ENERGY EFFICIENCY FINANCING PILOTS

# QUARTERLY REPORT & PROGRAM STATUS SUMMARY

## THIRD QUARTER 2018

CALIFORNIA ALTERNATIVE ENERGY AND
ADVANCED TRANSPORTATION FINANCING AUTHORITY
CAEATFA

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# The State of California has ambitious goals to reduce greenhouse gas emissions and address climate change

In 2006, the Legislature passed the California Global Warming Solutions Act (Assembly Bill 32), which created a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California. In the subsequent Scoping Plans, intended to describe the approach California will take to reduce GHGs, one of the primary methods identified is increasing efficiency in existing buildings.

With so many headlines about electric vehicles, rooftop solar and other renewables, it's easy to forget how important energy efficiency is to the GHG reduction mix. Billions of square feet of existing commercial and residential properties are currently in need of energy upgrades—both the structures themselves and the energy using equipment they house.

**There is simply not enough government or ratepayer funding to pay for these upgrades.**

With this awareness, the California Public Utilities Commission (CPUC) allocated funds to launch several financing pilot programs designed to attract private capital to finance energy efficiency upgrades[1]. In its decision, the CPUC acknowledged that energy efficiency(EE) measures are the important tools for addressing greenhouse gas emissions, and that lowering the barriers to energy efficiency retrofits and financing—particularly in underserved market sectors—is critical to reaching the state's goals of reduced energy consumption and spreading benefits to all Californians.

## Background

The California Public Utilities Commission Decision 13-09-044 authorized a series of financing programs, designed to attract private capital to finance energy efficiency upgrades, and established the California Hub for Energy Efficiency Financing (CHEEF) to administer the new programs. The CPUC requested the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) assume the administration of CHEEF, and directed the Investor Owned Utilities (IOUs) and CPUC staff to assist CAEATFA with implementation.

A core feature of the new financing programs is to incentivize private finance companies to improve terms or expand credit criteria for the financing of energy efficiency projects by providing a credit enhancement, funded with IOU energy efficiency ratepayer funds. This credit enhancement helps remove the upfront cost barrier for Californians to undertake energy efficiency retrofits. A key objective is to test whether transitional ratepayer support for credit enhancements can lead to self-supporting energy efficiency finance programs in the future.

In a separate document,[2] the CPUC further clarified the goals under which the financing programs would be evaluated.

The financing tool should:

1. Be scalable
2. Be leveraged by private capital and able to support energy efficiency upgrades
3. Reach underserved Californians who would not otherwise have participated in EE upgrades
4. Produce energy savings

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[1] Decision 13-09-044

[2] Resolution E-4900, published December 14, 2017

This report is prepared in response to D. 13-09-044, which directs CAEATFA, in conjunction with the IOUs, to issue quarterly reports on the progress of the CHEEF financing pilots. It contains quarter highlights and other informational items to keep interested parties informed as to program challenges and successes.

## Program Participants

CAEATFA is working with the CPUC, IOUs, finance companies and several key vendors to develop a series of energy efficiency financing programs.

The following table describes the primary program participants and their roles. A complete list of organizations who make up the CHEEF infrastructure can be viewed in Appendix 1.

| ENTITY | ACRONYM | PRIMARY ROLE |
|---|---|---|
| California Public Utilities Commission | CPUC | The CPUC authorized the financing programs and set guidelines for program design. |
| California Alternative Energy and Advanced Transportation Financing Authority, housed in the CA State Treasurer's Office | CAEATFA | CAEATFA is responsible for details of program design, implementation and finance company and contractor outreach and participation. |
| The Investor Owned Utilities:<br>– Pacific Gas &Electric<br>– San Diego Gas & Electric Company<br>– Southern California Edison, and<br>– Southern California Gas Company | IOU(s)<br>PG&E®<br>SDG&E®<br>SCE®<br>SoCalGas® | The IOUs contribute ratepayer funds to administer the programs and for credit enhancements, participate in program development and market the programs to their existing customers. |
| The Center for Sustainable Energy | CSE | CSE is the CHEEF Marketing Implementer, providing direct-to-end-user marketing for the programs. |

Other common acronyms used throughout this report:

| | |
|---|---|
| Residential Energy Efficiency Loan program | REEL |
| Small Business Energy Efficiency Financing program | SBF |
| Affordable Multifamily Financing program | AMF |
| OBF, On-Bill Financing | OBF |
| OBR, On-Bill Repayment | OBR |

# Quarter Highlights

## New REEL Finance Company

CAEATFA enrolled a new REEL finance company--First U.S. Community Credit Union--bringing the total number of participating lenders in the REEL program to seven. First U.S. Community Credit Union serves 12 counties in Northern California including Sacramento and surrounding counties.

## REEL Keeps Growing

The REEL program enrolled 81 new REEL loans, totaling $1.3 million dollars, a nearly 70% increase from the previous quarter in the dollar amount of funded loans. By the end of Q3, a total of 274 REEL loans had been enrolled, totaling $4.7 million.

## Serving Underserved Borrowers

53% of REEL loans were made to households in Low to Moderate Income census tracts, and 20% in Disadvantaged Communities, as identified by CalEPA's CalEnviroScreen[3] tool.

## PG&E Outreach to Over 1 Million Customers

PG&E distributed a REEL marketing email to 1.7 million customers. REEL lenders reported a significant upswing in loan applications and loan approvals as a result of the campaign

## REEL Reaches 2-year Anniversary; Ready for EM&V Process

July 18, 2018 marked the 2 year anniversary of the first REEL loan enrolled. At the 2-year pilot mark, the CPUC can begin its Evaluation, Measurement and Verification (EM&V) process to evaluate pilot success. Following the EM&V, CPUC staff will put forth a recommendation to the full Commission in the form of a resolution recommending the long-term status of the REEL program. With the program evaluation pending, REEL continues to move forward, enrolling new loans and contractors.

## Small Business Program Development Continues

CAEATFA plans a public workshop to present draft regulations for the Small Business Energy Efficiency financing Program in October of 2018. Following a public workshop on Program design in April, staff held over 50 conversations with commercial project developers, contractors, consultants, manufacturers and finance companies, and has used this increased understanding of the market in the design of the Small Business Program regulations. CAEATFA intends to have final regulations approved and published by Quarter 4, 2018, begin enrolling finance companies immediately following the approval of the regulations, and begin enrolling Contractors and Project Developers in Quarter 1, 2019.

## Affordable Multifamily Program Development Ramps Up

The Affordable Multifamily Housing financing program closely trails the development of the Commercial program. CAEATFA staff and consultants had conversations with a number of interested parties and attended two regional Affordable Multifamily conferences to continue building relationships with Affordable Multifamily developers and finance companies.

## www.gogreenfinancing.com

The GoGreen Financing website, which was launched at the end of Quarter 2, continued to grow and attract new customers.

[3] https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30

# Program Status: Progress, Outreach, Challenges


Header images are those used on the GoGreen Financing website: www.gogreenfinancing.com/residential

## The Residential Program (REEL)

CAEATFA's residential program is called REEL—the Residential Energy Efficiency Loan Assistance program. REEL provides attractive financing to owners and renters of existing residential properties who select from a broad list of energy efficiency measures intended to reduce energy consumption. Customers may upgrade a single-family home, townhome, condo, duplex, triplex, fourplex or manufactured home. Renovations for up to four units can be bundled into the same loan.

As with all CHEEF programs, eligibility requires that the property receive electric or natural gas service from at least one of the IOUs: PG&E®, SDG&E®, SCE® or SoCalGas®.

REEL Lenders receive a credit-enhancement of 11% of the claim eligible amount, or 20% if the borrower is considered underserved. CAEATFA defines underserved borrowers as either:

1. *Low-to-Moderate Income (LMI) Census Tract* – Area Median Income (AMI) of the borrower's census tract does not exceed 120% of the AMI for the Metropolitan Area, County, or State. To make this determination CAEATFA selected the existing geocoding tool administered by the Federal Financial Institutions Examination Council (FFIEC) Geocoding System.[4]
2. *Low-to-Moderate Income Household Income* - Borrower's household income is at or below the current annual income limits as determined by the California Department of Housing & Community Development, according to county and family size.
3. *Credit-Challenged* – a borrower whose credit score is < 640 (if the lender has opted-in to the Credit-Challenged facility by demonstrating additional benefits to credit-challenged borrowers).

Data regarding the number of underserved borrowers receiving REEL loans is discussed below.
REEL program regulations can be viewed here.[5]

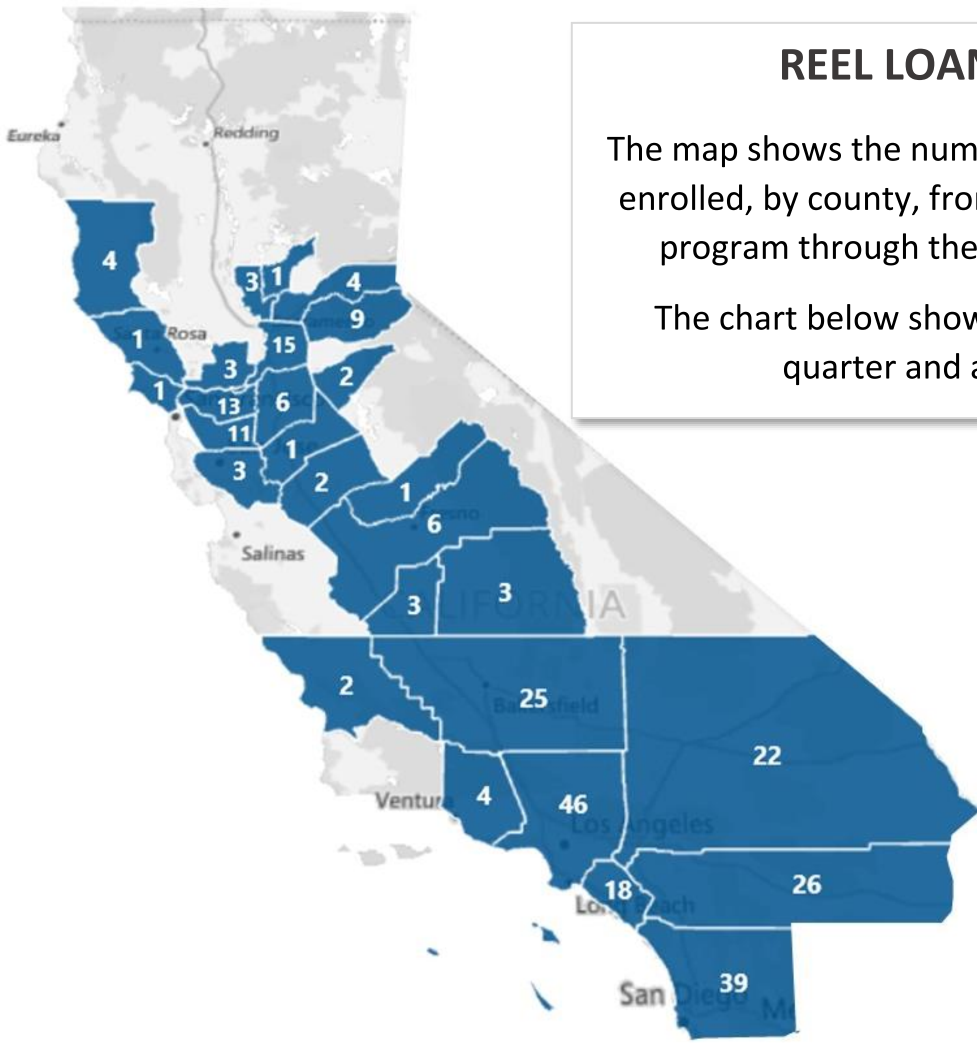
## Progress

REEL showed exceptionally strong growth during Q3, enrolling 81 loans totaling $1.3 million. This single quarter had more loans and a higher dollar volume than the first five quarters of the program combined. By the end of Q3, the program had enrolled 274 loans with claim-eligible principal totaling $4.7 million.

The program is entering a new phase of maturity as many program pieces fall into place. The newest lenders are beginning to bring in loans—six of the seven REEL lenders enrolled loans during Q3 2018. The GoGreen Financing website, which just launched at the end of Q2 2018, continues to be refined from its initial rollout to meet consumer and stakeholder needs. During Q3 2018, there were over 75,000 unique visits to the site. CSE's statewide marketing campaign continues, and the release of a consumer-facing email by PG&E to 1.7 million customers resulted in a spike in loan applications, and highlighted the potential of partnering with the IOUs to reach residential customers statewide.

[4] https://geomap.ffiec.gov/FFIECGeocMap/GeocodeMap1.aspx

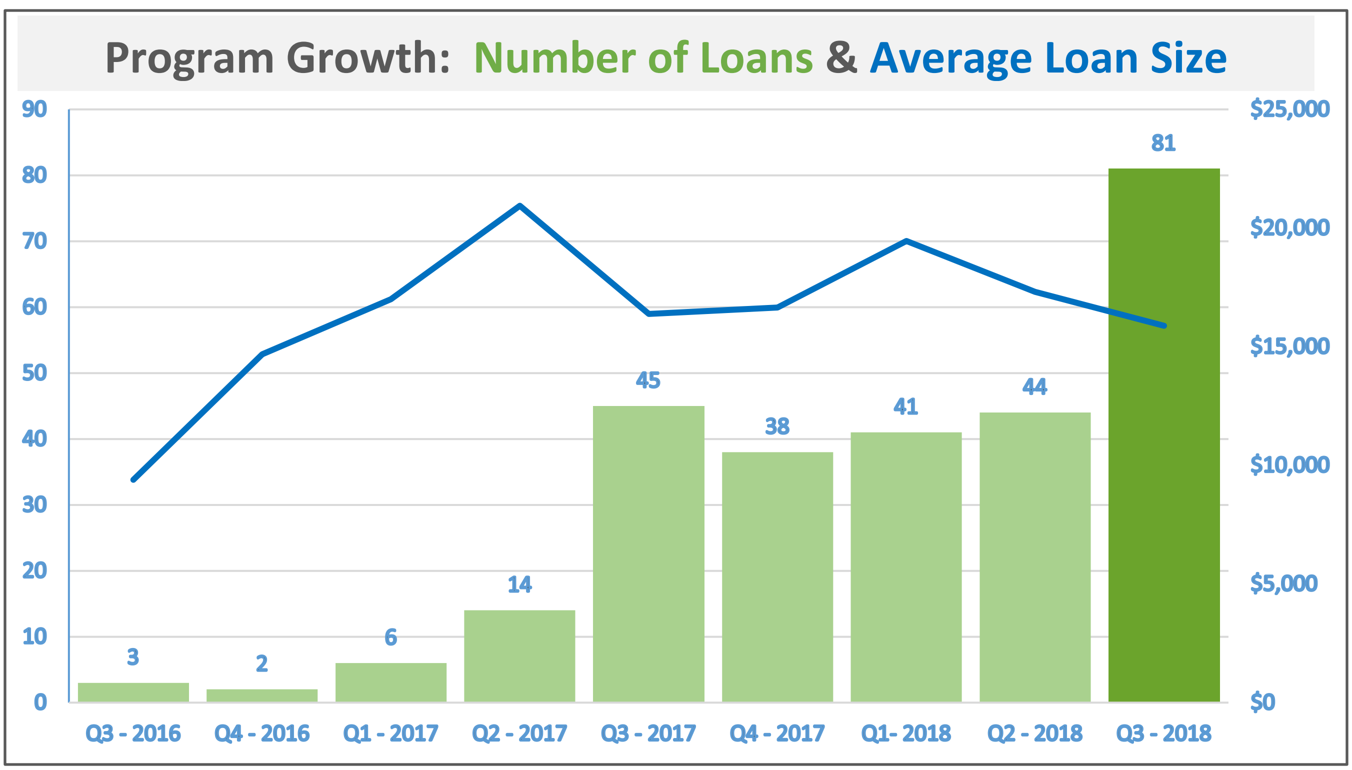
[5] REEL regulations are available online at https://www.treasurer.ca.gov/caeatfa/cheef/reel/regulations/2018/reel-e-regs-9-17-18.pdf




## REEL LOANS ENROLLED

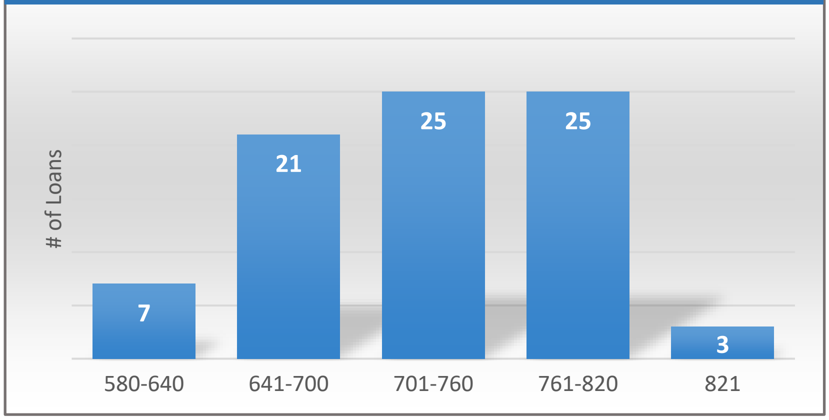
The map shows the number of REEL loans enrolled, by county, from the start of the program through the end of Q3, 2018.

The chart below shows loan growth by quarter and average loan size.

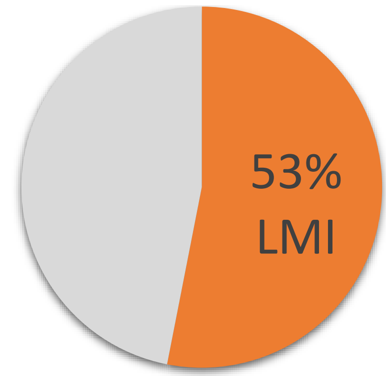


# REEL: Facts and Figures for Q3 - 2018

## Q3 BORROWER CREDIT SCORES Q3




## # OF Q3 LOANS MADE IN "LMI" CENSUS TRACTS




LOW TO MODERATE (LMI) CENSUS TRACTS ARE DEFINED BY MEDIAN FAMILY INCOME <120% THE AREA MEDIAN INCOME

**269**

REEL Participating Contractors

**$1,286,451**

**REEL Loans Enrolled**

Q3

**$15,882**

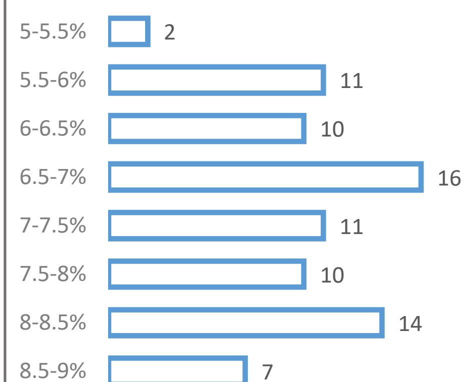
Average Loan Size

**$187,884**

Total **Loan Loss Reserve** Set Aside

## LOAN INTEREST RATES IN Q3

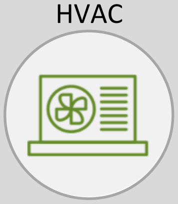
THE MAJORITY OF BORROWERS IN Q3 PAID BETWEEN 6.5% AND 7% INTEREST




ALL REEL LOANS PROVIDE LOWER RATES AND THE OPTION FOR LONGER TERM LENGTHS (LOWER MONTHLY PAYMENTS) WHEN COMPARED TO THE SAME LENDER'S UNSECURED PRODUCT.

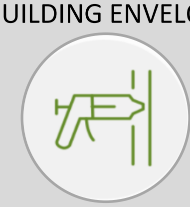
## Top 3 Measure Types Installed During Q3

HVAC



HVAC equipment and ductwork

BUILDING ENVELOPE

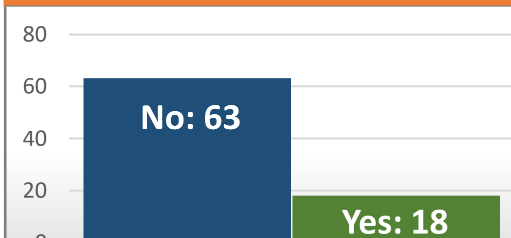


Air sealing, insulation, cool roofs, windows, etc.

WATER HEATING

Water heaters and low-flow fixtures

## Q3 IOU REBATE SOUGHT




*As indicated on the Certificate of Completion

# The Impact of the Credit Enhancement

**The Credit Enhancement mitigates risk for lenders yielding better loan terms for REEL customers and encourages more energy efficiency lending that will help California achieve its greenhouse gas reduction goals**

Based on the initial agreements with REEL lenders, the credit enhancement has resulted in better terms and approval rates for REEL customers.

When interested financial institutions submit an application to become a lender, CAEATFA asks them to describe their most similar loan product (typically an unsecured personal loan) and to describe their current interest rate, minimum credit scores, maximum loan amounts and maximum terms for these loans. With this information, CAEATFA is able to insure the final and approved REEL product has appropriate benefits for borrowers.

Because lenders are free to set their own underwriting criteria within the program guidelines, individual products vary from lender to lender. The table below gives some highlights of changes that resulted as a result of the credit enhancement. When a range is stated below, it generally ties back to the borrower's credit score.

| **Improvements:** | California Coast | Matadors Community Credit Union | Valley Oak Credit Union | Desert Valleys Federal Credit Union | Eagle Community Credit Union | First US Community Credit Union | Pasadena Service Federal Credit Union |
|---|---|---|---|---|---|---|---|
| | STATEWIDE LENDERS | | REGIONAL LENDERS | | | | |
| **Interest Rate** | Reduction ranged from 347 – 1097 bps[6] | Reduction ranged from 391 – 641 bps | Reduction ranged from 164 - 614 bps | Reduction ranged from 749 – 1000 bps | Reduction ranged from 675 – 1075 bps | Reduction ranged from 391 - 546 bps | Reduction ranged from 300 – 650 bps |
| **Minimum Credit Score** | No change from existing 600 | Reduced from 660 to 640 | No change from existing 580[7] | No change from existing 580[7] | No change from existing 580[7] | Reduced from 640 to 600 | Reduced from 640 to 600 |
| **Maximum Loan Amount** | Increased from $20,000 to $50,000 | Increased from $15,000 to $50,000 | Increased from $20,000 to $50,000 | Increased from $2,500 to $50,000 | Increased from $25,000 to $50,000 | Increased from $25,000 to $50,000 | Increased from $20,000 to $30,000 |
| **Maximum Loan Term** | Increased from 5 years up to 15 | Increased from 5 years up to 15 | Increased from 5 years up to 15 | Increased from 5 years up to 15 | Increased from 5 years up to 15 | Increased from 5.5 years up to 15 | Increased from 5 years up to 15 |

[6] bps = Basis point, a common unit of measure for interest rates. A single basis point is equal to 1/100th of 1%, so 100 bps = 1%

[7] 580 is the REEL program minimum

The provision of a credit enhancement is at the heart of CHEEF's financing program design. As the table on the previous page shows, REEL lenders have made improvements to their existing underwriting criteria, as a result of the loan loss reserve, that significantly benefit potential borrowers. But to put these changes in perspective, it's important to be reminded of the lending landscape in the *absence* of a program like REEL, and to see how the credit enhancement helps achieve the goals for the financing programs.

## Interest Rates *without* REEL

Though lenders traditionally look at a number of factors when determining if an applicant will receive a loan, and—if so—what rate they will pay, a borrower's credit score is one of the largest factors in determining the annual percentage rate for a personal loan. In general, the higher one's credit score, the lower the rate.

Nationwide Average APR for Personal Loans, 2018[8]

| Rating | Credit Score | Average Unsecured Personal Loan APR |
|---|---|---|
| Poor | 300 – 639 | 28.5% - 32.0% |
| Average | 640 – 679 | 17.8% 19.9% |
| Good | 680 - 719 | 13.5% - 15.5% |
| Excellent | 720 – 850 | 10.3% - 12.5% |

- The data in the chart at left comes from a finance website that conducts in-depth research and analysis on a variety of financial topics, in this case, the average 2018 annual percentage rate for unsecured personal loans (where property is not used as collateral).
- Note the impact a borrower's credit score has on the interest rate paid, with rates ranging from 10.3% to as high as 32%.
- Now consider that REEL Q3 interest rates range from 4.99% to a high of 9.99%[9], and that several REEL lenders accept applications from borrowers with credit scores as low as 580.

## How the Credit Enhancement Helps Achieve Program Goals

The Credit Enhancement is more than just a financial mechanism. For the CHEEF programs, it means the difference between achieving program goals—or not. Consider these potential outcomes for a borrower wishing to access $25,000 to upgrade their home's energy efficiency.

| A BORROWER WITH . . . | Without REEL | With REEL |
|---|---|---|
| …a lower credit score of 600 | Borrower would be unlikely to qualify for a personal loan.<br><br>**No program goals achieved.** | Borrower may qualify for a REEL loan for a term of 10 or 15 years, paying 9.99% or less.<br>**PROGRAM GOALS ACHIEVED!** |
| …a higher credit score of 700 | Borrower could likely take out a personal loan, paying the nationwide average of 13.5%. Since lenders seldom make unsecured personal loans for longer than 5 years, the resulting payment on a $25,000 loan would be $575. Borrower may not be able to afford the high monthly payment.<br>**No program goals achieved.** | Borrower could likely take out the necessary REEL loan, paying the REEL average 7% interest for 15 years. The resulting monthly payment would be a manageable $225.<br><br>**PROGRAM GOALS ACHIEVED!** |

[8] https://www.valuepenguin.com/personal-loans/average-personal-loan-interest-rates#by-credit-score

[9] REEL interest rates are capped at the rate on new 10-year treasury bonds plus seven hundred and fifty (750) basis points

## Outreach

GoGreen Financing – www.gogreenfinancing.com has been mentioned previously in this report, but its positive impact bears repeating. Having an easy-to-use website, where consumers can learn about the types of energy efficiency projects available to install, find local REEL contractors who can install the measures, and explore the financing options provided by REEL lenders (and even apply for a loan online) has a big impact on the success of the program. CAEATFA and our partners continue to work to improve and expand this new website to make it even more helpful and intuitive for consumers.

Social Media – throughout the quarter, CSE, the REEL marketing implementer, made 56 consumer-facing social media posts regarding REEL on Facebook and Twitter.


Contractor Outreach – Frontier Energy, the REEL Contractor Manager, continued its outreach to potential REEL contractors. By the end of Q3, borrowers could choose from 269 contractors statewide.

IOU Customer Outreach – The marketing support of the IOUs is invaluable to the success of the REEL financing program. As trusted messengers, the IOUs have the opportunity to reach millions of customers with a single email. During Q3, PG&E delivered an email message to 1.7 million customers, driving customers towards the REEL program. This messaging helps build program awareness, and increases visits to GoGreen Financing and the participating lenders.

Events – Throughout the quarter, CSE and the IOUs participated in 29 community events at which the REEL program was represented. These include a broad range of events like the Ventura County Fair and the 41st Assembly District Community Resource Fair and Block Party.

## Challenges / Contingencies

Pilot status and Lender Recruitment – While CAEATFA has made several modifications to the Regulations to streamline program participation, lenders still invest considerable time when joining the program. They need to get products approved internally, learn eligibility rules and adjust their operations to provide CAEATFA needed data. Through its outreach, CAEATFA has found that lenders often express a desire to wait until the program becomes permanent before enrolling to safeguard resources and costs.

Recruiting an Indirect/High-Volume Lender – All REEL lenders to date are local credit unions. To help REEL grow and add another lending model, CAEATFA would also like to recruit an indirect/high volume lender to the pool of available lenders. CAEATFA is waiting for the permanent status of REEL to be resolved before resuming this outreach.

Header images are those used on the GoGreen Financing website: www.gogreenfinancing.com/smallbusiness

## The Small Business Energy Efficiency Finance Program (SBF)

Like all the financing pilots, the Small Business Energy Efficiency Financing program ("Small Business Finance" or SBF)—seeks to address multiple challenges.

- *Provide a state-backed financing program designed to address the energy efficiency challenges faced by business owners and tenants:* small business owners face challenges when it comes to energy upgrades. Although energy use can account for up to 20 percent of the expenditures of a small business, business owners often don't have the expertise, time, or capital to invest in efficiency measures for their business. The SBF program was designed with these small business owners in mind.

- *Provide an accessible—and attractive—financing option for small businesses:* finance companies often view small businesses as a greater credit risk than larger ones and when small businesses do get financing, they typically pay higher interest rates. Given that the underwriting costs for evaluating, verifying, and processing a small loan is roughly the same as for a larger one, lenders are pushed to focus on larger loans to bigger businesses.

- *Provide a source of financing that allows deep energy retrofits in existing buildings*: an estimated 3 billion square feet of small commercial business space was built in California before statewide, energy efficiency building standards were introduced. This leaves these, and many other, existing buildings in need of deep energy retrofits.

### Program Design

The Small Business Finance program is under active development with three upcoming program milestones:

1. Milestone 1 – December 2018: Office of Administrative Law (OAL) approval of Small business Regulations
2. Milestone 2 – February 2019: Initial finance companies enrolled with approved products. Contractor and Project Developer enrollment begins.
3. Milestone 3 – Summer 2019: Financing offered to small businesses (a limited program launch may be rolled out in Spring)

### Customer Eligibility

Financing through the program will be available to small businesses, non-profits and market rate multifamily properties who meet the size requirements listed below:

- 100 or fewer employees, or
- Annual revenues of less than $15 million, or
- Meet SBA small business size requirements
    - Annual revenue limits range from $750,000 to $38.5 million depending on industry

## Loan Size and Credit Enhancement

Small business owners and renters will be eligible for SBF, and can take out loans up to $5 million. The first $1 million will be credit enhanced, as follows:

- The first $50,000 of each financing agreement will be credit enhanced at 20%
- The remainder (up to an additional $950,000) will be credit enhanced at 5%
- Maximum loss reserve contribution will be $57,500

## Financing Instruments

To best accommodate the market, the program will facilitate a variety of financing instruments, including:

- Loans - Customer takes ownership of measures
- Lease/Efficiency Financing Agreements
    - Customer gets use of measures
    - Title can transfer at end of lease term or at the beginning of term (Equipment Finance Agreement).
- Service Agreements
    - Customer gets use of measures
    - Regular, ongoing service and maintenance of measures is provided to the customer
    - Title does not transfer to customer
    - Guarantee of functionality of measures or guarantee of energy savings
- Savings Based Payment Agreements
    - Savings measured and verified at least annually
    - Agreement is “cashflow positive” for customer compared to prior energy bills
    - Customer shares in benefits if savings exceed expectations
    - Customer does not bear risk if savings are less than projected

As with all CHEEF programs, eligibility requires that the property receive electric or natural gas service from at least one of the IOUs.

## Progress

The following milestones were either reached or significantly advanced during Q3:

- Completion of Draft program Regulations – Staff completed the drafting of small business program regulations in preparation for Q4 Board approval. CAEATFA’s goal is to define a program that is flexible enough to adapt to the variety of small business customers, technologies and financing models, while rigorous enough to protect public resources and achieve energy savings.
- Development of Energy Saving Measures List - Staff worked with technical consultants to develop a list of pre-approved financeable Energy Saving Measures (ESMs). The resulting list is based on broad categories of measure types currently in use in commercial, agricultural and industrial properties, and incorporates significant feedback received from stakeholders over the past year. It is an important part of the small business program, as the ESM list is one of the pathways through which projects can be financed. The design of the list increases the likelihood of energy savings while allowing the flexibility to include measures approved by IOU rebate programs, as well as new technologies.

## Outreach

Outreach during the program design phase consisted of over 50 conversations with stakeholders following CAEATFA's program design workshop in April of 2018. The conversations helped CAEATFA better understand the market. CAEATFA modified the initial program design based on information received during these calls. The conversations and exchange of ideas had the additional benefit of informing potential stakeholders of the upcoming program.

In addition, staff attended or presented at a few outreach events during Q3, including:

- 9/11/18 meeting and networking with CA local governments to present the upcoming availability of the Commercial financing program.
- 9/11/18 presentation to over 40 Community Based Organizations (CBOs) who work with low-income communities and businesses to build awareness of the upcoming program. Some of the larger CBOs manage CDFI funds and may be interested in providing financing for the small business program.

## Challenges / Contingencies

- Board and the Office of Administrative Law (OAL) approval of regulations - If the CAEATFA Board does not approve the CAEATFA small business regulations or if OAL review and approval requires significant redrafting of the regulations, the launch of the program could be delayed.
- Micro lender – Research by the CPUC, IOUs and CAEATFA regarding the energy efficiency financing needs of small business point to the need for "micro" lenders, those who will offer loans of $5,000 or less. This is an important niche to be filled because the 0% interest, On-Bill Financing revolving loan programs offered by the IOUs do not offer loans less than $5,000. Based on input from the IOUs as well as the Small Business Baseline Study conducted by Opinion Dynamics for the CPUC in the fall of 2017, CAEATFA anticipates that there are many small businesses who will require these smaller financing amounts. CAEATFA intends to start this outreach to micro lenders during Q4, 2018.


Header images are those used on the GoGreen Financing website: www.gogreenfinancing.com/multifamily

# The Affordable Multifamily Program

During Q3, CAEATFA focused on program design and outreach for the Affordable Multifamily (AMF) program, incorporating feedback from the industry into the initial program design. The team continues to work to integrate ongoing research and outreach activities into a program design.

Following closely behind the rollout of the SBF program, the AMF program is able to leverage a number of the processes and resources developed during the design of the SBF program, such as the Energy Savings Measures list and the data dictionary. These efficiencies put CAEATFA on schedule to meet its AMF launch goal of mid 2019.

## Initial Program Design

Please note that the AMF program design described below is the "initial" design, as it is currently envisioned by CAEATFA. The design has been the result of a public workshop process, and is subject to additional change resulting from added research and information, including stakeholder feedback.

## Program Leveraging

A key efficiency of the AMF program design is integration with existing AMF programs, specifically the Low-Income Weatherization Program (LIWP) administered by the State's Department of Community Services and Development, and the Solar On Multifamily Affordable Homes (SOMAH), administered by CPUC, via a competitively selected team of non-profit organizations.

LIWP offers a generous incentive to qualifying AMF properties who install energy efficiency, and SOMAH requires the completion of an energy audit before issuing an incentive to install solar. Both programs have detailed processes and procedures already in place to encourage the installation of cost-effective energy efficiency measures, and CAEATFA is working toward integration with both programs to offer its attractive financing for the portion of the measures not incentivized.

Similarly, the AMF program will fund any energy efficiency or demand response measure approved for rebate and incentive by any IOU, Renewable Energy Network (REN) or Community Choice Aggregator (CCA), as well as any measure from its aforementioned Energy Savings Measures list.

## Key Program Features

- No minimum or maximum loan size
- The first $1 million of each loan will be credit enhanced, at 15% of the claim eligible amount
- Fixed or variable rates allowed
- No underwriting requirements imposed on the finance company. Underwriting is based on participating financier's requirements

## Customer Eligibility

Any AMF property of 5 units or more where at least 50% of the units are income restricted to 80% Area Median Income is eligible for financing.

## Financing Instruments

Similar to the Small Business Financing program, the AMF program intends to support varying financing product types such as loans, leases, service agreements and savings-based payment agreements.

## Outreach

CAEATFA participated in three AMF outreach events during Q3:

- The Non Profit Housing Conference in San Francisco, where CAEATFA staff distributed literature to and networked with AMF finance companies, property developers and other interested parties.
- The Southern California Association of Non-Profit Housing (SCANPH) in Los Angeles, where CAEATA again made valuable connections in the AMF industry, and also spoke, as a member of a panel, on the topic of "Energy Efficiency Financing and Funding Opportunities for Affordable Multifamily Housing."
- A Low-Income Multifamily Convening conference call hosted by the UC Berkeley Law School. This is an ongoing convening with a diverse group of organizations focusing on providing resources for low-income multifamily properties in increasing the quality of life and reducing energy usage.

## Challenges/Contingencies

- Many proponents of affordable housing have been advocating in this arena for decades, and have built a cohesive group of support organizations. CAEATFA is somewhat of a "newcomer" in the AMF arena and must work to build awareness of both CAEATFA and the financing program.

## Nonresidential Program

The Nonresidential program will be available to:

- for-profit businesses and nonprofit organizations that do not meet eligibility requirements as a “Small Business”
- public entities

Like all the financing programs, the Nonresidential program is designed to encourage growth in private market lending. Though a credit enhancement will not be provided, the program will be designed to provide financing, which will be repaid on the utility bill, for building energy efficiency, distributed generation, battery storage and demand response projects. The flexibility of the program will allow the combination of financing with IOU rebates and other incentives.

In developing the SBF program design and regulations, CAEATFA anticipated how the program would need to be modified to incorporate the Nonresidential program as well as On-Bill Repayment functionality for SBF (see below). Much of the work done to establish the SBF program will be leveraged in the development of the Nonresidential program.

## On-Bill Repayment (OBR)

Several programs will include On-Bill Repayment (OBR) as a key feature. CAEATFA staff has been working with the IOUs and the Master Servicer (MS) to establish the OBR infrastructure. The CPUC’s recent Decision provided CAEATFA with the ability to offer off-bill repayment for the SBF and AMF programs. CAEATFA will research and develop OBR, while concurrently launching off-bill versions.

The development of the finance company/MS communications was an area of focused work for CAEATFA for much of 2017 and continues through 2018. CAEATFA staff and the MS made progress identifying the information lenders will require and reporting structure so that it will apply not only to current programs, but can be leveraged for use when upcoming programs launch.

One key component of the OBR infrastructure is the Data Exchange Protocol (DEP), which outlines the process for secure transmission of payments and repayment data between the IOUs, MS, and finance companies. After analyzing multiple complex residential and commercial customer data scenarios, the MS and the IOUs agreed on the DEP. Through testing, the MS and IOUs identified several components of the DEP that required clarification. The MS has been working closely with the IOUs to produce an updated version of the DEP and final approval of the DEP is anticipated next quarter. DEP finalization is scheduled to occur at an IOU, MS, and CAEATFA in-person meeting in November.

Another key component of the OBR infrastructure involves the process by which customer payments are routed from utilities to financial institutions. The MS is currently preparing the specifications for such secure transfer of funds.

# Appendices

## Appendix 1: CHEEF Infrastructure

CAEATFA is creating a streamlined, statewide platform for finance companies and contractors to participate in the uptake of energy efficiency projects through increased access to financing. As the manager of the CHEEF, CAEATFA is developing uniform program requirements, standardized documentation and processes, and a central administrative entity to facilitate investment in energy efficiency projects and implementation of the programs.

Key infrastructure elements needed to implement the CHEEF include a Master Servicer, Trustee Bank, Secure Flow of Funds functionality, Contractor Manager, Data Manager, and Technical Advisors. Below are descriptions of each of these roles and information regarding their current status as it relates to CAEATFA's procurement processes.

**Master Servicer**

| | |
|---|---|
| *Organization* | Concord Servicing Corporation |
| *Duties* | The Master Servicer plays a key role in the daily administration of the program(s), accepting loan enrollment applications, and processing on-bill repayment transactions. |
| *Contract Term* | 1/1/18 – 12/31/2019 |
| *Notes* | Option for a one-year extension. |

**Trustee Bank**

| | |
|---|---|
| *Organization* | US Bank |
| *Duties* | The Trustee Bank holds the ratepayer funds provided by the IOUs to serve as Credit Enhancements under the various programs. CAEATFA provides direction to the Trustee Bank to transfer CE funds between various accounts. |
| *Contract Term* | 1/8/18 – 12/31/19 |
| *Notes* | Option for a one-year extension. |

**Contractor Manager**

| | |
|---|---|
| *Organization* | Frontier Energy |
| *Duties* | The Contractor Manager recruits, enrolls trains, supports and manages contractors in the REEL program, and conducts quality control oversight of projects not participating in an IOU rebate/incentive program. |
| *Contract Term* | 10/24/17 – 8/31/19 |
| *Notes* | Option for a one-year extension. |

**Data Manager**

| | |
|---|---|
| *Organization* | TBD |
| *Duties* | The Data Manager will receive program data from the MS and other energy efficiency finance program administrators in order to prepare it for public presentation and use. It will also receive program related energy savings data from the CPUC. The data will be aggregated and anonymized according to the combined standards and regulatory requirements of the IOUs and capital providers. The RFP for the competitive solicitation for this service has yet to be released while CAEATFA prioritizes its workload to develop and implement the programs. Concurrently, CAEATFA and its agents will continue to collect the appropriate data to ultimately be transmitted to the data manager when it is brought under contract. |
| *Contract Term* | TBD |
| *Notes* | TBD |

**Technical Advisors**

Technical Advisors provide expertise to CAEATFA in the development and implementation of the CHEEF programs. CAEATFA currently uses the services of two technical advisors.

| | |
|---|---|
| *Organization* | Energy Futures Group (EFG) |
| *Duties* | Provides technical assistance to continue research and development, and implementation assistance for the commercial programs. |
| *Contract Term* | 3/29/17 – 2/14/19 |
| *Notes* | No option for extension. |

| | |
|---|---|
| *Organization* | Harcourt Brown & Carey (HB&C) |
| *Duties* | Under its implementation agreement with the IOUs, CAEATFA continues to rely on the ongoing technical support of, and anticipates additional assistance from, HB&C with regard to on-bill infrastructure implementation. HB&C's expertise and project management assistance has been helpful in providing continuity under the programs. |
| *Notes* | HB&C is contracted to SoCalGas, and jointly funded by IOUs. |

## Appendix 2: Budget and Staffing Authorization

D.13-09-044 directs the IOUs to allocate a total of $75.2 million to finance the programs over the initial period. Table 1 provides an itemized breakdown of these allocations, current expenditures and remaining balance. As of September 30, 2018, CAEATFA had expended $6,472,43510 of the $15.36 million allocated for CHEEF Administration, Direct Implementation, and Marketing, Education, and Outreach.

CAEATFA management continued to engage in the budgetary process to obtain legislative approval to extend budgetary reimbursement and expenditure authority beyond fiscal year 2017-2018 (June 30, 2018). This funding extension was approved in the 2018 Budget Act.

CAEATFA will be seeking additional funding for program implementation beyond 2020 to align with the current program implementation timetable.

**Budget Table for CHEEF Expenditures (September 2014 through September 30, 2018)[11]**

| Item | Allocated | Expended/ Encumbered[12] | Balance |
|---|---|---|---|
| **CHEEF Administration** | | | |
| Includes Start-Up costs, CHEEF administrative, direct implementation, and contracting costs[13] | $ 13,360,000 | $ 5,765,772 | $ 7,594,228 |
| **Subtotal CHEEF Start-Up Costs** | **$ 13,360,000** | **$ 5,765,772** | **$ 7,594,228** |
| **Marketing, Education, Outreach (MEO)** | | | |
| Statewide MEO plan | $ 8,000,000 | (TBD) | $ 8,000,000 |
| CAEATFA outreach and training to finance companies and contractors | $ 2,000,000 | $ 706,663 | $ 1,293,337 |
| **Subtotal Marketing, Education, and Outreach** | **$ 10,000,000** | **$ 706,663** | **$ 9,293,337** |
| **Residential Pilots Credit Enhancement Funds[16]** | | | |
| Residential Energy Efficiency Loan (REEL) | $ 25,000,000 | $ 601,592 | $ 24,398,408 |
| Energy Financing Line Item Charge (Funding to PG&E) | $ 1,000,000 | (TBD) | $ 1,000,000 |
| Affordable Multifamily | $ 2,900,000 | $ - | $ 2,900,000 |
| **Subtotal Residential Pilots** | **$ 28,900,000** | **$ 601,592** | **$ 28,298,408** |
| **Non-Residential Pilots Credit Enhancement Funds** | | | |
| Small Business sector with credit enhancement | $ 14,000,000 | $ - | $ 14,000,000 |
| **Subtotal Non-Residential Pilots** | **$ 14,000,000** | **$ -** | **$ 14,000,000** |
| **Information Technology (IT)** | | | |
| IT Funding to IOUs[14] | $ 8,000,000 | *(TBD)* | $ 8,000,000 |
| **Subtotal IT Funding to IOUs** | **$ 8,000,000** | ***(TBD)*** | **$ 8,000,000** |
| **CHEEF Pilot Reserve** | | | |
| CHEEF Pilot Reserve[15] | $ 984,931 | $ - | $ 984,931 |
| **Subtotal CHEEF Pilot Reserve** | **$ 984,931** | **$ -** | **$ 984,931** |
| **GRAND TOTAL** | **$ 75,244,931** | **$ 7,074,027** | **$ 68,170,904** |

***Note**: Quarterly expenditures are based on good faith estimates due to a lag in invoice submittals.

[10] This figure does not include the amount listed as credit enhancements.

[11] This table is not a comprehensive representation of the budget. It does not reflect CSE's expenditures related to ME&O, the IOUs' expenditures and additional allocations for IT and administration, or other non-CAEATFA costs.

[12] "Encumbered" refers to the credit enhancement funds reserved for enrolled loans under the Residential Energy Efficiency Loan (REEL) Loan Loss Reserve (LLR).

[13] Amount of funds allocated to this section includes the additional $8.36 million that was approved by CPUC Rulemaking 13-11-005: Joint Ruling of Assigned Commissioner and Administrative Law Judge on Financing Pilots and Associated Marketing, Education and Outreach Activities issued November 22, 2016.

[14] IT funding to IOUs reports only the initial allocation and does not reflect current IOU expenditures.

[15] This amount reflects the remaining balance after the release of funds that was approved by CPUC Rulemaking 13-11-005: Joint Ruling of Assigned Commissioner and Administrative Law Judge on Financing Pilots and Associated Marketing, Education and Outreach Activities issued November 22, 2016.

[16] Actual credit enhancement dollars available less funds for operations setup by IOUs.

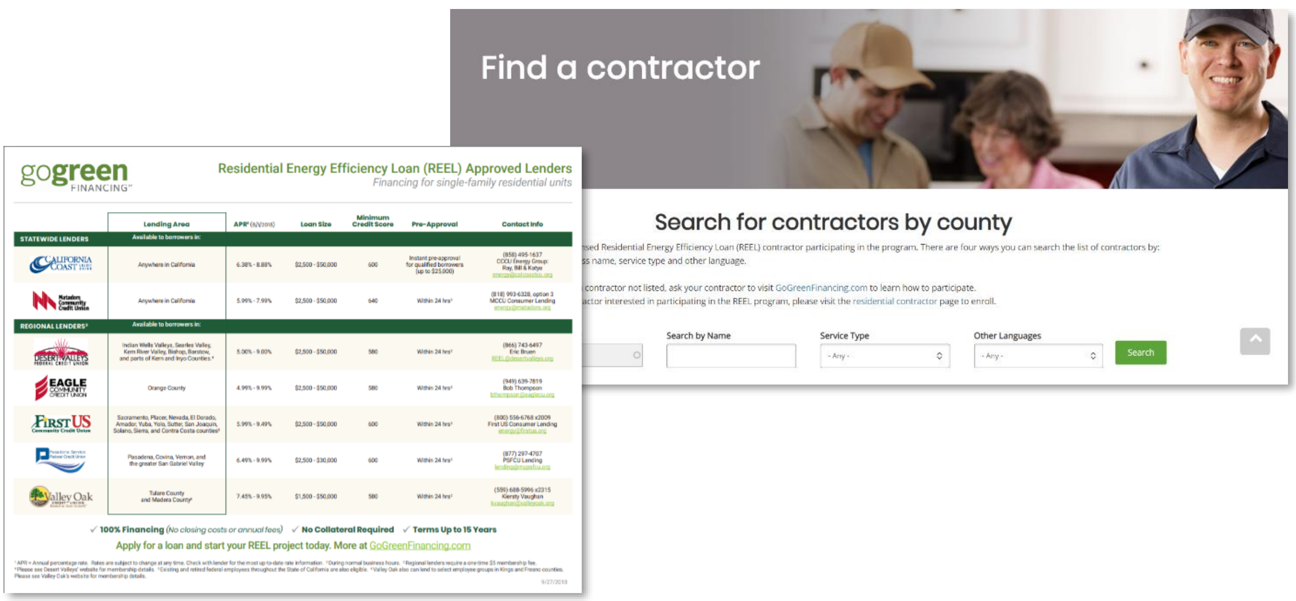
## Appendix 3: Customer Facing Products

Customer facing products are discussed throughout this report, but this Appendix functions as a summary.

Designed and implemented by the CHEEF program marketing implementer, the Center for Sustainable Energy (CSE), with input and direction from CAEATFA and the IOUs, GoGreen Financing ([www.gogreenfinancing.com)](http://www.gogreenfinancing.com) serves as the primary customer-facing website for the financing programs.

GoGreen Financing contains information for end users (customers), contractors, finance companies and partners for each of the programs. Some of the resources on the website include:

- Pages that allow potential REEL borrowers to find a local REEL participating contractor review the rates of participating lenders and apply for a REEL loan online through the participating lender's website.
- Program descriptions and benefits for the upcoming SBF, AMF and Nonresidential programs.
- Partner resources for contractors, finance companies, local governments and non-profits (some of which are available to these organizations to co-brand), include:
    - A customer facing REEL flyer, available in both English and Spanish
    - Social media ads / Facebook / Twitter
    - PowerPoint Presentations
    - Partner talking points



## Appendix 4: Account Beginning and Ending Balances

### IOU HOLDING ACCOUNTS

Funds from the IOU holding accounts were originally transferred to IOU-specific REEL program accounts. After the consolidation of REEL accounts to single, Statewide accounts took place in December 2017, funds were transferred to the new, statewide REEL program Account. A total of $250,000 from each IOU has been deployed from the holding accounts.

The IOU holding accounts continue to earn a (very) small amount of interest each quarter, as shown below:

| | SCG | PGE | SCE | SDG&E |
|---|---|---|---|---|
| 7/1/2018 | $699.05 | $698.43 | $693.57 | $692.01 |
| 9/30/2018 | $699.55 | $698.93 | $694.07 | $692.51 |

### REEL RELATED ACCOUNTS

The *REEL program* account holds a portion of the IOU ratepayer funds, used to pay the LLR each time a loan is enrolled. The IOUs hold additional funds, budgeted for the REEL program, and those funds are available to be deposited to this account when needed.

The *REEL Reservation* account holds funds set-aside in the event a loan is pre-approved.

The *REEL Interest* account accrues the interest from the following accounts: REEL program, REEL Reservation and all seven REEL Lender LLR accounts.

| | REEL program | REEL Reservation | REEL Interest |
|---|---|---|---|
| 7/1/2018 | $565,357.24 | $2,096.38 | $1,079.95 |
| Recaptured funds from paid off Loans (Matadors and Calcoast) | $18,837.87 | $0.00 | $0.00 |
| Credit Enhancement (CE) Contributions | ($187,883.85) | $0.00 | $0.00 |
| 9/30/2018 | $396,311.26 | $2,096.38 | $1,794.51 |

### REEL LENDER LOAN LOSS RESERVE ACCOUNTS

- Each time a lender enrolls a loan, the 11% or 20% LLR is paid from the "REEL program" account into the lenders Loan Loss Reserve Account. The ending balance shows the amount the lender has available to help offset a default, should they have a claim.
- There were no claims during Q3.

## Rebalance of Accounts

D. 13-09-44 directs CAEATFA to recapture funds, periodically, when loans are paid off and D. 17-03-026 gives CAEATFA the ability to true up its credit enhancement funds at its discretion. CAEATFA has chosen to do the recapture through an annual rebalancing. The rebalance will occur annually in July, for the previous fiscal year running July 1-June 30. The original CE funds will be transferred from the Lenders Loss Reserve Account back to the Program Account. Rebalancing of the CE funds allows us to develop a sustainable program. The first rebalance of all LLR accounts, covering enrolled loans from July 2016 to June 30, 2018, took place in September 2017. Two lenders enrolled in our program had their accounts rebalanced due to having paid off loans.

| | California Coast | Matadors Community | Valley Oak | Desert Valleys |
|---|---|---|---|---|
| 7/1/2018 | $307,285.35 | $97,257.28 | $5,292.98 | $22,710.77 |
| Recaptured funds from paid off loans | ($9,636.58) | ($9,201.29) | | |
| Credit Enhancement (CE) Contributions | $113,429.60 | $65,566.64 | $0.00 | $1,629.97 |
| 9/30/2018 | $411,078.37 | $153,622.63 | $5,292.98 | $24,340.74 |

| | Eagle Community | Pasadena Service Federal | First U.S. Community* |
|---|---|---|---|
| 7/1/2018 | $0.00 | $0.00 | $0.00 |
| Credit Enhancement (CE) Contributions | $4,255.73 | $1,905.09 | $1,096.82 |
| 9/30/2018 | $4,255.73 | $1,905.09 | $1,096.82 |

* Account opened 7/2/2018

## Appendix 5: Residential Program Participating Lender Overview

There are currently seven lenders offering REEL loans. A brief introduction to the lenders is included in this section. They are listed, chronologically, based on the date they entered the program.

Valley Oak Credit Union was the first credit union to join as a REEL lender, submitting their application in June 2015—nearly a year before the residential program started. Valley Oak has 7,300 members and serves Tulare and Madera counties.

Valley Oak is a Low-Income Designated credit union[16] and serves borrowers with credit scores starting at 580. Over the life of the program Valley Oak has enrolled 3 loans.

Matadors Community Credit Union is one of two statewide REEL lenders, meaning that they can offer loans to eligible customers anywhere in the state. Matadors has nearly 20,000 members and became a REEL lender in March 2016.

Matadors serves borrowers with credit scores starting at 640. They enrolled 19 REEL loans during Q3, and a total of 63 loans since the program began.

Desert Valleys has just over 4,000 members and serves customers in portions of Kern, Inyo, and San Bernardino counties. They are a Low-Income Designated credit union and have been a REEL lender since August 2016.

Desert Valleys serves borrowers with credit scores starting at 580. Desert Valleys enrolled 2 loans during Q3 and a total of 11 loans since the program began.

California Coast Credit Union is the second of two REEL, statewide lenders. Joining the REEL program in September 2016, "Cal Coast" has over 173,000 members.

Cal Coast serves borrowers with credit scores starting at 600. During Q3, they enrolled 56 loans and a total of 193 loans since they became a REEL lender.

Eagle Community Credit Union is one of the first of three REEL lenders to join the program as a result of CAEATFA's Q1, 2018 lender outreach. Serving Orange County residents, Eagle has just over 20,000 members. Eagle opted-in to the Credit-Challenged facility by demonstrating additional benefits to credit-challenged borrowers, a new opportunity made available in September 2018, when the REEL regulations were modified. As a result, Eagle, and other REEL lenders who opt-in to the Credit-Challenged program, receive the 20% credit enhancement for lending to borrowers with credit scores less than 640.

Under the REEL program, Eagle serves borrowers with credit scores starting at 580. They enrolled their first two REEL loans during Q3.

[16] A designation made by the National Credit Union Administration. A federal credit union can receive a Low-Income Designation (LID) when a majority of its membership qualify as Low-Income Members.

As their name implies, Pasadena Service Federal Credit Union serves members in and around the City of Pasadena as well as federal employees statewide. With over 11,000 members, Pasadena Service Federal is a REEL credit union with a Low-Income Designation.

Pasadena opted-in to the REEL Credit-Challenged facility, and accepts applications from customers with credit scores starting at 600. In Q3, Pasadena enrolled their first REEL loan.

First U.S. Community Credit Union was the most recent REEL lender to join the program, submitting their initial lender application in June, 2018. First U.S. serves 12 Northern CA counties, including Sacramento, Placer, Nevada, El Dorado, Amador, Yuba, Yolo, Sutter, San Joaquin, Solano, Sierra and Contra Costa.

Serving 25,000 members, First U.S. opted-in to the REEL Credit-Challenged facility and considers borrowers with credit scores starting at 600. First U.S. enrolled their first REEL loan during Q3.