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Description:	S2.5D Kaylee D'Amico, CAEATFA
Filer:	Raquel Kravitz
Organization:	California Hub for Energy Efficiency Financing
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Financing Decarbonization

*through the California Hub for Energy Efficiency
Financing (CHEEF)*

Presented by

California Alternative Energy and Advanced Transportation
Financing Authority (CAEATFA)

2021 IEPR Commissioner Workshop on Building Decarbonization

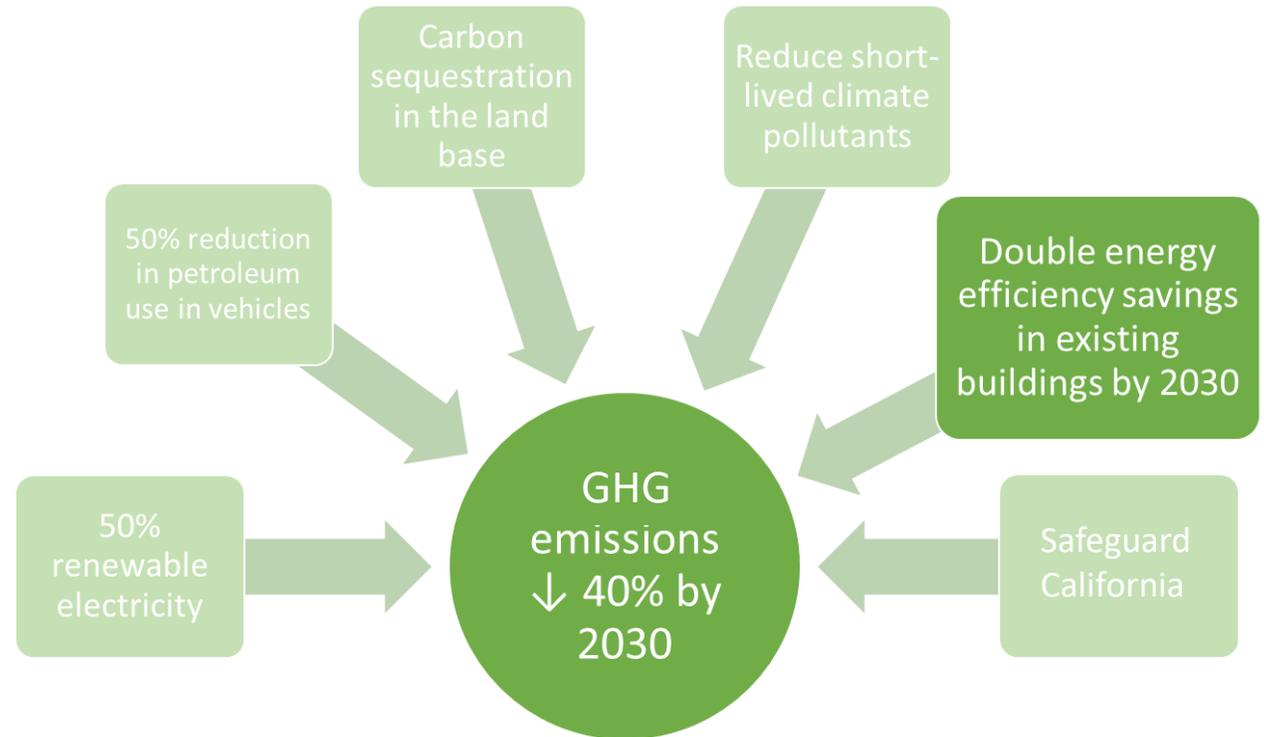
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FINANCING™



The California Hub for EE Financing (CHEEF) supports statewide energy goals by eliminating cost barriers to EE projects

The CHEEF:

- **Facilitates attractive financing options** by leveraging private capital using a credit enhancement
- **Supports efficiency measures in existing buildings** through three programs in the residential, small business, and affordable multifamily sectors
- **Works toward the State's climate and energy savings goals**





California State Treasurer's Office houses CAEATFA and over 15 other financing authorities and commissions



California Alternative Energy & Advanced Transportation Financing Authority (CAEATFA) administers the CHEEF and other programs



California Hub for Energy Efficiency Financing (CHEEF)
REEL, SBF and AMF Programs



Public facing platform for the CHEEF



California Public Utilities Commission created the CHEEF to bring private capital into the energy efficiency marketplace and authorized CAEATFA as its administrator

Credit enhancement leverages private capital for energy efficiency

Program provides finance companies with credit enhancement

Finance companies offer better terms and approve a wider group of customers

Contractors present financing options to their customers

Attractive financing allows more customers to start or complete deeper EE upgrades

Customers reduce energy use; state and local govts. make progress toward goals

Key financing features:

- Single Family, Small Business and Affordable Multifamily Programs
- Financing is unsecured or equipment-secured; no property liens
- Finance companies offer lower rates, longer repayment terms, larger amounts of financing and more approvals
 - For Residential: Minimum FICO score is 580 and rates range from 2.95% - 8.12%, terms out to 15 years, no prepayment or closing fees
- Residential Program: 8 credit union lenders, 500+ enrolled contractors

Balancing State decarbonization goals with current authorization



- CHEEF doesn't actually run electrification programs – created to **leverage capital for energy efficiency and demand response**
- **Funded by IOU ratepayers** and must deliver benefits to those customers
 - CPUC is considering expanding to other clean energy tech as part of the Clean Energy Financing Proceeding
 - CPUC has issued Proposed Decision allowing CAEATFA to bring in non-ratepayer funds to expand programs statewide
- Financing can **support any IOU ratepayer-funded EE program**, but is not connected to a specific on-the-ground IOU program and doesn't generate its own demand
- Ratepayer dollars cannot be used to credit enhance financing for distributed generation or battery storage (including solar thermal water heating)
- **We have adapted to try and support decarbonization goals wherever possible within our authorization**

Data from the REEL Program: 2016 – 6/25/21

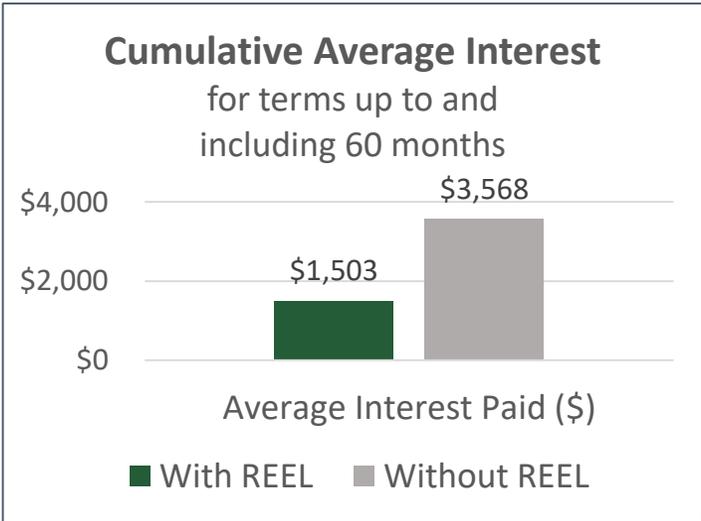
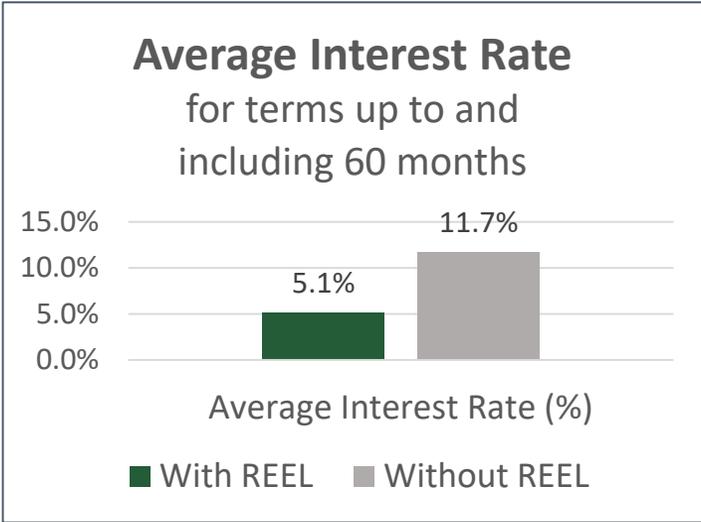
1,304
loans enrolled

\$22MM
total amount
financed

\$16,802
average loan size

108 months
average term length

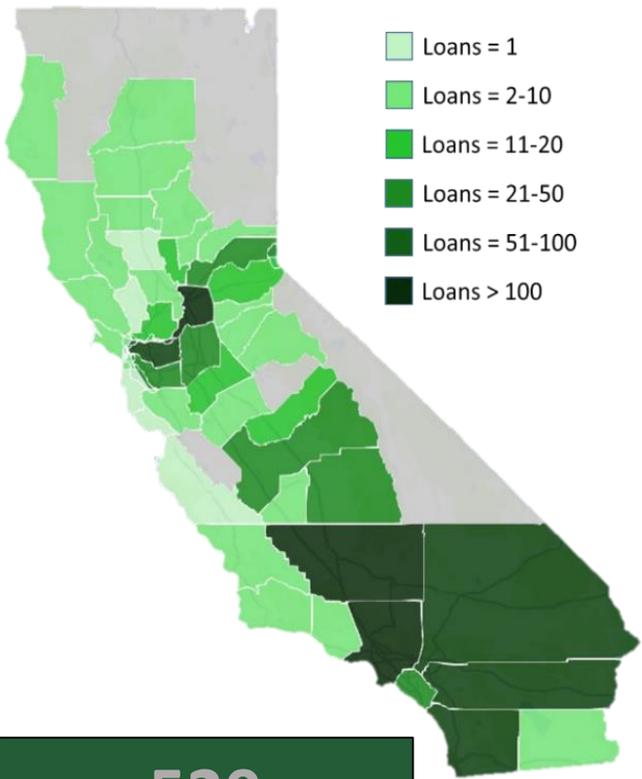
\$6.57
in private capital
leveraged for every \$1
of ratepayer credit
enhancement



Top 3 Measures Installed with REEL:

-  **HVAC**
Equipment and ductwork
-  **Building envelope**
*Air sealing, insulation,
cool roofs, windows*
-  **Water heating**
*Water heaters, low-flow
fixtures*

REEL Loans Enrolled by County



520
contractors

8
finance companies

Heat pump data from the REEL Program

Of the **819 projects** that included HVAC equipment:

- **111* projects (14%)** contained heat pumps
 - **73** central systems
 - **37** mini-split systems
 - **1** central and mini-split
 - **49 (44%)** for underserved customers

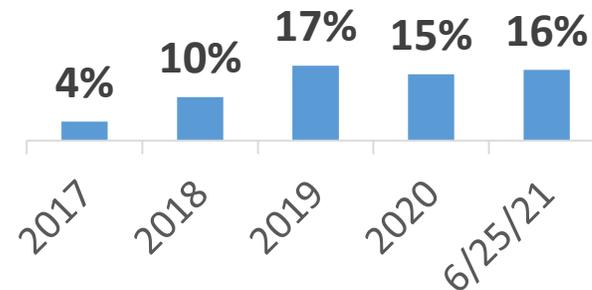
Of the **95 projects** that included water heating:

- **10 (11%)** were for HPWHs

Metrics for Heat Pump HVAC Projects

Overall Average Loan Size:	\$16,802
Average Loan Size for Heat Pump Projects:	\$19,017
Overall Percentage of Rebated Projects:	13%
Percentage of Rebated Heat Pump Projects:	26%

Heat Pumps as a % of HVAC Projects Over Time



The Average Heat Pump Project for a Customer:

Loan Amount	\$19,017
Interest Rate	5.76%
Term Length	107 months
Monthly Payment	\$228

Financing is flexible enough to accommodate heat pump projects

What's
Working

- Heat pumps and heat pump water heaters have always been **on our list of eligible measures**
- **Financing can include “legal and practical” costs** beyond EE measures
 - Customer is able to finance panel upgrade and water heater re-location (which are often necessary for heat pump installs) within the same REEL loan
 - Lender receives credit enhancement for the portion of financing needed for “legal and practical” costs
- **Long repayment terms** help customers with affordable monthly payments for large loans for both residential and small business – average monthly payment for a heat pump project is \$228

Organic customer and contractor interest in pursuing heat pump projects

What's Working



- **40+ contractor companies** have installed heat pumps using the REEL Program so far
- The number of heat pump projects installed per year has grown consistently, despite limited marketing and education for customers
- Established REEL contractor network provides opportunity to educate contractors on heat pumps and how customers can finance them

Funding silos and utility jurisdictions have prevented scaling

- Programs are currently IOU ratepayer-funded and can't support fuel switching if a POU provides electricity
- Private capital providers and contractors do not view the world through IOU/POU jurisdictions
- Result is a **web of eligibility complexity** that makes project qualification complicated for contractors and lenders
- **More than 8 million Californians** are unable to install electrification measures under CHEEF Programs (because they are POU electric customers, even if many are IOU gas customers)
- **Breaking News:** CPUC Proposed Decision would allow CAEATFA to incorporate non-ratepayer funds to expand Programs statewide

Challenges



West Sac:
PG&E
Service
Heat pumps encouraged!

Sacramento:
PG&E & SMUD
Service
No heat pumps!

Contextual realities pose additional challenges for financing electrification

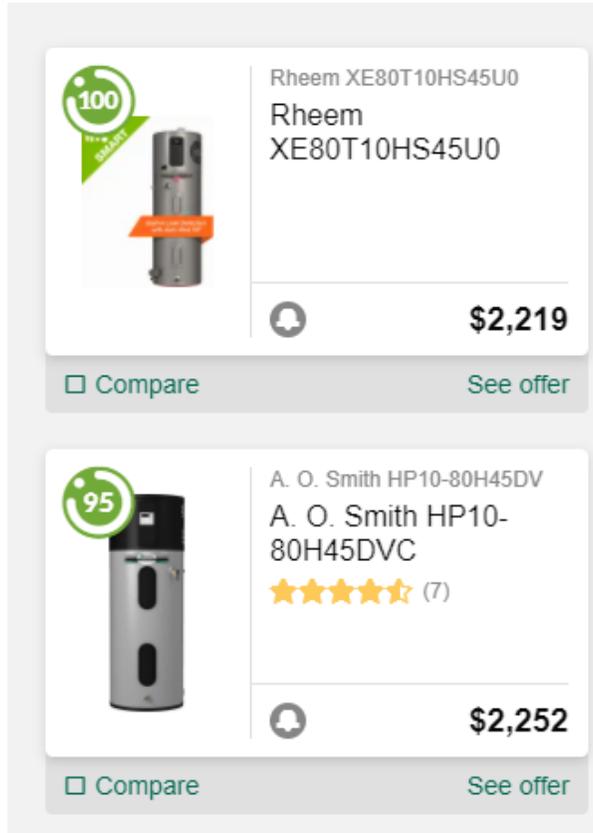
Challenges



- Funding silos mean we **can't finance solar and battery storage** to do comprehensive decarbonization projects – programs are supported by funds earmarked for EE
- **Evaluation criteria** has thus far been based on energy efficiency, kWh and therms reduced, not decarbonization
- **Economics:** 85% of California homes currently heat water with gas; electricity is expensive
- Common **workforce challenges:** limited number of contractors who know how to install heat pumps
- **Program coordination challenges:**
 - Electricians do not see themselves as “EE contractors” – should/how do we get them to participate in our program?
 - Payment coordination and data collection from multiple contractors

Financing heat pump water heaters through online marketplaces

Opportunities



- A **point-of-sale residential microlending product** through REEL is currently under development
- Product will **allow customers to finance heat pump technology, instantly at the time of purchase** through their utility's marketplace
- Broad credit approvals (down to 580 expected) and low rates resulting from credit enhancement - much better financing offer than credit cards
- Launching with Enervee and One Finance this year
- Challenges: balancing compliance with opportunity to scale
 - Requiring professional installation and ensuring permit compliance with an online purchase model

A truly statewide program with comprehensive projects

Opportunities

- CPUC tentatively approved incorporation of non-IOU ratepayer sources of funding in a recent Proposed Decision (released 7/2/21)
 - Would allow for more uniform project eligibility rules across utility jurisdictions and ease participation for contractors
 - Comment period is forthcoming, and prior comments were supportive
- CHEEF seeking CPUC approval to provide credit enhancement for solar, storage, and EV charging as part of the CHEEF
 - Customers don't view EE projects as separate from other energy upgrades; would enable comprehensive decarbonization projects
 - To be determined in Track 2 of Clean Energy Financing Proceeding
- Potential for more deliberate integration of efforts with IOU/REN programs
 - Financing alone doesn't create a demand; needs to be offered as part of a package for a residential or commercial upgrade



Thank you!

Visit [GoGreenFinancing.com](https://www.GoGreenFinancing.com)
to learn more about our programs.

Kaylee D'Amico, ME&O Specialist

California Alternative Energy and Advanced
Transportation Financing Authority (CAEATFA)

kdamico@treasurer.ca.gov

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Residential



Small Business



Affordable Multifamily

Customers	Owners or renters of single-family residences (including mobile homes, condos, and multiplexes)	Small businesses and nonprofits (building owners or tenants)	Multifamily properties where at least 50% of units are restricted to LMI households
Financing Products	Loans from \$2,500 to \$50,000 with terms up to 15 years; appliance microloans via utility marketplaces currently under development	Loans, leases, equipment finance agreements, and efficiency-as-a-service agreements from \$10,000 to \$5 million with terms up to 10 years	Equipment finance agreements from \$10k-\$250k for up to 84 months; efficiency-as-a-service agreements from \$250,000 to \$10 million, up to 10 years
Collateral	Unsecured – loan is not tied to customer’s property	Equipment-secured – loan is not tied to customer’s property	Equipment-secured – loan is not tied to customer’s property
Key Features	Rates range between 2.95% and 8.12%, compared to national average of 12.3% (for unsecured loans via credit unions in 2019)	Can be combined with utility rebates, incentives, and financing programs (e.g., OBF)	Complements existing affordable multifamily energy programs, like SOMAH and LIWP
Electrification Support	Heat pumps and HPWHs are eligible measures; new regulations will ease complexity of hot water source issues	Heat pumps and HPWHs are eligible measures; custom qualification process offers additional flexibility	No eligible measure list for the program – offers flexibility to install electrification measures as needed