill Savings: Technologies that reduce the customer's total energy costs
- Bill Stability: Reduced volatility of energy costs
- Energy Reduction: A decrease in the final energy demand for a customer; can be the result of higher efficiency equipment or on-site generation
- Peak Reduction: Reduction in highest peak loads during defined seasonal or diurnal periods
- Load Shifting: Increased ability to manipulate loads to match system conditions

- Avoided Transmission & Distribution (T&D) Upgrades: The technology helps avoid the need for grid infrastructure upgrades and investments
- Emissions Reductions: Technology expected to lower emissions of greenhouse gases and other criteria pollutants
- Islanding/Back Up: Technology that increases the ability to maintain energy services during power interruptions, including public safety power shut-offs
- Resilience: Improved ability of the system to respond, endure, and recover from stresses; a system that has a greater number of nodes with levels of distributed generation and load matching is more resilient than a system that is centralized

The table below demonstrates how this framework could work in practice for three sample technologies; note that this is not intended to be final and CAEATFA will formalize benefits tests and determine eligible measures through its public rulemaking process.

Table 1: Example Benefits Tests Using CAEATFA's Proposed Framework

	Customers	*Utility*	*Society*	*Pass/Fail*
Stand-alone on-site solar generation	Bill savings, bill stability, energy reduction			**Fail** (ineligible for credit-enhanced financing)
Battery storage	Bill savings, bill stability, energy reduction, peak reduction, resilience	Load shifting, islanding/back-up, resilience	Energy reduction, emissions reduction	**Pass** (eligible for credit-enhanced financing)
Fuel cell/hydrogen end use	Energy reduction, load shifting, peak reduction, islanding/back-up	Load shifting, peak reduction, islanding/back-up, resilience	Load shifting, avoided T&D upgrades, emissions reduction, resilience	**Pass** (eligible for credit-enhanced financing)

4. *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?*

The CHEEF was initially created with the goal of testing whether financing alone, without additional rebates or incentives, is enough to encourage borrowers to take on energy upgrades. This proposition has been proven over time, as to date 88% of GoGreen Home loans have been "finance-only," meaning no rebate or incentive was applied to the financed project. That figure has increased in recent years, with 95% of GoGreen Home loans being finance-only in 2020 and 92% in 2021. At the same time, the Programs are financing programs, not energy efficiency or self-generation programs. While there is a marketing budget for a website and outreach to customers, there are not implementers meeting customers at their homes or businesses to educate them about potential energy projects. To that end, coordination with other clean energy programs has been and will be important.

CAEATFA has designed the Programs to be complementary to existing IOU, REN and CCA programs. For example, any measure that is eligible under an IOU, REN or CCA energy efficiency program is eligible for financing through GoGreen Home, GoGreen Business, or GoGreen Multifamily, even if that specific measure is not on the Program's eligible measure list. CAEATFA will apply similar parameters to regulations governing expansion to include additional technologies in the Programs. For the Public Buildings/Large Commercial Financing Program, CAEATFA expects that customers will coordinate with the IOUs to access any incentives they are able to qualify for; CAEATFA will leverage existing relationships with program and finance leads at the IOUs to help facilitate this collaboration as needed.

Part IV: Costs and Benefits

1. *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?*

The CPUC authorized a budget of up to $75.2MM for the GoGreen Financing Programs for use from June 30, 2022-July 1, 2027 through D.21-08-006.[35] To support expansion to comprehensive clean energy technology for GoGreen Home, GoGreen Business, and GoGreen Multifamily, CAEATFA recommends both of two potential funding options:

[35] D.21-08-006, page 15: "We find it reasonable to authorize CAEATFA to receive up to an additional $75.2 million to support its existing CHEEF programs for IOU ratepayers through June 30, 2027."

- **Allow CAEATFA to seek external non-IOU, non-PPP funds for this expansion, such as state, federal, or POU funds, as was done to allow CAEATFA to expand the Programs to non-IOU geographic territories in D.21-08-006.** At a minimum, the CPUC should allow CAEATFA to incorporate non-IOU ratepayer funds into the Programs for this purpose to leverage the existing infrastructure of the CHEEF for comprehensive projects. CAEATFA has already developed accounting tools and practices to successfully collect, track, and report on external funds.
- **Determine that the $75.2 million in funds authorized to support the Programs for fiscal years 2022-2027 through D.21-08-006 may be used to support clean energy technologies beyond EE and DR.** While this budget uses PPP surcharge funds from IOU ratepayers, it was approved as part of the Clean Energy Financing Proceeding (R.20-08-022) and not the EE Proceeding (R.13-11-005). The Commission could decide to authorize this approved budget to support additional technologies beyond EE and DR in spirit with the Order Instituting Rulemaking for this Proceeding, which stated on page 30: "The purpose of this proceeding is to provide a venue for investigating and designing mechanisms that can help customers finance all of the energy investments they might wish to make on their properties, without artificial barriers, such as those caused by regulatory rules related to funding source." It is likely that increased loan volume and loan size due to the enrollment of comprehensive projects will mean that CAEATFA deploys the credit enhancement budget approved faster than was projected during Track 1 of this Proceeding. However, this would mean that tens of millions of dollars of private capital would be deployed toward critical State energy goals to achieve savings earlier, and CAEATFA could then request additional capital from IOU ratepayer sources if needed. CAEATFA may also have identified non-IOU ratepayer funding sources by the time additional funds are needed, should the Commission authorize option 1 above.

CAEATFA does not recommend authorizing new ratepayer funding to support this expansion, as this would require the IOUs to pass on additional surcharges to ratepayers before dollars already approved for CHEEF financing have been spent. Maintaining separate accounting between two sources of IOU ratepayer funds for different technologies, while possible, would also add administrative burden.

To support the Public Buildings/Large Commercial Financing Program, CAEATFA recommends one funding source for the CPUC's consideration:

- **Authorize CAEATFA to use a portion of the $75.2 million CHEEF budget for fiscal years 2022-2027 to support this Program.** Because this Program will not offer credit enhancements and the OBR infrastructure essential for its operations has already been developed and launched, CAEATFA anticipates minimal administrative lift and low overall costs for resuming its development. Similarly to the technology expansion request, the additional loan volume from this Program and the larger project sizes associated with financing in this sector will mean that CAEATFA may deploy its credit enhancement budget faster than was projected during Track 1 of this Proceeding.

For an example of the breakdown of costs between private capital and potentially ratepayer-supported credit enhancement funds, see the response to Question 2 below.

2. *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?*

For technology expansion, CAEATFA anticipates more significant savings to be achieved from comprehensive projects that incorporate a mix of EE, DR and generation/storage measures than those achieved from EE and DR measures alone. In addition to more significant energy savings, efficiency measures paired with measures like on-site generation and battery storage result in whole-house energy back-up.

The financial benefits of including all of a customer's energy upgrade needs under one affordable financing agreement are manyfold, and customers who are considering one or a few measures could more easily finance a comprehensive retrofit if a wide variety of clean energy technologies are available to choose from.

Table 2 below conveys an example of the potential energy and financial benefits GoGreen Home customers could see from one potential type of comprehensive clean energy project: a heat pump and insulation installed along with rooftop solar and storage.

Table 2: Example of GoGreen Home Customer Benefits from Technology Expansion

Type of Technology	Measure	Cost	Estimated Energy Impacts and Benefits
Energy Efficiency[36]	Heat pump HVAC upgrade + insulation	$20,000	Savings from heat pump only: Gas Savings: 296 Therms Electric Savings: -1,293 kWh
Distributed Generation[37]	Rooftop solar PV system, 2-4 kW	$8,250	Generation: annual output of 3.6-7.2 MWh *Bill Savings, Bill Stability, Energy Reduction, Peak Reduction, Emissions Reductions*
Storage[38]	Peak battery with controls; 1-2 units for critical load and whole-house back-ups	$12,000	*Load Shifting, Islanding/Back up, Resilience*
	Total Project Cost	**$40,250**	

GoGreen Home Financing Options				**National Credit Union Average[39]**
Rate[40]	3.49%	4.49%	5.49%	10.7%
Loan Term in Months	60	120	180	60
Monthly Payment	$732	$417	$329	$869
Total Interest Paid	$3,672	$9,784	$18,909	$11,897

Without GoGreen Home, a borrower could expect to pay, on average, an interest rate of 10.7% for an unsecured loan from a credit union. Most likely, they would be offered no more than a 60-month term. A GoGreen Home borrower choosing the same 60-month term would pay

[36] Cost based on estimate of GoGreen Home projects installing heat pumps. Savings based on CAEATFA's deemed analysis for 97 central heat pump projects installed through end of 2021. Measure characterization based on California eTRM, Measure ID SWHC045-01. Assumptions: Installation of Residential SEER 15-18 and HSPF>=8.7 heat pump replacing a SEER 13/AFUE 80% HVAC unit with savings adjusted for each climate zone. Building prototype based on DEER 2020 figures. CAEATFA does not currently have access to savings calculations for insulation when combined with a heat pump. Actual savings are therefore likely to be greater.

[37] Modeled based on the NREL System Advisor Model of Imperial, CA; default cost assumptions based on the Tracking the Sun Database. A range of $5,500-$11,000 for project costs is expected, so the average is used.

[38] Based on Green Mountain, Energy Storage System, and Tesla Power Wall. 1-2 units have a price range of $8,000-$16,000, so the average is used.

[39] Average rate for an unsecured personal loan in February 2022 per the Credit Union National Association: https://www.cuna.org/content/dam/cuna/advocacy/cu-economics-and-data/data---statistics/CUMonthEst_Feb22.pdf

[40] Rates as of April 15, 2022 for Matadors Credit Union, a statewide GoGreen Home lender. Rates are not linked to credit score.

over $8,000 less in interest over the life of the loan, or the GoGreen Home borrower could choose to extend their term out to 120 months and reduce their monthly payment significantly.

Tables 3 and 4 below present examples of the potential benefits GoGreen Business and Public Buildings/Large Commercial Financing Program customers could see from one potential type of comprehensive clean energy project per program. Financial benefits are excluded as they are more varied and complex to quantify than those of consumer financing products.

Table 3: Example of GoGreen Business Comprehensive Project

Type of Technology	Measure	Cost	Estimated Energy Impacts and Benefits
Energy Efficiency[41]	Commercial HVAC upgrade, LED lighting, variable frequency drives	$82,500	27,458 kWh 84 kW 445 Therms
Distributed Generation[42]	Rooftop solar PV system, 6-20 kW	$35,750	Generation: annual output of 10.8-36 MWh *Bill Savings, Bill Stability, Energy Reduction, Peak Reduction, Emissions Reductions*
Storage[43]	Total equipment costs for 2-10 units each with - 13.5 kWh, 7kW peak battery with controls	$48,000	*Load Shifting, Islanding/Back up, Resilience*
	Total Project Cost	**$166,250**	

[41] Costs based on average financed amount of 14 GoGreen Business projects pre-approved and/or enrolled today, excluding one very large outlier project. Measures based on typical measures financed through the Program. Savings based on Opinion Dynamics Corporation's forthcoming evaluation of 8 GoGreen Business projects, average savings per project, excluding savings for the one very large outlier project which accounted for 1/3 of all savings.
[42] Modeled based on NREL System Advisor Model of Imperial CA; default cost assumptions based on Tracking the Sun Database. Price ranges from $16,500 to $55,000, so the average is used.
[43] Based on Green Mountain, Energy Storage System, and Tesla Power Wall. 2-10 units for small commercial critical load or full backup. Note Lazard Cost of Storage study characterizes commercial BTM storage as 125kW typical size. Price ranges from $16,000 to $80,000, so the average is used.

Table 4: Example of Public Buildings/Large Commercial Financing Program Comprehensive Project

Type of Technology	Measure	Cost	Estimated Energy Impacts and Benefits
Energy Efficiency[44]	Central heating and cooling system upgrade, LED lighting, building envelope measures, building management system	$1,000,000	192,200 kWh 585 kW 3,114 Therms
Distributed Generation[45]	Rooftop solar PV system, 250 kW-500 kW	$479,500	Generation: annual output of 450 MWh-890 MWh *Bill Savings, Bill Stability, Energy Reduction, Peak Reduction, Emissions Reductions*
Storage[46]	1 MW - 4MWh total direct and indirect	$1,500,000	*Load Shifting, Islanding/Back up, Resilience*
	Total Project Cost	**$2,979,500**	

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

Table 5 below provides potential high, middle and low scenarios for the total number of comprehensive clean energy finance agreements to be enrolled in fiscal year 2023-2024, using the sample project costs described above. Actual enrollments will include many different types of technology at many different financing amounts. For GoGreen Home and GoGreen Business, these scenarios are intended to present *additional* enrollments on top of the total loans to be enrolled that will install only EE and DR measures.

[44] Measures: CAEATFA estimate based on typical inquiries. Cost: CAEATFA estimate. Savings: CAEATFA estimate based on average savings per dollar of project cost investment, based on Opinion Dynamics Corporation's forthcoming GoGreen Business evaluation.
[45] NREL System Advisor Model, cost assumptions, output for Imperial CA. Cost ranges from $339,000-$620,000, so the average is used.
[46] NREL System Advisor Model, PV-Battery Combination.

Table 5: Comprehensive Clean Energy Financing Project Scenario for First Year, FY 2023-2024

<table>
<tr><th></th><th>GoGreen Home</th><th colspan="2">GoGreen Business</th><th colspan="2">Public/Large Commercial</th></tr>
<tr><td>Sample Project Cost</td><td>$40,250</td><td colspan="2">$166,250</td><td colspan="2">$2,979,500</td></tr>
<tr><th colspan="6">2023-2024 Scenario: Number of Comprehensive Clean Energy Projects Enrolled</th></tr>
<tr><td>Low Scenario</td><td>250</td><td colspan="2">15</td><td colspan="2">5</td></tr>
<tr><td>Mid Scenario</td><td>500</td><td colspan="2">25</td><td colspan="2">7</td></tr>
<tr><td>High Scenario</td><td>800</td><td colspan="2">50</td><td colspan="2">10</td></tr>
<tr><th></th><th>GoGreen Home</th><th>GoGreen Business</th><th colspan="2">Public/Large Commercial</th><th>Total</th></tr>
<tr><td>Private Capital Leveraged (based on mid scenario)</td><td>$20,125,000</td><td>$4,156,250</td><td colspan="2">$20,856,500</td><td>$45,137,750</td></tr>
<tr><td>Credit Enhancement $ Allocated (based on mid scenario)</td><td>$3,220,000</td><td>$395,313</td><td colspan="2">$0</td><td>$3,615,313</td></tr>
<tr><td>$ of Private Capital Leveraged per $1 of Credit Enhancement</td><td>$6.25</td><td>$10.51</td><td colspan="2">N/A</td><td>--</td></tr>
</table>

4. *How many years will the program run?*

CAEATFA's timeline in Table 6 below plans for the launch of comprehensive clean energy technology and the Public Buildings/Large Commercial Financing Program in September 2023. The below timeline is conservative, allowing CAEATFA time to implement the proposal along with launching other planned initiatives for the GoGreen Financing Programs. CAEATFA requests that authorization of the full proposal coincides with the current budget cycle established for the Programs in D.21-08-006, running until June 30, 2027.

Table 6: Tentative Timeline for Proposal Implementation

October 2022	CPUC Decision authorizing technology expansion and Public Buildings/Large Commercial Financing Program
November 2022 – January 2023	CAEATFA research and design
February 2023 – May 2023	CAEATFA emergency rulemaking process
June 2023 – August 2023	Program operationalization
September 2023	Launch of expanded technology and Public Buildings/Large Commercial Financing Program

Part V: Reporting and Metrics

1. *Describe the key performance indicators (KPIs) 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.*

CAEATFA recommends that the wide variety of metrics CAEATFA has been ordered to report on through D.21-08-006, covering Program activity, private capital leveraged, loan portfolio performance, borrower financial benefits and information, how the Programs serve underserved customers and disadvantaged communities, and measures installed, be utilized as KPIs for additional clean energy technologies. Special emphasis should be paid to the types of clean energy measures installed, and the proportion of loan dollars supporting energy efficiency versus comprehensive clean energy technology.

Current metrics used to determine whether the Programs are successful in delivering benefits and addressing market barriers include:

- Comparisons of interest rates and monthly payments between financing products offered via GoGreen Financing vs. market-rate products
- Financing feasibility metrics, which determine how many customers take advantage of the improved rates and terms offered by participating finance companies (e.g., loans enrolled to borrowers with term lengths longer than 5 years)

- Loans enrolled by census tract income and CalEnviroScreen score (to determine Program use among underserved customers and disadvantaged communities)

CAEATFA staff also frequently review Program activity data and reporting metrics to determine necessary reconfigurations of the Programs. CAEATFA has modified Program regulations and rules over the years to better serve the customers, contractors, and lenders participating in the Programs; all three Programs have been modified at least once since 2020. Modifications have included adding new EE and DR measures to the eligible measure lists, developing pathways to allow microloans in the GoGreen Home and GoGreen Business Programs, streamline operations for lenders and contractors, and more. These modifications are made via the public rulemaking process, which allows for public input that CAEATFA then incorporates into the updated regulations.

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

CAEATFA publishes its quarterly reports approximately one quarter later (i.e., the first quarter's report is typically published during the second quarter), and monthly data summaries are posted approximately one month later (i.e., January's report is typically published in February). Tracking of KPIs is ongoing, and CAEATFA has a well-established internal process for translating data from enrolled loans into its reports.

A formal evaluation of GoGreen Home is scheduled to launch in January 2024 as per D.21-08-006. This Decision also directed CAEATFA to continue its quarterly reporting on GoGreen Business and GoGreen Multifamily "through CAEATFA's regular reporting process."[47]

[47] D.21-08-006, pages 46-47 and Ordering Paragraph 12.